

White Paper on Small and Medium Enterprises in Taiwan, 2010



**Small and Medium Enterprise Administration
Ministry of Economic Affairs
September, 2010**

White Paper on Small and Medium Enterprises in Taiwan, 2010

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Foreword

As the financial tsunami swept the world during the second half of 2008, Taiwan was unable to escape from its powerful effect. Although the economy started to pick up in the second half of 2009, the GDP growth rate for the whole year of 2009 was -1.91% and the unemployment rate was 5.85%. As for the performance of SMEs in 2009, the number of enterprises (1,232,025 firms), the total sales (NT\$9189.5 billion) and SME employment (8,066,000 people) were lower compared to 2008, while the number of newly-established SMEs (88,531 firms) in 2009 was slightly higher than in the previous year.

The economy in 2010 is continuing to expand; the GDP growth rate has been estimated to be 8.24% for 2010, while the improvement in the job market is taking place much more slowly. At the end of July 2010, the unemployment rate was still as high as 5.17%. Hence, how to create jobs in the economy is the focus of economic policy in the government. In addition, the SMEs in Taiwan also face major challenges from globalization and regionalization, especially the Economic Cooperation Framework Agreement (ECFA) that was signed in June 29, 2010 between Taiwan and Mainland China, which brings opportunities and also threats to the SMEs in Taiwan. These issues as well as the responses of both enterprises and the government are the highlights of this volume of the SME White Paper.

The Small and Medium Enterprise Administration has since 1992 published the *White Paper on Small and Medium Enterprises in Taiwan* on an annual basis, in order to witness the development of SMEs in Taiwan, and the English version has been published since 1998. Each volume of the *White Paper* consists of three parts.

In Part One of the 2010 volume, an extensive array of statistical figures is provided to describe the development of SMEs from a wide variety of perspectives in 2009, which includes a comparison with their performance in previous years, as well as with the performance of large enterprises.

In Part Two of this volume, three special topics are tackled through an in-depth analysis to deal with the special challenges faced by SMEs in recent times. They are “Establishing a Healthy Investment Environment for SMEs to Promote Job Creation,” “Helping SMEs to Cope with Resource Shortages and Create Jobs,” and “The Impact of the ECFA Agreement on Taiwan’s SMEs, and How the Government is Helping SMEs to Cope.”

The government has been helping the SMEs in various ways by ensuring that the necessary resources are available and that the overall business environment is conducive to

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them. In Part Three, the major government policies and measures related to SMEs along with their resulting effects over the past year are examined. These policies and measures can be categorized into five areas, i.e., assistance in upgrading business management, strengthening SME financing and investment capabilities, strengthening business start-up capabilities, revitalizing local economies and making it easier for SMEs to participate in international SME activities. The Appendix to this volume also provides important SME statistics covering the years 2007-2009 for reference purposes.

Providing guidance to support the development of SMEs requires a long-term effort. It is hoped that the *White Paper* will give readers both in Taiwan and overseas a better understanding of Taiwan's SMEs, while at the same time providing a useful reference work to assist SME managers in their decision-making. Your comments on the content of the *White Paper* would be most welcome.



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Director General

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Summary

In early 2009, the world was still reeling under the impact of the global financial crisis; as in the rest of the world, Taiwan's economy remained depressed. However, by the middle of the year, there were signs that the situation was starting to improve. The first indications of recovery were seen in the financial markets; subsequently, the real economy also began to pick up again. However, unemployment remained high throughout the year, despite the economic upturn. How has Taiwan's small and medium enterprise (SME) sector developed in this dramatically fluctuating economic environment? What major problems have Taiwan's SMEs had to face? And what strategies has the government adopted to help the SME sector? The *White Paper on Small and Medium Enterprises in Taiwan, 2010* attempts to provide detailed answers to these questions. The content of this year's *White Paper* is summarized below.

Part One Major Trends in SME Operations

1. Changes in the Domestic and International Economic Environment

In the first few months of 2009, the world economy was suffering from the effects of the global financial crisis. The economic situation continued to worsen, and unemployment rose steadily. However, by mid-year the financial markets were showing signs of recovery, and this was followed by a gradual upturn in the real economy. The leading international economic forecasting agencies all began to make upward revisions to their growth forecasts for the global economy as a whole and for individual regions and countries.

However, it became apparent that this gradual economic recovery would be a largely "jobless" recovery, while at the same time the emergence of an asset bubble and the debt crises that various countries around the world were experiencing posed the danger of sparking off a second global financial crisis; there was widespread concern as to whether such a crisis could in fact be prevented. Coupled with natural disasters such as earthquakes and flooding, climate change, and epidemics such as H1N1 influenza, these factors combined to create a highly uncertain business environment.

As far as the overall economic and social environment is concerned, there are several important long-term trends that have not been affected by the global financial crisis. For example, the impact of falling family size on industry, the growing business opportunities in the senior citizen market, and rising consumer environmental awareness (accompanied by a growing emphasis on "green" lifestyles) are all trends that SMEs need to pay attention to and devise strategies to cope with. However, the global financial crisis has also stimulated the emergence of a number of new trends, including a renewed emphasis on frugality and simple lifestyles, a trend towards higher savings rates, and an increased focus on spiritual cultivation and on humanistic and cultural issues. Products that combine reasonable quality with low price and practical usefulness have become the market mainstream, and there has been a growing emphasis on the

integration of cultural and creative features into new product design. Overall, there has been a trend towards developing technology that meets real needs – a trend towards “disruptive innovation” that emphasizes “good enough” design and low-priced service provision. It is worth emphasizing that the impact of the global financial crisis will not only be felt in the short term; the trends referred to above will continue into the mid-term at least, and SMEs will need to take account of them when developing new products and services.

Looking ahead to the future, we can expect to see a continued expansion of Internet applications and functionality, which will help to link SMEs and consumers more closely together. It is clear from the growing power of online communities that, in the future, SMEs will need to pay more attention to consumer-oriented information, and to the utilization of online platforms for interaction and sharing with consumers. Consumers’ views will need to be taken into account not only in the sales process, but also at the innovation and design stage. In addition, the need to speed up innovation will make it increasingly important for SMEs to look for sources of innovation outside the enterprise; SMEs will need to make effective use of collaboration with universities and research institutes, and with the design services industry, to speed up innovation and ensure that they are able to seize the opportunities that emerge from the rapidly changing business environment.

2. Major Trends in the Development of SMEs in Taiwan in 2009

Analysis of Ministry of Finance VAT data gives the following picture of the state of Taiwan’s SMEs in 2009:

- There were 1,232,000 SMEs in Taiwan in 2009, representing 97.91% of all business enterprises. 80.24% of these SMEs were in the service sector, while 52.13% were in the wholesaling and retailing industry. 57.21% of SMEs were organized as sole proprietorships, and 46.65% were located in Northern Taiwan.
- SMEs’ total sales, export sales and domestic sales all fell in 2009 compared to 2008. Domestic sales accounted for 85.68% of SMEs’ total sales; the exports of SMEs in the manufacturing sector accounted for over 65% of the total exports of all SMEs.
- In 2009, 35.61% of SME owners were women. 43.62% of female-owned SMEs had been in existence for at least 10 years, and around 64% were structured as sole proprietorships. The vast majority (85.84%) of female-owned SMEs were in the service sector; just over 54% were in the wholesaling and retailing industry.

3. Financial Status of SMEs

- As of 2008, current assets accounted for 49.76% of the total assets of Taiwan’s SMEs. The SMEs’ inventory ratio had risen by 3.17 percentage points (compared to 2007) to 17.89%, and inventory accounted for 35.95% of total current assets. These figures show that, as a whole, SMEs have demonstrated unsatisfactory operational management when faced with the impact of the global financial crisis, and they carry a higher level of operational risk than that borne by large enterprises.
- As regards operating costs, in 2008 the large enterprises’ operating cost ratio rose only slightly, by 0.78 percentage points, while the SMEs’ operating cost ratio increased by 7.47 percentage

points to 83.7%. As a result, the SME sector as a whole posted negative operating profit in 2008 (whereas operating profit in 2007 had been positive). Clearly, the negative impact of the global financial crisis on SMEs was greater than that experienced by large enterprises; SMEs experienced a substantial rise in operating costs that eroded their profit margins and threatened the survival of many SMEs.

- With regard to earnings, 2008 saw a pronounced change in SMEs' earning ability. All profitability indicators – including the operating profit ratio, return on total assets, return on fixed assets, return on capital and return on net worth – turned negative, indicating that Taiwan's SMEs have had difficulty coping with the impact of the global financial crisis, and have experienced steadily worsening operational difficulties as a result.
- Turning to bank loans, as of 2009 42.66% of the total outstanding loans of all domestic banks in Taiwan had been extended to SMEs, up from 40.51% in 2008. This shows that, despite the negative impact of the global financial crisis on the economy, the measures implemented in accordance with the government's "Three Supports" policy have been successful in easing the difficulties that SMEs experience in securing financing.

4. Employment in the SME Sector

According to the new definition of SMEs that was introduced in September 2009, the number of employed persons working in SMEs in Taiwan in 2009 was 8,066,000, of which 5,679,000 were paid employees. If the old definition of SMEs is used instead, then the number of employed persons fell by 2.17% compared to 2008, and the number of paid employees fell by 1.12%. As Taiwan was still feeling the effects of the global financial crisis in 2009, the number of SME business owners declined (as did the number of female business owners); however, there was a pronounced increase in the number of middle-aged and elderly people starting their own business.

- The impact of the global economic downturn led many SMEs to make adjustments to working conditions in 2009. These changes included wage cuts, reduced bonuses, reductions in working hours, making employees take unpaid leave, switching over to the use of part-time workers, job-sharing schemes, etc.; other firms cut back on employee benefits, left vacancies unfilled, implemented layoffs or encouraged employees to take early retirement. However, as the economic situation began to improve in the second half of 2009, the number of workers being made to take unpaid leave fell.
- As regards manpower cultivation, SMEs continued to emphasize employee training and the cultivation of human talent, despite the economic downturn. For both training programs implemented by individual firms and those conducted on a joint basis by more than one enterprise, the number of training classes and the number of workers receiving training rose in 2009 compared to the previous year. The number of SME employees who benefited from incentive measures to encourage them to improve their skills amounted to several hundred thousand people, indicating that SMEs are working to build up the quality of their human resources in preparation for the post-crisis period.

5. SME Innovation, R&D and Market Development

In the aftermath of the global financial crisis, the key issue facing SMEs as they seek to move back onto a growth path has been the question of how to leverage innovation, R&D and market development to strengthen the overall quality of business operations. SME managers, R&D personnel and sales staff need to be constantly thinking about how they can leverage the technology resources available to them in the development of new products and market segments, while exploring all the potential uses of the firm's technology, so as to turn an opportunity into a crisis.

- The total R&D spending of all SMEs in Taiwan rose to NT\$43,864 million in 2008, 17.17% up on 2007; this was the fourth consecutive year of growth.
- According to the results obtained in the Survey of SME Innovation, R&D and Market Development in Taiwan in 2010 undertaken by the Chung-Hua Institution for Economic Research, around 40% of the respondent SMEs were involved in innovation and R&D activity. The survey results indicated that the main sources of innovation concepts were customers' needs, the SMEs' own technology resources, and managers' creativity, and that SMEs hoped to use innovation and R&D to develop new markets, reduce costs and improve efficiency. The aspects of technology to which those SMEs engaged in innovation and R&D attached the most importance were quality, cost reduction and production efficiency, which shows that SMEs have gradually become more aware of the importance of being customer- and quality-oriented; the factor of most importance to SMEs when collaborating with customers is the building of a solid long-term relationship. When collecting information about potential customers, SMEs rely mainly on visits to new customers and regular purchasing activities; relatively few SMEs make extensive use of online information search or participation in trade fairs and exhibitions for this purpose.

Part Two Developing New Investment Opportunities to Create New Jobs in the SME Sector

1. Establishing a Healthy Investment Environment for SMEs, to Promote Job Creation

In the era of economic globalization, the key challenge facing the advanced nations around the world has been the need to reduce unemployment by creating new jobs. An examination of the measures employed by governments in different parts of the world shows that the main strategies adopted involve encouraging business enterprises to develop international markets, and working to stimulate domestic demand. One particularly important strategy has been that of working to improve the investment environment, so as to stimulate investment. Over the past three decades, both large enterprises and SMEs have come to rely heavily on machinery to undertake what were previously highly labor-intensive activities; there has also been an increase in the use of temporary and contract labor to reduce labor costs. Even so, SMEs continue to create more jobs per NT\$1 million of assets than do large enterprises, which shows just how important SME investment is in terms of job creation; SMEs continue to account for the lion's share of new jobs

created in Taiwan. The importance of creating an investment environment conducive to SME growth should therefore not be underestimated.

An examination of the investment environment in Taiwan, of the government's industrial policy as it affects SMEs, of the availability of financing, and of the legal and regulatory environment, shows that more still needs to be done to strengthen government industrial policy (in the wider sense) to provide meaningful support for SMEs. Financial institutions' current loan mechanisms are inadequate to meet SMEs' financing needs; at the same time, regulatory compliance costs constitute a severe financial burden for SMEs. The following policy recommendations are therefore proposed to help improve the SME investment environment:

- (1) Formulation of industrial policies tailored to SMEs (and particularly SMEs in the service sector), to ensure that SMEs' basic needs are met, which in turn will help to stimulate job creation in the SME sector and reduce unemployment in Taiwan.
- (2) Establishing systems for auditing the results achieved in the implementation of SME-related policies, taking "customer satisfaction" as the basis for appraisal, and using the "plan-do-check-action" process to ensure constant feedback from SMEs and make sure that the government's SME policies achieve their original aims.
- (3) Establishment of diversified financing channels (making effective use of lessons from the advanced nations), and encouraging SMEs to obtain financing directly from the capital markets, so that they can meet their funding needs by issuing corporate bonds or through the use of financial derivatives, thereby reducing SMEs' dependence on indirect financing.
- (4) Promoting the establishment of an intangible asset appraisal system, so that banks have guidelines to follow with regard to accepting intangible assets as security for loans; this will facilitate the securing of start-up capital by SMEs and help them to commercialize new ideas, which would be the most concrete, meaningful assistance that the *Statute for Industrial Innovation* could provide for SMEs.
- (5) Providing greater incentives for SMEs to ensure that their financial statements are accurate, and offering guidance to help SMEs establish sound accounting systems, thereby enhancing the transparency of SMEs' finances.
- (6) Strengthening the mechanism for ensuring that the needs of SMEs are taken into account when formulating or revising government legislation; this will involve active evaluation of the impact that changes in the legal and regulatory environment may have on SMEs, and responding more quickly to SMEs' needs. This constitutes an important part of the process of creating a first-rate SME investment environment.

2. Helping SMEs to Cope with Global Resource Shortages and Create Jobs

Over the next 10–20 years, the world can be expected to experience shortages of many different types of resources, including inadequate supplies of oil, the "atmosphere shortage" resulting from excessively high greenhouse gas emissions, food shortages, and water shortages. Energy and water are vital production factors for many manufacturing firms, while foodstuffs constitute a basic raw material for enterprises in the food processing and restaurant industries. Shortages of

these resources will affect both production and consumption; the impact will be felt most severely by SMEs and their employees. Taiwan's SMEs employ a combined total of nearly 8 million workers; whether SMEs prosper or fail affects not only the SME owners, but also the large numbers of people who work for these enterprises.

- SMEs will need to respond to energy shortages by adopting energy-efficient technology and enhancing the efficiency of their energy use. With regard to water shortages, SMEs can no longer expect the government to keep the price of water artificially low; they will have to do more to strengthen their own water conservation abilities. As far as food shortages are concerned, there will be a need for the development and adoption of new agricultural technologies and new food product technology.
- The main tasks that the government will need to undertake to encourage SMEs to transform themselves to cope with an era of shortages include: (1) Implementing staged increases in the price of energy and water so that both internal and external costs are fully reflected in the price. (2) Assisting with the development of new energy technology, agricultural technology, and food processing technology. (3) Requiring the water supply companies to achieve a major reduction in the percentage of water supply pipes that suffer from leaks, so as to increase future water supply capacity. (4) Providing SMEs with guidance on how to implement energy and water conservation.

3. The Impact of the ECFA Agreement on Taiwan's SMEs, and How the Government is Helping Them to Cope

The main reason for the signing of the Economic Cooperation Framework Agreement (ECFA) between Taiwan and China is to enable Taiwanese companies to build competitive advantage in the China market. Besides helping to strengthen the position of Taiwanese firms in China, it is anticipated that ECFA will also help Taiwan to avoid being marginalized by the various free trade agreements that are being negotiated in the region; the benefits that Taiwan receives under ECFA, and the ensuring of access to the China market, will facilitate the repositioning of the Taiwanese economy and the strengthening of competitive advantage by Taiwanese companies.

- As regards the challenges and opportunities that ECFA represents, the key challenge (and opportunity) for Taiwan following the signing of ECFA will be to strengthen Taiwan's position within global supply chains, integrating Taiwan's technology with China's manufacturing capacity and huge market, and thereby helping Taiwanese companies to develop strong brands and develop global markets. While the signing of ECFA will create significant new business opportunities, the opening up of Taiwan's markets to China will also pose a threat to the continued existence of many Taiwanese SMEs.
- With regard to the measures being adopted by the government to help Taiwanese SMEs cope with the impact of ECFA, the Ministry of Economic Affairs has formulated a number of guidance measures, and allocated significant guidance resources, to help SMEs adjust to the changes that the policy of opening up Taiwan's market to China will bring, and to support technology upgrading, the development of innovative new services, industry cluster development and enhanced availability of financing to SMEs. In addition, the Council of

Labor Affairs has formulated the Plan for Supporting Job Creation Following Trade Liberalization, to help maintain employment stability and assist workers who lose their job because of ECFA in finding new work. It is anticipated that, while maximizing the positive benefits from ECFA it should also be possible to minimize the negative impact on SMEs and on low- and medium-income households.

Part Three The Government's SME Policies, and the Outlook for the Future

1. Helping SMEs to Upgrade and Transform Themselves, and Providing Guidance to Strengthen SMEs' Operational Management

The rapid changes that have taken place in the international business environment in the past few years have put Taiwan's SMEs under heavy pressure and left them facing serious challenges; there is a clear need for SMEs to strengthen their ability to make effective use of information technology, as well as their product quality and management and R&D capabilities, to cope with these challenges. The government should be working actively to help SMEs to upgrade and transform themselves (through e-adoption, improved quality and strengthened managerial capabilities, technology upgrading and enhanced R&D capabilities), and should be implementing plans to strengthen the provision of guidance relating to operational management.

2. Strengthening SME Financing and Investment Capabilities

SMEs often find it difficult to obtain funding from the financial markets because of their small size, frequently unsatisfactory management structure, inability to provide adequate collateral, and poor creditworthiness. The government has worked actively to establish financing guidance mechanisms and to provide various types of policy loan; it has also established the SME Financing Services Contact Window and SME Troubleshooting Center to provide guidance information and handle requests for emergency assistance and consulting services. In addition, the SME Credit Guarantee Fund provides SMEs with credit guarantees that make banks more willing to lend to them; this is supplemented by start-up investment support, to help SMEs obtain the working capital they need.

3. Strengthening Business Start-up Capabilities and Promoting New Business Incubation

In 2009, the Small and Medium Enterprise Administration launched the Start-up Guidance Plan, which embodies three core strategies: improving the start-up incubation environment, building start-up knowledge information platforms, and helping new businesses to obtain seed capital. The Plan incorporates 16 sub-plans, to provide would-be entrepreneurs, owners of new businesses, and existing SMEs and microenterprises with the services they need.

- One of the key tasks to be undertaken under the Creating Value through Industry-University Collaboration Plan is the promotion of networks of industry-specific incubation centers. In line with the Executive Yuan's "Six Key Emerging Industries" strategy, it was decided to focus on the creation of incubation networks for the biotech and healthcare industry, the green energy

industry, the cultural and creative industries, and the ICT applications industry. The aim was to adopt an industry-specific approach towards encouraging individual incubation centers to collaborate and share resources with one another so as to provide a comprehensive range of services that covers technology R&D, IP strategy planning, market development, finance and financing, commercialization of R&D results, etc.

- Measures taken to help female entrepreneurs start their own business include the Small and Medium Enterprise Administration's Female Entrepreneurship Guidance Plan (which in 2009 was integrated with the resources available under the New Business Actualization Plan), the Flying Geese Program established by the National Youth Commission, Executive Yuan, and the BeBoss Plan initiated by the Council of Labor Affairs, Executive Yuan, etc. These initiatives help to provide women who are interested in establishing their own business with the knowledge and resources they need.

4. Revitalizing Local Economies and Promoting the Development of New Business Opportunities

Over the past few years, the Ministry of Economic Affairs has been working actively to promote the development of "local cultural industries" and tourist itineraries that can support the growth of these industries. The Ministry has been providing guidance to help SMEs in local communities throughout Taiwan transform and upgrade themselves, helping individual localities to differentiate themselves and achieve economic benefits.

- In 2008, the Small and Medium Enterprise Administration, Ministry of Economic Affairs launched the Plan for Helping Local Cultural Industries to Create Value, to direct guidance resources towards supporting the development of local cultural industries in Taiwan. The Plan aims to foster the creation of "One Town, One Product" by leveraging the special characteristics of local industries, enhancing the value that industry value chains can create and developing both domestic and export sales of local cultural industries' products.
- The Industrial Development Bureau, Ministry of Economic Affairs has launched the Creative Lifestyle Industry Development Plan and the Local Industry Cluster Development Plan – Factory Tourism Guidance Plan; the Department of Industrial Technology, Ministry of Economic Affairs has been promoting the Local Industry Innovation Engine Plan and the Local Industry Innovation Engine Plan and Local Small Business Innovation Research (Local SBIR) Plan; the Commerce Department, Ministry of Economic Affairs, has launched the Local Business District Branding Development Plan. These projects all seek to promote the development of local tourism, innovation and new business models, to encourage SMEs to participate actively in local cultural industry R&D, and to revitalize local economies by strengthening the competitiveness of local industries.
- To ensure Taiwan's continued economic development in the aftermath of the global financial crisis by promoting the development of those industries that are more oriented towards the domestic market (and which thus have an important role to play in creating jobs and ensuring social stability), in 2009 the Executive Yuan allocated a budget of NT\$1 billion to establish the Local Industry Development Fund, whereby local government authorities will be proactively involved in drawing up roadmaps and plans for the development of local cultural

industries, and the central government will provide funding support to help local governments put these plans into action, thereby supporting the development of local industries. In addition, to help SMEs cope with the operational difficulties that they have experienced as a result of the worsening economic climate, the government has launched the i-Care plan to implement proactive service provision for SMEs at the local level. In line with the government's "Three Supports" policy (whereby the government supports the banks, banks support business enterprises, and business enterprises support their employees), this plan seeks to strengthen SMEs' capabilities and help them to get through this difficult time.

- With the volume of global trade growing rapidly, the gradual opening up of world markets offers almost unlimited business opportunities. To help Taiwan's SMEs develop new business opportunities both at home and overseas, the Ministry of Economic Affairs' Bureau of Foreign Trade, Commerce Department and Small and Medium Enterprise Administration have been formulating a variety of business opportunity development and marketing plans that approach this issue from the point of view of markets, industries, individual companies, industry associations, branding, etc. The idea is to help business enterprises develop new markets successfully, expand their marketing and distribution networks both in Taiwan and overseas, and enhance the export competitiveness of their products, to facilitate Taiwan's continued economic development in the post-crisis era.

5. Participation in International SME Affairs, and Other Relevant Resources

This chapter examines the provision to SMEs of those types of guidance and services not addressed in the previous four chapters, including participation in SME-related international activities, the resources allocated by the government for the provision of guidance to SMEs, cultivation of human talent for the SME sector, legal and regulatory adjustment, etc.

Part One

Recent Development of SMEs



CHAPTER 1

Changes in the Domestic and International Economic Environment Since 2009

In early 2009, the world was still feeling the effects of the global financial crisis, with the economic situation continuing to worsen, and rising unemployment. However, by the middle of 2009 there were already some signs that the economy was beginning to recover. Stock markets rallied, and industrial production started to increase. The various economic forecasting agencies began to revise their growth forecasts upwards.

However, despite the signs of a gradual economic recovery, there was considerable concern that it might turn out to be a “jobless recovery”; there were also fears that the asset bubbles that had built up, and the high debt burden under which many countries were laboring, might lead to a second financial crisis. These dangers, coupled with the impact of earthquakes, storms, climate change, H1N1 influenza, etc., made for a highly uncertain economic environment.

The changes in the global economic environment were bound to have an impact on SMEs, and this is discussed in more detail in Section 4 of this chapter. Section 1 below outlines the main changes that have taken place in the overall global living environment; Sections 2 and 3 present an overview of the changes in the international economic environment and in the domestic economic and trade environment in Taiwan. Section 4 analyzes the ways in which SMEs have responded to these changes, and the transformations they have undergone.

I Changes in the Overall Global Environment in the Aftermath of the Financial Crisis

While the global financial crisis has led to many changes in the overall global environment, the analysis presented in this section will focus on the issues of climate change and global warming, the trend toward smaller families and aging populations, the increasingly important role of women in the workplace, food shortages, and the energy crisis.

1. The Problem of Climate Change and Global Warming Continues to Worsen

There is still considerable disagreement among biologists and geologists as to the causes and speed of global warming. For several hundred years now, scientists have been trying to work out how ice ages begin and end. It is clear that significant progress has been made in developing a better understanding of the relationship between carbon dioxide and climate change. As the volume of carbon dioxide being produced worldwide increases, global temperatures rise. When less carbon dioxide is being produced, temperatures fall. This relationship helps us to understand the unprecedented crisis that global warming threatens to bring, and to find ways to combat it.

2 White Paper on SMEs in Taiwan, 2010

The terrible damage caused by Hurricane Katrina in the U.S. in 2005 was due partly to the increase in the speed with which the hurricane revolved, caused by rising sea temperatures. On August 8, 2009, Typhoon Morakot struck southern Taiwan, bringing a year's worth of rain in just three days, and leading to floods that caused the destruction of an entire village (Hsiaolin Village), with serious loss of life; this was the single most destructive typhoon to hit Taiwan since records began.

In September 2009, the Philippines were hit by two typhoons within a few days of each other. Typhoon Ketsana caused almost unbelievably heavy rain in Manila and in 25 neighboring provinces. A month's worth of rain fell in just six hours, creating the worst floods that the Philippines had experienced for 42 years. Following hard on the heels of Typhoon Ketsana, Typhoon Parma brought heavy rain to the mountain areas of Luzon, causing landslides that killed at least 181 people. In all, the two typhoons left over 500 people dead or missing, and another 500,000 or so people homeless.

This series of natural disasters shows how unbalanced the global environment has become, and clearly demonstrates that global warming is a reality that the world needs to take seriously. The IPCC conference in Copenhagen in December 2009 was attended by more experts than any previous climate change meeting; the conference represented an attempt to forge a new international agreement to replace the Kyoto Protocol, which will soon be expiring. The chief objective of the conference could be described as an attempt to save the planet.

However, even before the conference (which was attended by 85 heads of state) got underway, it was clear that there would be problems. Many of the national leaders insisted that all they were attempting to achieve at Copenhagen was to negotiate a "political agreement," rather than a treaty that would be legally binding. As a result, this major international conference, which had taken so much effort to organize, failed to produce a consensus.

2. Falling Family Size and Aging Populations

Over the last few years, the trend toward smaller families, along with aging population structures, has transformed the "population problem." In the future, the basic problem facing economists will not be to work out how humanity can maintain a reasonable quality of life in the face of steadily rising populations, but rather how people can maintain their standard of living when the workforce is shrinking. In some countries, the population is already starting to decline; furthermore, these are all large, wealthy countries such as Japan and Germany.

In many regions, changes in relative population will affect the geopolitical importance of different countries. For example, in Asia, by the middle of the 21st century the population of India will surpass that of China. Similarly, Turkey's influence in Eastern Europe and in the Caucasus will increase, while that of Russia declines; by the middle of this century Turkey and Russia will have roughly the same population size. Europe's share of world population will fall significantly, and Europe's influence in world affairs will experience a similar decline. Within the European Union, France and the U.K. will become relatively more important, as each country's population rises to a level that puts it on a par with Germany.

The birthrate in Taiwan has been falling rapidly, while the death rate has been rising. As a result, Taiwan's annual population growth rate has declined dramatically. Women are getting married later, and the percentage of women of childbearing age who are living with a partner has fallen, reducing women's effective reproductive period. The total fertility rate (i.e., the average number of children that each woman gives birth to over her lifetime) has been falling rapidly for some years now, and Taiwan's population will continue to decline in the future, as the population ages and the trend towards smaller families becomes more pronounced.

An aging population structure and smaller families can lead to a wide range of social problems, including the need to care for growing numbers of elderly people, the increased burden on medical resources, a trend for more men to marry foreign women, the need to import labor from overseas, and high unemployment among the middle-aged and elderly, etc. Governments around the world will need to find solutions to these problems.

3. Women's Labor Power is Transforming the World

While the trend towards smaller families and aging populations is creating short-term labor shortages, there has been a (largely unnoticed) increase in the size of the available female workforce. According to a survey conducted by the Boston Consulting Group, over 1 billion women are in employment worldwide, and the number of women in work is growing steadily at an annual rate of 2.2%. By 2013, there will be at least 90 million more women in the workplace, roughly equivalent to four times the population of Taiwan.

An examination of the Fortune 500 listing for 2009 shows that 15 of the companies included in the Fortune 500 list have female CEOs. Similarly, 28 of the companies included in the Fortune 1000 have female CEOs. Overall, the number of female CEOs has been increasing on almost an annual basis.

A quiet revolution is underway, in which women are transforming the working environment and employment structure. It seems certain that women will come to play an even more important role in the economy in the future.

With the improvements in the level of education that women receive and in their employment opportunities, as well as the tendency for women to marry later, women's ability to manage their own finances autonomously and to control their own consumption is also increasing.

4. The Scope of the Global Food Crisis is Becoming Clear

With the trend towards economic globalization, the developing nations are becoming increasingly vulnerable to the impact of fluctuations in international markets. Over the past 10 years or so many poorer nations have steadily become more dependent on food imports, and have neglected to invest in and develop their own agricultural sectors. At the same time, the volume of agricultural subsidies provided by the developed nations has also been falling, exacerbating the problem of food security in the developing nations.

Lack of food security in developing nations can affect political, economic and social stability. The serious riots that occurred in Haiti in April 2008, in which many people died or were injured, were caused by the global food crisis. Other countries that experienced demonstrations and riots

4 White Paper on SMEs in Taiwan, 2010

(of varying severity) related to food around this time included the Philippines, Cameroon, Egypt, Indonesia, Ivory Coast, Mozambique and Senegal. From Haiti to Zimbabwe, from North Korea to Afghanistan, and from Moldova to Chechnya, millions of poor people are unable to buy enough food, and are engaged in a daily struggle with hunger. The effects of rising raw materials prices and rising oil prices have made the food crisis a more serious problem than war, global warming, or the loss of equilibrium in the environment.

The question of food supplies is closely related to global population growth, energy, climate, agricultural technology, and environmental issues; changes in any of these areas affect all the others, too. The issue of inadequate global food supplies is an old problem that has never gone away. It has caused global food prices to rise, pushing up wages, and, ultimately, leading to higher costs in manufacturing industry, which in turn creates inflationary pressure and has a negative impact on the national competitiveness, economic stability and social stability of the countries concerned.

The Food and Agriculture Organization (FAO) warns that rising food prices have created a situation where 37 countries in various parts of the world are already experiencing food crises. Most of these countries are developing nations in Africa, South Asia and Central America. Many households in these countries have had to go from eating three meals a day to eating just one meal a day. Every day, more than 25,000 people die from hunger and hunger-related diseases. While people in wealthy countries consume, on average, around 50% more calories than they need, average calorie consumption in poorer regions is only about 70% of the basic daily requirement. Globally, the richest 20% of people are consuming 86% of the world's goods and services, while the poorest 20% consume just 1%. The combination of an unfair distribution of resources, unfair trading systems, poverty, civil strife that is related to poverty, and natural disasters has exacerbated the threat to security that the global food crisis poses.

5. The Global Energy Crisis is Still Continuing

Although the recent global financial and economic crisis has certainly been a severe one, in comparison with the Great Depression of the 1930s it really only represents a short term loss of economic equilibrium. As far as humanity is concerned, the limits to economic growth will be set not by any financial bubble, but rather by the constraints imposed by energy resources and the environment. The environmental crisis facing the planet has been discussed briefly above; turning to the global energy crisis, this has three main aspects:

The first aspect is the rapidly growing demand for energy, at a time when the supply of energy is limited. Since 2003, global demand for petroleum has been growing fast, to the extent that the expansion of production capacity has not been able to keep pace, leading to a steady rise in the price of oil, which by 2008 had reached an unprecedentedly high level.

The second aspect of the global energy crisis is the fact that, since the mid-1980s, there has been only a very limited improvement in the efficiency with which energy is used worldwide. In the developing nations, the intensity of energy use in the industrial sector tends to be very high, while in the developed nations the residential and transportation sectors use large amounts of energy.

A third point is that it will be at least 20 to 30 years before alternative energy sources are able to meet the world's energy needs and replace energy derived from hydrocarbons. Given that the potential for further increases in oil production is limited, the world will be faced with continuing high oil prices and rising commodity prices.

After reaching a historic high of US\$145.49 per barrel on July 14, 2008, the international oil price then began to fall. The global financial crisis that was sparked off in September 2008 led to an economic downturn in countries throughout the world, resulting in reduced demand for oil, and causing the international oil price to fall to a level of around US\$31 per barrel by December 22, 2008, the lowest level since December 8, 2003. By comparison with the skyrocketing prices of the previous year, 2009 saw only a slow, steady rise in the price of oil, which had climbed back up to US\$59.45 per barrel by July 14, 2009. With countries throughout the world beginning to see an improvement in economic performance, the price of oil continued to rise steadily in the second half of 2009, and by June 30, 2010 it had reached approximately US\$75.77.

The enormous demand for energy in China and India has exacerbated the situation. Given that China controls around 90% of the world's reserves of rare earths, the U.S. and its allies have become concerned about the possibility that the supply of key materials might become restricted. This concern was reflected in the decision by the Australian government in 2009 to prohibit a Chinese mining conglomerate from acquiring an Australian rare earth extraction company.

II Changes in the International Economic Environment

By the second half of 2009, the impact of the global financial crisis was starting to fade, and the global economy was recovering rapidly. The leading international economic forecasting agencies began to revise upwards their growth forecasts for 2009 and 2010.

1. The Vibrant Emerging Markets Have Become the Main Engine of Growth for the Global Economy

The emerging markets recovered rapidly from the global financial crisis, and the center of gravity of global consumption has shifted away from the high-income, industrialized G7 nations towards the emerging markets. Over the past few years, the emerging markets have been posting annual economic growth rates that are 4 to 5 percentage points higher than those of the developed nations, and this trend is expected to continue in the future.

Many of the emerging markets have already moved away from their traditional export-oriented growth model, and are seeking to make domestic demand the main driver of economic growth. The best examples of this trend are the four "BRICs" nations. These countries have been maintaining high economic growth rates for some years now. By 2009, there were already 14 cities in China where per capita GDP exceeded US\$10,000; between them, these cities (which included Beijing, Shenzhen, Shanghai and Suzhou, and even Ordos in Inner Mongolia) had a combined population of over 100 million people. These 100 million people already enjoy a level of wealth that is almost on a par with that of the people of Taiwan. According to a report compiled

by management consulting firm McKinsey, by 2020, annual personal consumption in China will have surpassed US\$2.5 trillion, giving China the third largest domestic market in the world after the U.S. and Japan. Brazil has also achieved very impressive economic performance, thanks to sensible government policies and buoyant domestic demand. Russia's success in controlling inflation has given the central bank freedom to cut interest rates; the government's relaxed monetary policy has helped to stimulate economic recovery, while in India strong domestic demand has been combined with rising exports. If the four BRICs nations continue to grow steadily, this will make a significant contribution towards stimulating renewed growth for the global economy as a whole.

The key factor that has enabled so many emerging markets to achieve such impressive growth is the stimulus provided by strong domestic demand. Whereas 10 years ago consumption growth in the U.S. was higher than in the BRICs nations, these four countries have now overtaken the U.S. to become the main driver of consumption growth for the global economy. At the same time, the emerging markets have largely been spared the problems that the developed economies are experiencing. For example, the emerging markets have much lower levels of debt than the mature economies, as well as higher savings rates.

As a result of these developments, the center of gravity of the global economy is gradually shifting away from the U.S. The share of the world's top 500 companies by market value that is held by U.S. enterprises is gradually falling, while the shares held by the emerging markets are rising. The market value of Asian companies (particularly Chinese, Indian and Indonesian enterprises) has risen especially fast. The number of Asian corporations within the global top 500 has risen from 27 to 74, a growth rate that not only puts Europe and North America in the shade, but also surpasses the growth rates achieved by emerging markets in other parts of the world.

2. A Rapid Transformation of the Economic Environment in China

The emerging market that has been attracting the most attention is China; however, it is also China that gives most cause for concern. On April 15, 2010, China's National Bureau of Statistics announced that China had posted GDP of 8 trillion RMB in the first quarter of 2010, representing a year-on-year growth rate of 11.9%; in addition, large-scale industrial manufacturing grew by 19.6%.

Investment in fixed assets is the type of investment growth to which economists pay most attention. In the first quarter of 2010, fixed asset investment in China grew by 25.6% to reach 3.5 trillion RMB. Fixed asset investment in urban areas rose by 26.4%, and investment in real estate development increased by 35.1% to reach 660 billion RMB. Clearly, despite the impact that the government's "Three Orders and Five Explanations" policy has had on the real estate market, money continued to flow into real estate investment in the first quarter of 2010, helping to drive economic growth upwards.

The banks' relaxed lending policy is another factor that has tended to push real estate prices upwards. Chinese government data indicate that, in the first quarter of 2010, investment in urban areas totaled 4.8 trillion RMB (representing a growth rate of 38.7%), of which domestic loans accounted for 950 billion RMB (up 41%). State investment came to 190 billion RMB, representing

a growth rate of 25.3%; the combination of relaxed bank lending and loose monetary policy was intended to meet the government's objective of stimulating renewed economic growth.

Besides the real estate bubble, another issue is the substantial pay rises that have been granted by manufacturers in response to the wave of suicides at Foxconn factories and the labor dispute at the Toyota plant in Foshan. It appears that a new stage in the history of labor relations in China is beginning, with the emergence of a powerful labor movement.

The strike at the Toyota plant and management's decision to give in and award a pay rise is by no means the end of labor disputes in China; in fact, it is probably just the beginning. While it had previously been felt that the regional government policy of "removing old birds from the cage to make room for new ones" (which involves promoting the development of new types of industry to replace low-wage, low-tech manufacturing) that has been implemented in Guangdong and other parts of South China over the past couple of years would have a negative impact on the development of China's export-oriented industries, this policy now seems distinctly prescient. The rise in pay levels that has been seen in China's coastal districts is almost certainly just a foretaste of what is to come, as wage levels fall into line with what the market demands. In comparison with the strikes and pay rises that have been seen recently, the wave of suicides by Foxconn employees reflects more deep-rooted and complex social issues.

While China's population is very high, it has more or less ceased growing, and China is no longer enjoying the "dividends" from population growth. Given that manufacturers will no longer have a seemingly endless supply of potential workers to exploit, China may need to adjust its industrial policy as it affects the export-oriented industries. At the moment, manufacturers still have the option of relocating production from the coastal regions to inland China, where there is still significant underemployment. Eventually, however, China will be forced to make more effort to stimulate domestic demand to substitute for export-led growth, resulting in a dramatic transformation of China from the "factory to the world" to the "market to the world." Major changes will also be seen in the structure of the labor market. Overall, this impending transformation will have a major, far-reaching impact on all companies operating in China.

3. A National Debt Crisis Affecting Many Leading Nations

The global financial crisis plunged the global economy into the worst recession since the Second World War, and led to a dramatic contraction in government revenue. Forced to spend unprecedentedly large sums on revitalizing the economy, governments all over the world saw a rapid increase in the government budget deficit as a share of GDP. Governments became increasingly indebted, and government debt as a percentage of GDP shot up.

The first national debt crisis occurred in Iceland in 2008. In 2009, a similar crisis occurred in Dubai, sparking concern in the financial markets regarding the huge levels of debt that some European nations had built up. By early 2010, debt crises (or the threat of them) were affecting not only the four "PIGS" nations of southern Europe (Portugal, Italy, Greece and Spain) but also more highly developed economies such as the U.K., the U.S. and Japan. The potential for a national debt crises threatened to bring on a second wave of global recession. In September 2009, the *Economist* magazine warned that, although the global economy had escaped from the worst financial crisis

since the Great Depression of the 1930s, there was a serious risk that high levels of government debt would bring on another crisis; in *Global Risks 2010*, published in January 2010, the World Economic Forum suggested that the national debt crisis was the biggest single source of risk affecting the world as a whole.

The International Monetary Fund (2010) forecast that, in 2010, the government debt of the G7 nations would reach 109% of GDP, and would then climb still higher, to 113%, in 2011; by way of comparison, the corresponding figure for 2007 was 84%, and the 2000 figure was just 77%. During the 1990s, when the global economy was generally headed downhill, government debt as a percentage of GDP rose from 58% in 1990 to 80% in 1996. The IMF forecast that average government debt as a percentage of GDP for the G20 nations would rise from 78% at present to 118% by 2014, and that in Japan the percentage could be as high as 220%. It thus appears likely that the developed nations will be experiencing a severe debt crisis; the IMF issued an especially strong warning to the U.S. (which is particularly dependent on sales of U.S. government debt to foreigners) in this regard.

A survey by Britain's Barclays Capital indicated that, over the period 2009 – 2010, Japan, the U.S. and the leading European nations issued government debt totaling US\$10 trillion, and that global government debt would rise from US\$35 trillion in 2009 to US\$45 trillion by 2011; in the developed nations (including the U.S.), government debt as a percentage of GDP would have risen to 114%.

International credit rating agency Moody's noted that both the U.S. and the U.K. were in danger of losing their AAA credit rating; the U.S. and British government debt currently totals US\$12.1 trillion and US\$1.4 trillion, respectively. Several nations in the Eurozone, including Greece, Italy, Portugal and Belgium, have levels of government debt that exceed 100% of GDP. The potential for a serious debt crisis involving one or more of these countries cannot be ignored.

4. A Jobless Recovery

Although the global economy has shown signs of picking up again since the second half of 2009, unemployment has remained high, creating a "jobless recovery." As shown in Table 1-2-1, during the period between the end of June 2007 (before the sub-prime mortgage crisis had begun) and the end of 2009, with the exception of Japan and Germany (where unemployment fell slightly), the world's other leading economies all saw a steady rise in unemployment. Despite the upturn in the global economy that began in the second half of 2009, the job market remained depressed, and there was considerable concern as to if and when this situation would improve. With unemployment remaining high, income levels are unlikely to increase, which reduces the likelihood of a significant rise in consumer spending.

In early 2010, Lakschman Achuthan, Director of the Economic Cycle Research Institute (ECRI), said that the recovery the global economy was experiencing was not a full recovery; in other words, despite the respectable performance of the global economy in 2010, further growth over the next few years would be very slow. Achuthan suggested that it might take the U.S. 10 years to recover the several million jobs that had been lost in the recent crisis. Currently, around 6 million Americans have given up trying to find work, and so are not included in the official

unemployment data; when companies do start hiring, these people are likely to start seeking work again, which will cause the nominal unemployment rate to rise once more.

Table 1-2-1 Unemployment Rates in the OECD Member Nations

Unit: %

Country \ Year	2007 (End of June)	2007 (End of December)	2008 (End of June)	2008 (End of December)	2009 (End of June)	2009 (End of December)
Europe	7.1	7.4	7.3	8.2	9.1	10.0
Germany	8.1	8.1	7.6	7.3	7.5	7.2
Spain	7.9	8.8	10.7	14.9	17.6	19.6
France	7.8	7.9	7.2	8.5	8.9	10.0
Italy	5.4	6.7	6.6	6.8	7.3	8.8
U.K.	5.3	4.9	5.5	6.2	7.9	-
U.S.A.	4.7	4.8	5.7	7.1	9.7	9.7
Japan	3.6	3.5	4.0	4.1	5.2	4.8

Source: Eurostat.

5. The Process of Regional Economic Integration Continues to Speed Up

The progress made in bilateral trade negotiations within the World Trade Organization (WTO) framework has been very slow. As a result, since the 1990s many countries have been looking for partners with which to engage in regional economic integration. Accepting that completely barrier-free world trade may not be possible, countries around the world have begun to view regional economic groupings as representing an acceptable substitute. Following on from the formation of the European Union, NAFTA and ASEAN, other countries – including China, Japan, South Korea, India, New Zealand and Australia – have also begun to participate in the process of regional economic integration; in particular, the formation of “ASEAN + 3 + 3” will create a grouping that will rival the European Union in size.

Although the members of regional trade groupings benefit from reduced transaction costs, those countries that are excluded from them suffer; their potential for future growth is restricted by the impact of rising transaction costs and reduced market scope. While the growth of regional trade blocs constitutes an obstacle to truly global integration, if the regional grouping is large enough there may be significant potential for its members to leverage their respective sources of comparative advantage and build an effective division of labor. The members of each grouping may be able to enjoy the benefits of barrier-free trade, including rising income levels (a “passive” benefit) and faster economic growth (an “active” benefit).

Barrier-free trade within the context of regional economic integration has potential benefits, but it also has side-effects, in terms of the redistribution of wealth within individual countries. Free trade tends to cause the wage gap between countries to narrow, so that the wages of low-skilled workers in rich countries are dragged down, while the wages of low-skilled workers in poor countries rise (this phenomenon is related to the factor price equalization theorem). If workers in rich countries are unwilling to see their wages fall, then unemployment will rise still further.

The free trade agreement (FTA) between China and ASEAN came into effect on January 1, 2010; the negotiation of other FTAs between Japan, South Korea, ASEAN and China will also soon be completed. The general trend in trade between these countries will thus be towards zero tariffs.

When FTAs take effect, those industries that were already relatively open to foreign competition, and thus highly competitive, will tend to benefit. However, industries that had previously been protected will inevitably suffer. The challenge for the countries concerned is to keep the negative impact on these industries to a minimum and help them to transform and upgrade themselves. We can already see how the FTA between ASEAN and China has led to a flood of low-priced Chinese imports into the ASEAN member nations, creating a severe negative impact on these countries' "traditional" industries (including textiles, footwear manufacturing, and the iron and steel industry).

Concerns over the impact of the ASEAN-China FTA on traditional industries led Indonesia's Ministry of Industry and Trade to issue a formal letter to the ASEAN Secretariat in late December 2009, before the FTA took effect, demanding that implementation of tariff reductions on 146 product items be postponed for one year, that tariff reductions on another 60 items be postponed for two years, and implementation of tariff reductions on a further 22 items be put off until 2018.

III The Transformation of the Economic and Trading Environment in Taiwan

By mid-2009, the Taiwanese economy was starting to recover from the effects of the global financial crisis that began in the second half of 2008.

1. 2009 Saw a Gradual Economic Recovery in Taiwan

The Council for Economic Planning and Development, Executive Yuan uses a "traffic light" system to represent the economic outlook for Taiwan. During the period January – May 2009, Taiwan still had a "blue light" indicating a continued downturn; however, the economy's overall score was gradually rising, indicating that the economic situation was no longer worsening. In June–September 2009, the economy was given a "yellow-blue light," indicating the danger of a downturn, which in fact represented an improvement. By October, Taiwan had a "green light" indicating steady growth, with a six-point increase in the overall score. In November and December, there was a "yellow-red" light signifying that the economy was heating up, and the overall score rose by 11 points. By January 2010, this had changed to a "red light," indicating that the economy was starting to overheat. Overall, it can be seen that the Taiwanese economy was starting to pick up again by the second half of 2009, and that the recovery continued into 2010.

If one considers the economic growth rate, as can be seen from Table 1-3-1, between 2003 and 2007 Taiwan's economic growth rate displayed what might be called "normal" fluctuation, with growth rates of 3.67% in 2003, 6.19% in 2004, 4.70% in 2005, 5.44% in 2006, and 5.98% in 2007. However, 2008 saw a dramatic fall to a growth rate of just 0.73%, barely above zero growth, and in 2009 the economy actually contracted, with a growth rate of -1.91%. These figures show just how severe the impact of the global financial crisis was in Taiwan. However, it was generally anticipated that Taiwan would post a strong positive growth rate in 2010, reflecting a vigorous recovery.

2. Falling Prices, and Devaluation of the N.T. Dollar Followed by Upward Revaluation

Affected by the economic downturn and low consumer confidence, the consumer price index (CPI) displayed negative growth in every month of 2009 except January (when it rose by 1.48%). The biggest fall was in July (-2.33%); there had been a slight improvement by December (-0.25%). The average CPI growth rate for the whole of 2009 was -0.87%.

The first half of 2009 saw a steadily worsening fall in the wholesale price index (WPI); by July 2009 the WPI growth rate had fallen to -13.99%. The second half of the year saw a gradual recovery, with the WPI growth rate reaching 1.07% in November and 5.75% in December. With the rise in the international price of oil, basic metals, chemical materials, etc., this positive growth was maintained in 2010. The whole-year WPI growth rate in 2009 was -8.74%, much lower than the 2008 figure of 5.15%.

The fall in the value of the NT Dollar against the US Dollar that began in 2008 continued into 2009, although the NT Dollar started to rise again in July. As of the end of December 2009, the exchange rate stood at US\$1 = NT\$32.28. The average for the whole year was US\$1 = NT\$33.06, compared to US\$1 = NT\$31.54 in 2008.

Table 1-3-1 Key Indicators for the Taiwanese Economy, 2003–2009

Unit: %

Indicator Year	Economic Growth Rate	Wholesale Price Index	Consumer Price Index	Tax Revenue	Money Supply		Labor Force Participation Rate	Unemploy- ment Rate	Exchange Rate (NT\$ to the US\$)
					M1B	M2			
2003	3.67	2.48	-0.28	2.45	11.8	3.8	57.34	4.99	33.98
2004	6.19	7.03	1.61	10.93	19.0	7.5	57.66	4.44	31.92
2005	4.70	0.62	2.31	13.14	7.1	6.2	57.78	4.13	32.85
2006	5.44	5.63	0.60	1.66	5.3	6.2	57.92	3.91	32.60
2007	5.98	6.47	1.80	8.30	6.4	4.3	58.25	3.91	32.44
2008	0.73	5.15	3.53	1.20	-2.9	2.7	58.28	4.14	32.86
2009	-1.91	-8.74	-0.87	-16.12	16.5	7.2	57.90	5.85	33.06

Note: With the exception of the labor force participation rate, unemployment rate and exchange rate, all other indicators are expressed as annual growth rates.
Sources: 1. DGBAS, Executive Yuan, *Quarterly National Economic Trends* (Feb. 2010) and *Monthly Bulletin of Manpower Statistics* (Jan. 2010).
2. DGBAS, Executive Yuan, National Income Statistics and National Economic Growth Outlook press release (May 2010).
3. Central Bank, *Financial Statistics Monthly*.

3. A Fall in Tax Revenue in 2009 Compared to 2008

Preliminary estimates gave the government's tax revenue in 2009 as NT\$1,472.6 billion, 16.12% down on 2008. There was a fall in revenue in more than half of the individual tax items; the most pronounced decline was seen in business income tax (25.3%), followed by income tax (21.4%), customs duty (15.2%), and business tax (11.2%). The highest budgetary target achievement rate was in inheritance and gift tax (127.7%), followed by land tax (103.8%).

4. A Very High Level of Liquidity in the Money Markets

In 2009, the daily average value for the annual growth rate in the M2 money supply rose steadily over the course of the year. For the whole year, the daily average value for the annual growth rate in the M2 money supply was 7.2%, far higher than the 2008 average of 2.7%, while the daily

average value for the M1B money supply, which had contracted by 2.9% in 2008, rose by 16.5% in 2009.

Turning to the demand side, the Central Bank reduced the reserve requirement ratio in September 2008 in response to the global financial crisis and the negative impact it had had on the Taiwanese economy; as a result, banks enjoyed increased liquidity. The daily average value of the financial institutions excess reserves rate rose to over NT\$150 billion in April 2009; however, by the end of the year it had fallen back to just over NT\$39.9 billion.

Responding to the ongoing impact of the global financial crisis, the Central Bank cut the discount rate, the rate on accommodations with collateral and the rate on accommodations without collateral seven times between September 2008 and March 2009, with the aim of bringing interest rates down; by March 2009, these three rates had fallen to 1.25%, 1.625% and 3.5%, respectively. The Central Bank's reductions of the discount rate did succeed in reducing interest rates. By December 2009, the inter-bank offered rate and the commercial paper interest rate stood at 0.11% and 0.27%, respectively; the whole-year averages for 2009 were 0.12% and 0.24%, representing a fall of 1.89 percentage points and 1.68 percentage points, respectively, compared to 2008.

5. 2009 Saw a Continuing Falling in the Volume of Foreign Trade, But a Substantial Rise in Taiwan's Trade Surplus

The global economic downturn that began in the second half of 2008 continued into 2009, leading to a contraction in the volume of global trade. In 2009, the total value of Taiwan's foreign trade fell to US\$378.04 billion, 23.8% down on 2008. Exports came to US\$203.67 billion and imports totaled US\$174.37 billion, representing declines of 20.3% and 27.5%, respectively, compared to 2008. However, Taiwan continued to post a trade surplus in 2009, and in fact this surplus rose by 93.03% compared to 2008 (Table 1-3-2).

Table 1-3-2 Taiwan's Foreign Trade Performance, 2003-2009

Units: US\$ billions; %

Indicator \ Year	Total Foreign Trade		Exports		Imports		Trade Surplus or Deficit	
	Amount	Annual Growth Rate	Amount	Annual Growth Rate	Amount	Annual Growth Rate	Amount	Annual Growth Rate
2003	278.61	12.1	150.60	11.3	128.01	13.0	22.59	2.40
2004	351.13	26.0	182.37	21.1	168.76	31.8	13.61	-39.70
2005	381.05	8.5	198.44	8.8	182.62	8.3	15.82	16.20
2006	426.72	12.0	224.02	12.9	202.71	11.0	21.31	34.80
2007	466.07	9.2	246.72	10.1	219.35	8.2	27.43	28.60
2008	496.48	6.6	255.66	3.6	240.82	9.8	14.83	-45.90
2009	378.04	-23.8	203.67	-20.3	174.37	-27.5	29.30	93.03

Notes: 1. Total exports = exports + re-exports; total imports = imports + re-imports

2. The figures for total imports and total exports may not add up exactly to the corresponding figure for total foreign trade due to rounding.

Source: Ministry of Economic Affairs, Foreign Trade Statistics Database.

An increase or fall in the value of exports is a direct reflection of the volume of export orders received. The growth rate in the volume of export orders began to fall in October 2008, and continued to decline until September 2009, by which point it had fallen by three percentage points. However, in absolute terms the value of export orders had risen to its highest level for 11 months; October had been the first month since the crisis began in which positive growth (4.4%) was seen.

December saw an even more impressive growth rate of 52.6%. However, whole-year export orders in 2009 were 8.3% down on 2008.

6. China Remains Taiwan's Most Important Trading Partner

In 2009 Taiwan experienced a decline in exports to all of its main trading partners. Exports to the U.S. continued to fall, and were 23.5% down compared to 2008; exports to China declined by 18.9%. Countries and regions that accounted for 10% or more of Taiwan's total exports included China (26.6%), Hong Kong (14.5%), and the U.S. (11.6%). Taiwan's imports from all of its main trading partners also fell in 2009; the biggest decline was in imports from Hong Kong, which fell by 24.8% (Table 1-3-3).

Table 1-3-3 Taiwan's Trade with Its Main Trading Partners in 2009

Units: US\$ millions; %

Country / Region	Exports			Imports			Trade Surplus / Deficit	
	Amount	Share of Total	Annual Growth Rate	Amount	Share of Total	Annual Growth Rate	Amount	Annual Growth Rate
Total	203675	100.00	-20.30	174371	100.00	-27.50	29304	93.00
China (inc. Hong Kong)	83696	41.10	-15.90	25554	14.70	-22.30	58142	-60.80
China	54249	26.60	-18.90	24423	14.00	-22.20	29825	-16.00
Hong Kong	29445	14.50	-9.90	1123	0.60	-24.80	28323	-9.20
U.S.A.	23553	11.60	-23.50	18154	10.40	-31.00	5399	20.90
Japan	14502	7.10	-17.40	26320	20.80	-22.10	-21718	25.00
Singapore	8614	4.20	-26.20	4809	2.80	-0.30	3805	-44.50
South Korea	7303	3.60	-16.10	10507	6.00	-20.20	-3204	28.20
Other	66007	32.40	-24.40	79127	45.40	-32.40	-13120	55.80

Notes: 1. Total exports = exports + re-exports; total imports = imports + re-imports

2. The figures for total imports and total exports may not add up exactly to the corresponding figure for total foreign trade due to rounding.

Source: Ministry of Finance, *Customs Import/Export Trade Statistics Bulletin* for December 2009 (published on Jan. 7, 2010).

China (including Hong Kong) accounted for 41.1% of Taiwan's exports in 2009, up from 39.0% in 2008, although in absolute terms the value of exports from China fell by 15.9%. Imports from China (including Hong Kong) accounted for 14.7% of total imports; the absolute value of imports fell by 22.3%.

7. The Central Government's Finances are Improving Slightly

Central government revenue fell slightly in 2010, declining to around NT\$1.5 trillion, although expenditure also fell, to approximately NT\$1.7 trillion. With the global economy starting to pick up again, and with the various economic stimulus measures implemented by the government starting to show results, 2010 is expected to see a slight improvement in the government's budget deficit, from NT\$391.4 billion in 2009 to NT\$355.0 billion in 2010 (Table 1-3-4).

8. High Unemployment and Stagnant Wages

As a result of the global economic downturn, the unemployment rate in Taiwan remained high throughout 2009, rising to just over 6% in July and to 6.13% in August; the whole-year average for 2009 was 5.85%. While the unemployment rate fell slightly in 2010, it remained high; the overall picture was that of a "jobless recovery."

The average regular salaries of employed persons in Taiwan fell slightly in the first three quarters of 2009, again due to the global economic downturn; the fourth quarter saw a slight

improvement. Average regular salaries in November 2009 were 1.36 percentage points higher than in November 2008 – the first real sign of growth since the crisis began. However, whole-year average monthly wages for 2009 were 1.55% lower than in 2008, the fourth biggest decrease since records began. As the economy has started to pick up again in 2010, the situation has improved somewhat.

Table 1-3-4 The State of the Central Government's Finances, 2005–2009

Unit: NT\$ billions

Year	Indicator	Budget (Settled Account of Expenditures)		Budget Surplus	Budget	
		Revenue	Expenditure		Regular Budget	Special Budget Appropriations
2005		14,645	15,670	-2,034	-1,025	-1,009
2006		15,464	15,298	-943	166	-1,109
2007		16,354	15,520	-125	834	-959
2008		16,203	17,117	-2,364	-914	-1,450
2009		16,751	18,097	-3,914	-1,346	-2,568
2010		15,522	17,150	-3,550	-1,628	-1,922

Notes: 1. The data given for the Budget (Settled Account of Expenditure) represent the approved budget for the years 2005 – 2008 and the legally authorized budget for the years 2009 – 2010.

2. The data given for Special Budget Appropriations represent the approved special budget for the years 2005 – 2008, the legally authorized special budget for 2009, and the proposed special budget for 2010.

Source: DGBAS, Executive Yuan, *2010 Central Government Budget – Results of Budget Review by the Legislative Yuan* press release, issued on January 12, 2010.

IV SMEs' Response and Transformation

Although the global economy gradually started to pick up again in the second half of 2009, the impact of the financial crisis that began in the second half of 2008 was so great that Taiwan's overall economic performance in 2009 (on a whole-year basis) was significantly inferior to previous years. Taiwan's economy is closely integrated with the global economy, and the performance of Taiwanese companies in 2009 was disappointing, with SMEs being no exception; the number of SMEs, their total sales, domestic sales, export sales, and the number of jobs in the SME sector all fell compared to 2008.

Most business enterprises responded to the global economic downturn by streamlining their operations, cutting costs, or adopting a low-price strategy while waiting for the economy to pick up again. The impact of the extended downturn can be compared to a huge wave washing away the sand on a beach; falling market demand had led to a rapid intensification of competition, leading many enterprises to resort to competing on price.

1. Understanding and Responding to New Trends – Focusing on Change and Transformation

Broadly speaking, the most important trends in business development over the past two decades have been the process of economic globalization and the rapid evolution of information and communications technology (ICT). These trends have transformed the production and operations models that business enterprises use, and have driven the development of a global division of labor and global economic integration, while speeding up the rate at which the diffusion of knowledge, technology and information takes place. One effect of these changes has been excessively high levels of production and exportation of low-priced goods by low-income nations,

causing the price of these low-end products to fall dramatically. The enterprises concerned generally make only relatively low returns, and their employees are badly paid; however, this trend, combined with the rising price of raw materials and energy has put the advanced nations under pressure to upgrade and transform their industrial structures. At the same time, the speed of innovation has steadily grown more rapid, and product lifecycles have become shorter. Innovation and R&D have become the key factors influencing competitiveness, and the economy as a whole has entered a new era of the “knowledge economy.” Knowledge-intensive enterprises, and high-end manpower, have been able to earn higher returns. The steadily growing scale of global industrial production has exacerbated the problem of global warming, while the emergence of the knowledge economy has made the problem of the inequitable division of wealth within society even more severe, creating the “M-shaped society” in which society becomes polarized into high-income and low-income segments, while the middle class gradually disappears.

Besides affecting the production aspect of business enterprises’ operations, these important trends have also transformed consumer demand, and this process is continuing today. While the bursting of the global asset bubble and the dramatic contraction in global demand that results from it represented an unprecedented challenge for Taiwan’s SMEs, if SMEs can succeed in identifying the major trends that are starting to emerge, this will help them find opportunities to transform themselves and avoid falling behind the times.

There are many long-term trends that have not been affected by the global economic downturn. These include the trend towards smaller families, aging populations, growing environmental consciousness, resource shortages, and the intensification of market competition.

Taking the trend towards smaller families as an example, the advanced nations have been living with falling birthrates for many years. In Taiwan, the problem has come on more suddenly; today, Taiwan has one of the lowest total fertility rates in the world.

While those markets relating to children and young people are shrinking, the aging of the population is creating increased demand for products and services relevant to elderly people. In Japan, people over the age of 65 already account for 20% of the total population; in Taiwan, the percentage reached 10% in 2007, and is expected to keep rising over the next two decades.

Global warming has made energy saving and carbon reduction a hot topic. The introduction of new environmental regulations and directives is already having a direct impact on business; for example, the various environmental directives and standards promulgated by the European Union and by individual countries have directly affected both production and international trade.

2. Trends in Enterprises’ Business Models

Globalization has already transformed the production models of Taiwan’s SMEs. Whereas in the past SMEs had relied on trading companies, or undertaken OEM production for other manufacturers, they have now become integrated into global logistics models based on international resource integration; this transformation, which has taken place over the past decade or so, is one with which everyone is already familiar. In addition, however, the growth of the Internet and increased demand for innovation that the era of the knowledge economy has brought

with it (including both innovation content and innovation speed) has led enterprises to adopt new kinds of R&D and innovation models, new information models, and new marketing models. These are changes that SMEs cannot afford to ignore.

As far as R&D and innovation models are concerned, given the shorter product lifecycles that predominate today, it is no longer enough for enterprises to rely on their own in-house R&D capabilities; they need to make use of external R&D resources so as to speed up the innovation process. There are various ways in which firms can access external R&D capabilities: making use of overseas R&D resources (e.g., by establishing R&D and design centers overseas, so as to benefit from the creativity and talent of overseas R&D talent), making effective use of the national innovation system (e.g., by collaborating with universities and research institutes on technology development and R&D projects), commissioning other private-sector enterprises, research facilities and specialists to undertake R&D and innovation on their behalf, and by leveraging consumers' innovative ideas (by establishing consumer networks, or encouraging consumers to participate in the innovation process). Besides the trend for R&D and innovation models to become more collaborative and demand-oriented, there has also been a trend towards "destructive innovation"; rather than seeking to develop technology that is superior to what the market currently demands, the aim is to completely redefine market demand, identifying areas where demand is simply not being met at present and then developing technology that will meet these needs.

As regards information models, with the evolution of ICT and the growth of the Internet, the scope of enterprise e-enablement has already expanded from internal management to include e-commerce, and from B2B or C2C models that utilize a one-directional flow of information towards "Web 2.0" with its emphasis on proactive user participation and information sharing. Blog-based marketing is an example of a community-type business model that makes extensive use of information provided by consumers. Using the Internet, SMEs can achieve more intensive interaction with consumers, including not only the acquisition of information about consumer needs, but also the establishment of strong brand image in the "virtual market."

Having experienced the impact of globalization, Taiwan's SMEs have already begun to pay more attention to branding and marketing, a development which is reflected in the emergence of large numbers of specialist trading companies and new brands. The global economic downturn has created conditions conducive to the expansion of franchise-type business models, which constitute an important means for SMEs to build joint brands and collaborative distribution networks. At the same time, the integration of the Internet with physical distribution networks has stimulated an ongoing process of Web service innovation. The "stay-at-home economy" represents one of the most important new market segments that are emerging; advertisements in almost all media now make extensive use of terms like "online," "keyword search," and "web address." The formation of online consumer cooperatives to undertake bulk-buying has created immense online purchasing power and negotiating power. Overall, the Internet has evolved into a very important marketing medium and distribution channel.

The Internet has gone a long way towards lowering the barriers to entry in business. SMEs that lack the resources to establish a physical distribution network can leverage the Internet to distribute their products, while the C2C online auction market includes many participants who are

effectively operating as a business enterprise. It is important to note that the C2C transaction model is not confined to the virtual world of the Internet; C2C transaction platforms are also appearing in physical distribution (for example, in the shape of “micro-store” businesses). The greater transparency that this form of transaction model provides is helping to drive the growth of the micro-enterprise sector.

3. Trends in Product and Service Value Creation

Prior to the global financial crisis, consumption patterns were already being affected by the emergence of the highly polarized “M-shaped society.” The crisis, which led a pronounced reduction in the wealth of large numbers of middle-class households, has stimulated a new emphasis on simplicity and frugality. People are saving more, and adopting new lifestyles that give more weight to the cultural, ethical and moral significance of money and wealth. Reasonably-priced, practical, quality products have become the mainstream. Companies that embody these traits – such as Wal-Mart and Japan’s Uniqlo – have been able to grow despite the crisis. Websites devoted to DIY have become popular, and the new emphasis on destructive innovation has led to the identification of whole new market segments; examples would include ASUS’s Eee PC, which eliminates all unnecessary functions, and the growth of low-priced, no-frills hairdressing salons. Low-priced, market destruction initiatives of this kind have proved very successful.

At the same time, the growth of consumer environmental consciousness (one of the long-term trends discussed above) has created a steadily growing market for environmentally-friendly products and services. To strengthen their “green” corporate image and meet consumers’ needs, enterprises are willing to use recycled products (such a recycled paper and textile products made from recycled PVC), even if they cost more, and to manufacture products that have less of a negative impact on the environment (such as energy-saving products, products that use less packaging, and products made from materials that break down easily when disposed of), as well as developing new types of product based around “green” concepts, such as new bicycle products, thereby creating new market opportunities. Besides moving up towards high-end products, companies are also developing new business opportunities in peripheral services (even car advertisements are linked with bicycles) to extend the “green,” leisure-oriented image. In addition, the wealth destruction resulting from the global financial crisis has led to a boom in all kinds of “second-hand” business. Given how well it conforms to environmental concepts, this has significant potential to become a major new source of business opportunities.

The growth of the Internet and of interactivity and sharing has also affected the way that product and service value are presented. Although e-commerce still has something of a “cheap” image, there is no ignoring the fact that the bidirectional character of e-commerce has created a situation where the provision of information about needs by buyers (and buyers’ active search for the products they want) has significantly reduced the need for, and cost of, intermediary “middleman” services. It can therefore be assumed that the trend towards lower prices will continue, so that the only way to create value from products and services will be through innovation (including technology innovation and the integration of “cultural and creative” elements) and the establishment of a strong brand image.

4. A Strengthening of the Industry Cluster Effect

Whether a country is able to achieve international competitiveness depends to a large extent on how successful that country has been in developing industry clusters; this is how leading management theorist Michael Porter described the importance of the industry cluster effect.

Industry clusters have in the past always been one of the main sources of competitive advantage for Taiwanese industry, and well as helping to drive innovation and productivity growth. In the World Economic Forum's *Global Competitiveness Report*, Taiwan ranked number one in the world in terms of the state of cluster development for three years in a row, Taiwan's most impressive performance for any competitiveness sub-item. Taiwan has won a global reputation as a model of industry cluster development.

As Taiwan responded to the globalization of industrial competition and the transformation of the division of labor within Asia, a wide range of different types of industry cluster have emerged in Taiwan. In spatial terms, Northern Taiwan has the main electronics and IT clusters, Central Taiwan is a center for precision machinery manufacturing, and Southern Taiwan has the iron and steel and electromechanical equipment clusters. There are also numerous smaller, local clusters, such as the screw and nut manufacturing cluster at Kangshan (a "hybrid assembly operations cluster"), the ceramics industry at Yingko (a "service innovation cluster"), and the Nangang Software Park (a "hi-tech niche industry cluster") and Huashan Creative Park in Taipei.

Besides its hi-tech industry clusters, Taiwan has also been working actively to develop "traditional industry" clusters, including clusters that seek to integrate handicrafts, local culture and aesthetics into their product and service provision. These clusters help to stimulate regional economic growth, and also to create jobs. Examples include the digital content and ceramics industries in the Taipei area, the optical disc drive, automotive and glass manufacturing industries in Hsinchu, the bicycle, precision machinery and musical instrument industries in Taichung, and the TFT-LCD, IC and textile and garment manufacturing industries in Tainan County.

As part of its efforts to stimulate closer collaboration between the up-, mid- and downstream segments of the value chain, in the last few years the Ministry of Economic Affairs (MOEA) has implemented a number of industry cluster development guidance plans, intended to speed up the formation of new clusters and the growth of existing clusters. In both hi-tech industries and traditional local industries, there is significant potential for the enhanced integration of local resources to get SMEs working together more closely as members of industry clusters.

The MOEA is currently promoting the SME Cluster Innovative, Integrated Services Development Plan over the period 2008–2011. The plan is to help SMEs to develop hi-tech, knowledge-intensive and high-value-added industry clusters. The government's i-Taiwan 12 Projects also includes a plan to promote the development of a hi-tech industry cluster in Central Taiwan, with the aim of creating a unified, high-value-added industry cluster that integrates R&D, innovation and manufacturing.

5. Maintaining an Optimistic Outlook and Finding Ways to Respond to the Changing Environment

It can be seen from the overview presented above that the global financial crisis has not halted the long-term changes taking place in the economy and in society, including the impact of the trend towards smaller family size on industry, the new business opportunities being created by the aging of the population structure, the emphasis on energy conservation and environmental protection, and the rise in consumers' environmental consciousness and "green lifestyles." All of these are trends that SMEs will need to keep an eye on, making adjustments to their business strategy as necessary.

The global crisis has also led to the emergence of several new trends, including a renewed focus on simplicity and frugality, higher savings rates, and the advocacy of new lifestyles that emphasize spirituality and culture. The center of gravity in consumption is shifting towards low-priced, practical, high-quality products, as well as products that integrate cultural and creative elements; at the same time, there is also a trend towards the development of technologies suited to market needs, a de-emphasizing of unnecessarily complex and "over-designed" products, and the introduction of low-priced, "destructive innovation" in services. One important point is that if, as seems likely, these effects of the global financial crisis turn out not to be short-term in nature, then SMEs will need to take them into account when formulating their product and service development strategies in the medium term. Another significant point is that the government has responded to the changing business environment by introducing a range of new guidance measures and making resources available for business enterprises to make use of.

The "reshuffling of the deck" that has taken place in industry as a result of the global financial crisis and the new industrial development strategies that have been adopted by governments around the world have also created significant new opportunities. For example, in the wake of the financial crisis, the U.S. and several other countries have made a decision to transform their industrial structure by increasing investment in the energy industry. According to data published by the United Nations in January 2010, as of June 2009, the share of GDP accounted for by investment in the "green energy" industry was 0.7% in the U.S., 0.2% in the E.U., and 0.8% in Japan. In China and South Korea, which are seeking to reduce their reliance on hydrocarbons, the percentage is even higher, at around 3%.

Looking ahead to the future, we can expect to see continued development of new Internet applications and functions, which will make it easier for SMEs to get closer to the consumer. Judging from the growing power of online communities, in the future SMEs will need to pay more attention to consumer-oriented information, and will need to engage in interaction and sharing with consumers using online platforms. This does not only apply to consumption; enterprises will also need to take consumers' views into account at the innovation stage. To speed up innovation, identifying potential sources of innovation outside the organization will become increasingly important; SMEs should try to make effective use of collaboration with universities and research institutes, and with specialist R&D and design firms, in order to speed up innovation, keep pace with change, and seize opportunities for transformation.

CHAPTER 2

Major Trends in the Development of SMEs

In the first half of 2009, the whole world was still feeling the impact of the global financial crisis, with a continuing, worsening economic downturn and rising unemployment. By the second half of the year, the policies adopted by individual national governments to shore up the markets were starting to take effect, and the global economy as a whole began to show signs of recovery. Benefiting from the incipient global recovery, Taiwan saw a substantial increase in the economic growth rate in the fourth quarter of 2009; as a result, in terms of the whole-year figure, the Taiwanese economy contracted by only 1.91% in 2009.

Despite the slight improvement in the economic environment, the overall performance of the Taiwanese economy in 2009 was worse than in previous years. The data showed a decline in the number of business enterprises in Taiwan and in business enterprises' total sales (including domestic sales and export sales) compared to 2008; the total number of employed persons and the number of paid employees also fell. In the SME sector, the number of enterprises, total sales, export sales and domestic sales all fell in 2009 compared to the previous year; exports declined most dramatically, by 19.96%. The large enterprise sector also saw a decline in the number of enterprises and in total sales that was even more pronounced than in the SME sector. In terms of the number of employed persons and the number of paid employees, both SMEs and large enterprises experienced a decline in 2009 compared to 2008; here again, the decline was greater among large enterprises than in the SME sector. It can thus be seen that employment was a serious issue in Taiwan in 2009 (Table 2-0-1).

The data presented in this chapter for the number of SMEs in Taiwan and total SME sales are based on Value added sales tax data compiled by the Tax Data Center, Ministry of Finance. As these data do not include the number of employees working in each enterprise, for the purposes of determining the number of enterprises and total sales the definition of SMEs is based on capitalization and annual sales.

When using capitalization and sales as the benchmark for determining SME status, there is a possibility that an enterprise that would still be classed as a SME in terms of the number of employees may post annual sales in excess of NT\$100 million when the economy is booming, and as a result that enterprise is classed as a large enterprise. When the economy is in a less healthy state or the enterprise is not performing as well, its annual sales may fall under the NT\$100 million mark, causing it to be classed as a SME again. This point should be borne in mind when using the statistical data presented in this chapter.

In the following sections we examine the scale (in terms of the number of enterprises, total annual sales, domestic sales, export sales, etc.) and industry structure of Taiwan's SME sector, as well as undertaking comparisons based on the changes seen from year to year. For details of the sources used to determine the number of employed persons and number of paid employees, see

Part 1, Chapter Four of this White Paper. For more detailed statistical data, broken down by industry, scale of operations and geographical location (county and city), and for more detailed information relating to the manufacturing sector and female-owned enterprises, see the SME statistical data tables for 2009 presented in Appendix C.

Table 2-0-1 The Number of Enterprises in Taiwan, Their Annual Sales, the Number of Employed Persons and the Number of Paid Employees in 2009

Units: enterprises; NT\$ millions; thousand persons; %

Indicator \ Enterprise Size	All Enterprises	SMEs	Large Enterprises
No. of enterprises	1,258,260	1,232,025	26,235
Share of total	100.00	97.91	2.09
Annual growth rate	-0.44	-0.22	-9.84
Total annual sales	29,981,803	9,189,463	20,792,340
Share of total	100.00	30.65	69.35
Annual growth rate	-14.92	-12.17	-16.08
Domestic sales	22,179,910	7,873,111	14,306,799
Share of total	100.00	35.50	64.50
Annual growth rate	-13.91	-10.72	-15.57
Export sales	7,801,893	1,316,352	6,485,541
Share of total	100.00	16.87	83.13
Annual growth rate	-17.67	-19.96	-17.19
No. of employed persons	10,279	8,066	1,173
Share of total	100.00	78.47	11.41
No. of paid employees	7,889	5,679	1,171
Share of total	100.00	71.98	14.84

Note: The figures (and percentages) given in the table for the number of employed persons and number of paid employees working in all enterprises include 1,040,000 government employees, accounting for 10.11% of all employed persons and 13.18% of all paid employees.

Sources: 1. Ministry of Finance Tax Data Center, VAT data for 2009.

2. DGBAS, *Monthly Bulletin of Manpower Statistics*, 2009.

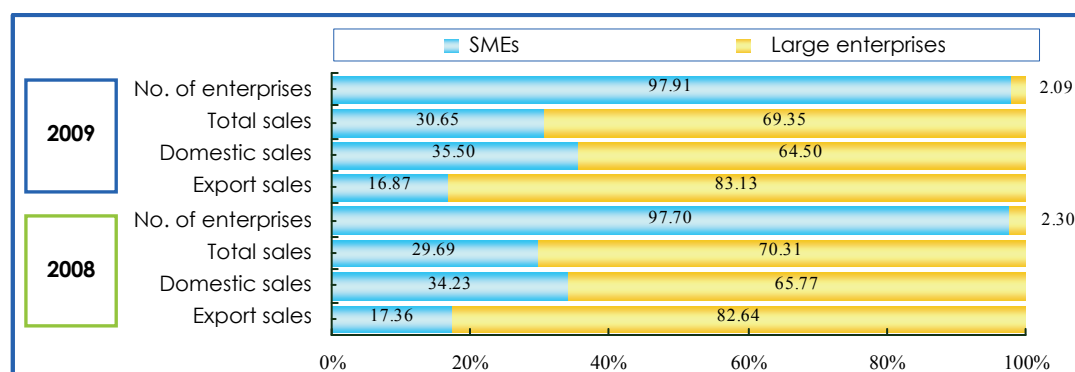
I The Number of SMEs in Taiwan

1. In 2009, 97.91% of All Business Enterprises in Taiwan were SMEs; More Than 80% of SMEs were in the Service Sector

As of 2009, there were a total of 1,232,025 SMEs in Taiwan; this figure represented a decline of 2,724 enterprises (0.22%) compared to 2008. In 2009, SMEs accounted for 97.91% of the total number of business enterprises in Taiwan (1,258,260 enterprises). This figure represented an increase of 0.21 percentage points compared to 2008, when the SMEs' share stood at 97.70%; this was mainly due to the decline in the number of large enterprises, which fell by 9.84% to 26,235 enterprises in 2009, a more pronounced decline than was seen in the number of SMEs (Table 2-1-1 and Figure 2-1-1).

As regards the breakdown of the SME sector by industry, in 2009 there were 989,906 SMEs in the service sector, accounting for 80.24% of all SMEs; this figure represented a decline of 1,356 enterprises (0.13%) compared to 2008. The number of SMEs in the manufacturing and construction sector stood at 230,990 in 2009, accounting for 18.75% of all SMEs in Taiwan, and representing a 0.66% decline compared to 2008. There were 11,129 SMEs in the agricultural sector in 2009 (0.90% of all SMEs), 1.41% up on 2008 (Table 2-1-1).

Over the past six years, the service sector has consistently accounted for more than 80% of all SMEs in Taiwan (Table 2-1-1). The slight decline in the service sector's share in recent years is attributable mainly to the fall in the number of SMEs in the wholesaling and retailing industry.

Figure 2-1-1 The Shares of Key Performance Indicators Held by SMEs and Large Enterprises, 2008–2009

Source: Ministry of Finance Tax Data Center, VAT data for 2009.

Table 2-1-1 The Shares of All SMEs in Taiwan Held by Individual Sectors and Key Industries, 2004–2009

Units: enterprises; %

Sector/Industry	Year	2004	2005	2006	2007	2008	2009
All SMEs		1,176,986	1,226,095	1,244,099	1,237,270	1,234,749	1,232,025
Annual growth rate		2.60	4.17	1.47	-0.55	-0.20	-0.22
Total (all sectors)		100.00	100.00	100.00	100.00	100.00	100.00
Agricultural sector		0.91	0.91	0.88	0.87	0.89	0.90
Industrial sector		18.24	18.11	18.13	18.79	18.83	18.75
Manufacturing		11.31	10.94	11.64	10.77	10.68	10.55
Construction		6.76	7.01	7.34	7.37	7.47	7.51
Service sector		80.85	80.98	80.99	80.33	80.28	80.24
Wholesaling and retailing		53.25	53.14	52.86	52.87	52.51	52.13
Hotel and restaurant		7.81	8.33	8.62	8.79	8.92	9.21

Source: Ministry of Finance Tax Data Center, VAT data for 2004–2009.

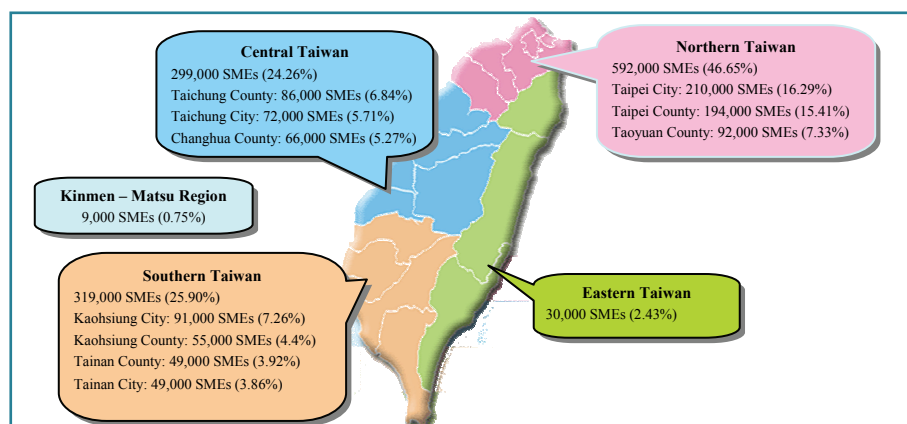
2. Taiwan's SMEs are Heavily Concentrated in the Major Cities on the West Coast, and in Their Satellite Cities and Counties

In 2009, the 10 counties and cities that had the largest number of SMEs comprised mainly the major metropolitan areas on Taiwan's west coast and their satellite cities and counties. Taipei City had the largest number of SMEs, at 200,748, representing 16.29% of all SMEs in Taiwan. Taipei County was in second place with 193,868 SMEs (15.41% of the total), followed by Taoyuan County with 92,199 SMEs (7.33% of the total); Taoyuan County now has more SMEs than Kaohsiung City, which has 91,408 SMEs (Figure 2-1-2).

Taiwan's large enterprises are all heavily concentrated in Northern Taiwan. Taipei City has the most (with 9,137), followed by Taipei County with 4,017, and Taoyuan County with 2,160.

In regional terms, in 2009 46.65% of Taiwan's SMEs were concentrated in Northern Taiwan; 24.26% were located in Central Taiwan and 25.90% in Southern Taiwan (Figure 2-1-2). The concentration in Northern Taiwan was even more marked in the case of large enterprises; 64.80% of Taiwan's large enterprises were based in Northern Taiwan in 2009.

Figure 2-1-2 The Distribution of SMEs by Region, and the Counties/Cities with the Largest Shares of SMEs, in 2009



Note: Northern Taiwan includes Taipei City, Taipei County, Keelung City, Ilan County, Taoyuan County, Hsinchu City, and Hsinchu County. Central Taiwan includes Miaoli County, Taichung City, Taichung County, Changhua County, Nantou County and Yunlin County. Southern Taiwan includes Chiayi City, Chiayi County, Tainan City, Tainan County, Kaohsiung City, Kaohsiung County, Pingtung County and Penghu County. Eastern Taiwan includes Hualien County and Taitung County. The Kinmen-Matsu Region includes Kinmen County and Lienchiang County.

Source: Ministry of Finance Tax Data Center, VAT data for 2009.

3. 57.21% of Taiwan's SMEs are Sole Proprietorships

Sole proprietorships constituted the largest group of SMEs, at 57.21% of the total, followed by limited corporations, with 344,688 firms (27.98% of the total), and corporations limited by shares, with 113,217 firms (9.19%). These three types accounted for a combined total of 94.38% of all SMEs in Taiwan; none of the other forms of enterprise organization accounted for more than a very small share of the total (Table 2-1-2).

Table 2-1-2 Business Enterprises in Taiwan by Form of Organization, 2008–2009

Units: enterprises; %

Form of Organization	2008				2009			
	SMEs	Share of Total	Large Enterprises	Share of Total	SMEs	Share of Total	Large Enterprises	Share of Total
Total	1,234,749	100.00	29,097	100.00	1,232,025	100.00	26,235	100.00
Corporation limited by shares	114,186	9.25	17,516	60.20	113,217	9.19	16,121	61.45
Limited corporation	342,688	27.75	6,385	21.94	344,688	27.98	5,346	20.38
Unlimited corporation	53	0.00	2	0.01	46	0.00	3	0.01
Unlimited corporation with limited liability shareholders	15	0.00	0	0.00	13	0.00	0	0.00
Partnership	19,367	1.57	63	0.22	19,786	1.61	62	0.24
Sole proprietorship	712,689	57.72	157	0.54	704,885	57.21	119	0.45
Foreign company	3,012	0.24	671	2.31	3,038	0.25	622	2.37
Representative office of foreign company	122	0.01	25	0.09	118	0.01	22	0.08
Branch office	26,290	2.13	2,638	9.07	27,818	2.26	2,341	8.92
Other	16,327	1.32	1,640	5.64	18,416	1.49	1,599	6.09

Source: Ministry of Finance Tax Data Center, VAT data for 2009.

The situation with regard to the organizational structure of large enterprises in Taiwan is significantly different. Corporations limited by shares represent the biggest group of large enterprises, at 61.45% of the total, followed by limited corporations, at 20.38%, and branch

offices, at 8.92%. Between them, these three categories account for 90.75% of all large enterprises in Taiwan (Table 2-1-2).

4. An Increase in the Share of SMEs Managing to Stay in Business for an Extended Period

In 2009, 7.19% of Taiwan's SMEs were new start-ups that had been in existence for less than one year. 32.89% of SMEs had been operating for less than 5 years, and 46.12% had been in existence for more than 10 years (Table 2-1-3). Among large enterprises, only 0.85% of enterprises were newly-established firms that had been in existence for less than one year; 12.72% of large enterprises had been operating for less than 5 years, and 66.12% had been in existence for more than 10 years. This figures show that, while SMEs display more flexibility than large enterprises in terms of market entry and exit, nevertheless, fewer SMEs have stayed in business for over 10 years.

Table 2-1-3 The Share of All SMEs Held by SMEs of Particular Ages over the Period 1995–2009

Year	Age	Less than 1 Year	1 – 2 Years	2 – 3 Years	3 – 4 Years	4 – 5 Years	5 – 10 Years	10 – 20 Years	Over 20 Years
1995		10.15	10.31	8.77	8.40	6.28	20.66	26.58	8.84
1996		9.30	10.02	8.47	7.36	7.24	20.72	27.26	9.63
1997		10.19	8.91	8.09	7.02	6.25	21.62	24.80	13.11
1998		9.94	9.77	7.23	6.83	6.03	21.68	24.31	14.22
1999		9.50	9.61	7.93	6.09	5.92	22.06	23.91	15.00
2000		9.04	9.27	7.86	6.72	5.30	22.57	23.58	15.66
2001		8.79	8.68	7.60	6.69	5.85	21.89	24.17	16.33
2002		8.28	8.51	7.01	6.39	5.78	21.16	25.26	17.61
2003		9.30	9.40	7.41	5.97	5.15	20.57	23.97	18.23
2004		10.17	8.79	7.73	6.32	5.18	19.83	23.71	18.28
2005		10.22	8.81	7.75	6.37	5.19	19.83	23.63	18.20
2006		8.71	9.69	7.35	6.69	5.64	19.87	23.32	18.73
2007		7.51	8.57	8.09	6.31	5.86	20.11	23.97	19.58
2008		6.99	7.25	7.34	7.08	5.61	20.64	24.63	20.47
2009		7.19	6.76	6.16	6.45	6.33	21.01	25.10	21.02

Note: From 2005 onwards, the data includes SMEs located in Lienchiang County.
Source: Ministry of Finance Tax Data Center, VAT data.

Examination of the changes in the percentage of SMEs that have been in business for a particular length of time shows that, during the 15-year period from 1995 to 2009, the percentage of newly-established SME start-ups (as a share of all SMEs) peaked in 2005 at 10.22%, and was at its lowest in 2008, at 6.99%. The percentage of SMEs that had been in existence for over 20 years was only 8.84% in 1995, but since then it has gradually risen, climbing to 21.02% by 2009 (Table 2-1-3).

II SMEs' Sales Performance

According to VAT data, in 2009 SMEs accounted for 30.65%, 35.50% and 16.88%, respectively, of the total sales, domestic sales and export sales of all business enterprises in Taiwan. The changes in the sales structure of Taiwan's SME sector are outlined below:

1. SMEs Account for Around 30% of the Total Sales of All Business Enterprises in Taiwan; the Wholesaling and Retailing Industry Accounts for the Largest Share of SME Sales

In 2009, the total sales of all business enterprises in Taiwan came to NT\$29,981.8 billion, representing a 14.92% decline compared to 2008. SMEs' sales totaled NT\$9,189.5 billion, 12.17% down on 2008, while large enterprises posted total sales of NT\$20,792.3 billion; 16.08% down on 2008. As a result, SMEs' share of the total sales of all business enterprises rose from 29.69% in 2008 to 30.65% in 2009 (Table 2-1-1 and Table 2, Appendix C).

Viewed in terms of individual sectors, more than half (53.96%) of SMEs' total sales in 2009 were derived from the service sector, with the manufacturing and construction sector accounting for another 45.85% and the agricultural sector for just 0.18%. Both the service sector and the manufacturing and construction sector saw a decline in sales in 2009 compared to the previous year, while the agricultural sector posted an increase (Table 2-2-1).

Table 2-2-1 The Shares of Total Sales Held by SMEs in Individual Sectors and Key Industries, 2004–2009

Units: NT\$ millions; %

Sector/Industry	Year	2004	2005	2006	2007	2008	2009
Total sales (all SMEs)		9,726,721	10,000,220	10,241,215	10,481,910	10,462,696	9,189,463
Annual growth rate		11.69	2.81	2.41	2.35	-0.18	-12.17
Total (all sectors)		100.00	100.00	100.00	100.00	100.00	100.00
Agricultural sector		0.14	0.14	0.14	0.15	0.16	0.18
Industrial sector		48.54	48.20	48.85	50.04	50.09	45.85
Manufacturing		37.24	36.75	37.11	38.39	38.24	34.07
Construction		10.82	10.94	11.22	10.69	10.89	10.82
Service sector		51.33	51.65	51.01	49.81	49.75	53.96
Wholesaling and retailing		37.43	37.95	37.41	37.27	37.14	39.77
Hotel and restaurant		2.01	2.07	2.12	2.16	2.25	2.65

Source: Ministry of Finance Tax Data Center, VAT data for 2004–2009.

Examination of the changes in SME sales by sector over the past six years shows that, in 2007, the service sector's share of SME total sales fell below 50% for the first time in many years, and also fell below the share held by the manufacturing and construction sector. This trend continued in 2008, but in 2009 the service sector's share of SMEs' total sales climbed back to 53.96%, while the share held by the manufacturing and construction sector dropped to 45.85%. Within the service sector, the wholesaling and retailing industry has always accounted for the largest share of total sales. In 2007 and 2008, a combination of rising oil prices, the impact of the global economic downturn, and a contraction in consumer spending within Taiwan led to a pronounced fall in both the number of enterprises in the wholesaling and retailing industry and the industry's total sales; this was the main factor that caused the service sector's share of total SME sales to fall for two years in a row.

2. The Wholesaling and Retailing Industry Accounted for a Higher Share of Total Domestic Sales Than Any Other Individual Industry

SMEs' share of domestic sales was highest in the service sector, at 57.46%; the corresponding figure for the manufacturing and construction sector was 42.35%. Total SME domestic sales in both the service sector and the manufacturing and construction sector fell in 2009 compared to 2008, while the domestic sales of SMEs in the agricultural sector rose. The service sector's share of total SME domestic sales has exceeded 50% for six consecutive years (Table 2-2-2).

Table 2-2-2 The Shares of Total Domestic Sales Held by SMEs in Individual Sectors and Key Industries, 2004–2009

Units: NT\$ millions; %

Sector/Industry \ Year	2004	2005	2006	2007	2008	2009
Total domestic sales (all SMEs)	8,278,347	8,481,397	8,678,992	8,842,983	8,817,989	7,873,111
Annual growth rate	12.16	2.45	2.33	1.89	-0.28	-10.72
Total (all sectors)	100.00	100.00	100.00	100.00	100.00	100.00
Agricultural sector	0.14	0.14	0.15	0.16	0.16	0.19
Industrial sector	45.26	44.37	45.00	46.14	46.05	42.35
Manufacturing	32.18	31.04	31.30	32.50	32.15	28.74
Construction	12.53	12.73	13.09	12.53	12.77	13.00
Service sector	54.60	55.49	54.85	53.71	53.79	57.46
Wholesaling and retailing	38.94	39.83	39.23	39.09	39.09	41.20
Hotel and restaurant	2.34	2.43	2.49	2.56	2.67	3.09

Source: Ministry of Finance Tax Data Center, VAT data for 2004–2009.

In 2009, domestic sales accounted for 85.68% of SMEs' total sales, with export sales accounting for 14.32%. By contrast, domestic sales' share of large enterprises' total sales was 68.81%, while export sales held a 31.19% share. It can thus be seen that, although the domestic market accounts for the bulk of sales for both large enterprises and SMEs, Taiwan's large enterprises are more export-oriented than its SMEs.

3. The Manufacturing Sector Accounts for 66% of SMEs' Export Sales

Taiwan's SMEs posted total export sales of NT\$1,316.4 billion in 2009, 19.96% down on 2008, and representing 16.88% of the total export sales of all business enterprises in Taiwan in 2009 (NT\$7,801.9 billion). Large enterprises' share of total export sales grew by 0.48 percentage points compared to 2008, to 83.12%. It can thus be seen that the impact of the global financial crisis, which led to a major contraction in the export sales of Taiwanese business enterprises in the first half of 2009, was felt more seriously by SMEs than by large enterprises (Table 2-0-1).

The manufacturing and construction sector accounted for the largest share of SME export sales in 2009, at 66.82%; the service sector's share was 33.03%. Over the past six years, the manufacturing and construction sector's relative contribution to overall SME export sales has increased steadily, while the service sector's contribution has fallen. However, 2009 saw a pronounced change in this regard, with the manufacturing and construction sector's share of total SME export sales falling from 71.77% to 66.82%, while the service sector's share rose from 28.12% to 33.03% (Table 2-2-3).

Table 2-2-3 The Shares of Total Export Sales Held by SMEs in Individual Sectors and Key Industries, 2004–2009

Units: NT\$ millions; %

Sector/Industry \ Year	2004	2005	2006	2007	2008	2009
Total export sales (all SMEs)	1,448,374	1,518,823	1,562,224	1,638,927	1,644,707	1,316,352
Annual growth rate	9.08	4.86	2.86	4.91	0.35	-19.96
Total (all sectors)	100.00	100.00	100.00	100.00	100.00	100.00
Agricultural sector	0.14	0.14	0.10	0.11	0.11	0.15
Industrial sector	67.25	69.61	70.25	71.09	71.77	66.82
Manufacturing	66.13	68.65	69.35	70.19	70.85	65.94
Service sector	32.61	30.25	29.64	28.79	28.12	33.03
Wholesaling and retailing	28.85	27.47	27.27	27.43	26.67	31.24

Source: Ministry of Finance Tax Data Center, VAT data for 2004–2009.

4. The Vast Majority of Newly-established Enterprises are SMEs; These Newly-established SMEs Derive Most of Their Revenue from Domestic Sales

For the purposes of this chapter, newly-established enterprises are defined as those that have been in existence for less than one year. In 2009, there were 88,531 newly-established SMEs in Taiwan, representing 99.75% of the total of 88,754 newly-established enterprises. Newly-established SMEs posted total sales of NT\$157.6 billion in 2009, accounting for 67.68% of the total sales of all newly-established enterprises; they posted domestic sales of NT\$147,318 million, representing 76.30% of the total domestic sales of all newly-established enterprises, and export sales of NT\$10,260 million, accounting for 26.82% of the export sales of all newly-established enterprises. Domestic sales represented 93.49% of the total sales of newly-established SMEs.

The data presented in Table 2-2-4 shows that, over the past six years, newly-established SMEs' shares of all newly-established enterprises, total sales, domestic sales and export sales reached their lowest point in 2008 before starting to rise again in 2009, probably reflecting the fact that the global economy started to pick up again in the second half of 2009, leading to a rise in exports and putting an end to the decline in consumer spending.

Table 2-2-4 The Number of Newly-established SMEs and Their Sales as a Percentage of the Total for All SMEs, 2004–2009

Units: enterprises; NT\$ millions; %

Item		Year					
		2004	2005	2006	2007	2008	2009
No. of enterprises	All SMEs	1,176,986	1,226,095	1,244,099	1,237,270	1,234,749	1,232,025
	Newly-established SMEs	109,883	125,313	108,320	92,956	86,325	88,531
	Newly-established SMEs as % of total	9.34	10.22	8.71	7.51	6.99	7.19
Total annual sales	All SMEs	9,726,721	10,000,220	10,241,215	10,481,910	10,462,696	9,189,463
	Newly-established SMEs	271,468	277,631	236,973	209,849	176,941	157,579
	Newly-established SMEs as % of total	2.79	2.78	2.31	2.00	1.69	1.71
Domestic sales	All SMEs	8,278,347	8,481,397	8,678,992	8,842,983	8,817,989	7,873,111
	Newly-established SMEs	242,473	256,192	221,496	192,999	165,219	147,318
	Newly-established SMEs as % of total	2.93	3.02	2.55	2.18	1.87	1.87
Export sales	All SMEs	1,448,374	1,518,823	1,562,224	1,638,927	1,644,707	1,316,352
	Newly-established SMEs	28,995	21,438	15,477	16,851	11,722	10,261
	Newly-established SMEs as % of total	2.00	1.41	0.99	1.03	0.71	0.78

Source: Ministry of Finance Tax Data Center, VAT data, consecutive years.

5. The Service Sector Accounts for the Largest Share of the Number of Enterprises, and of the Total Sales of Newly-established SMEs

In 2009 the service sector accounted for by far the largest share of the total number of newly-established SMEs in Taiwan (86.54% of the total), as well as the largest share of newly-established SMEs' total sales (83.97%), domestic sales (82.00%) and export sales (93.57%) (Table 2-2-5).

Table 2-2-5 The Number of Newly-established SMEs and Newly-established SME Sales Performance by Sector in 2009

Units: enterprises; NT\$ millions; %

Item	No. of Enterprises	Total Sales		Domestic Sales	Export Sales		
		Share of Total	Share of Total		Share of Total	Share of Total	
All sectors	88,754	100.00	232,822	100.00	193,088	39,734	100.00
Agricultural sector	425	0.48	502	0.22	485	17	0.04
Industrial sector	11,521	12.98	37,311	15.81	34,757	2,554	6.43
Service sector	76,808	86.54	195,511	83.97	158,331	37,180	93.57
Wholesaling and retailing	42,181	47.53	139,248	59.81	106,973	32,275	81.23

Source: Ministry of Finance Tax Data Center, VAT data for 2009.

In terms of individual industries, in 2009 the wholesaling and retailing industry accounted for the largest share of the total number of newly-established SMEs (47.53%), newly-established SMEs' total sales (59.81%), domestic sales (55.40%) and export sales (81.23%) (Table 2-2-5).

III The Number of Female-owned SMEs, and the Sales Performance of Female-owned SMEs

In this section, enterprises where the owner is a juridical person or foreigner have to be excluded from the calculations. In addition, it is not possible to eliminate those enterprises where a woman is the nominal owner but is not actually running the business, or where the female "owner" actually controls only a minority of the firm's shares. The number of female-owned SMEs in 2009, their sales structure, and the significant changes, are outlined below:

1. Female-owned Enterprises Account for Over 30% of All Business Enterprises in Taiwan

In 2009, there were 1,249,549 business enterprises in Taiwan for which the sex of the business owner could be determined. Of these, 444,906 (35.61% of the total) were owned by women. 17.88% of large enterprises were owned by women compared to 35.96% of SMEs. 99.01% (440,515) of female-owned enterprises were SMEs (Table 2-3-1).

2. 44% of Female-owned Enterprises Have Been in Existence for Over 10 Years

As of 2009, 7.82% of female-owned enterprises in Taiwan had been in existence for less than one year, compared to a figure of 6.60% for male-owned enterprises. 64.93% of female-owned enterprises had been in existence for over 5 years, and 43.62% for over 10 years; the corresponding percentages for male-owned enterprises were 69.11% and 48.30%, respectively (Table 2-3-2).

3. The Sales of Female-owned Enterprises Account for Less Than 20% of the Total Sales of All Business Enterprises

In 2009, Taiwan's female-owned business enterprises posted total sales of NT\$3,925.1 billion, accounting for 14.45% of the combined total for all business enterprises. Female-owned enterprises had domestic sales of NT\$3,271 billion (15.94% of the total for all enterprises), and

export sales of NT\$654 billion (9.85%). The female-owned enterprises' share of overall sales was far lower than the share held by male-owned enterprises. However, the shares of SME sales held by female-owned SMEs were somewhat higher, at 23.76% of SMEs' total sales, 24.62% of domestic sales and 18.32% of export sales (Table 2-3-1).

Table 2-3-1 Number of Enterprises and Sales Performance in 2009 – by Sex of Business Owner

Units: enterprises; NT\$ millions; %

Indicator	Enterprise Size		
	All Enterprises	SMEs	Large Enterprises
No. of enterprises	1,249,549	1,224,987	24,562
Female-owned enterprises	444,906	440,515	4,391
Share of total	35.61	35.96	17.88
Male-owned enterprises	804,643	784,472	20,171
Total sales	27,155,844	8,924,371	18,231,453
Female-owned enterprises	3,925,083	2,120,369	1,804,714
Share of total	14.45	23.76	9.90
Male-owned enterprises	2,3230,762	6,804,022	14,626,739
Domestic sales	20,518,184	7,710,720	12,807,464
Female-owned enterprises	3,271,033	1,898,034	1,373,000
Share of total	15.94	24.62	10.72
Male-owned enterprises	17,247,151	5,812,686	11,434,465
Export sales	6,637,660	1,213,671	5,423,989
Female-owned enterprises	654,049	222,335	431,714
Share of total	9.85	18.32	7.96
Male-owned enterprises	5,983,611	991,336	4,992,275

Notes: 1. Whether an enterprise should be classed as male-owned or female-owned was determined using the registered identity of the business owner.

2. The totals for all enterprises given in this table do not conform to those given in Table 2-1-1 because some enterprises are registered as being owned by other enterprises or by foreigners; these enterprises were excluded from the data used in this table.

Source: Ministry of Finance Tax Data Center, VAT data for 2009.

Table 2-3-2 Enterprise Age Structure in 2009 – by Sex of Enterprise Owner

Units: enterprises; %

Enterprise Age	All Enterprises		Female-owned Enterprises		Male-owned Enterprises	
	No. of Enterprises	Share of Total	No. of Enterprises	Share of Total	No. of Enterprises	Share of Total
Total	1,249,549	100.00	444,906	100.00	804,643	100.00
Less than 1 year	87,883	7.03	34,812	7.82	53,071	6.60
1 – 2 years	82,905	6.63	31,994	7.19	50,911	6.33
2 – 3 years	75,899	6.07	29,002	6.52	46,897	5.83
3 – 4 years	79,661	6.38	29,766	6.69	49,895	6.20
4 – 5 years	78,280	6.26	30,475	6.85	47,805	5.94
5 – 10 years	262,209	20.98	94,793	21.31	167,416	20.81
10 – 20 years	316,046	25.29	108,345	24.35	207,701	25.81
20 years or more	266,666	21.34	85,719	19.27	180,947	22.49

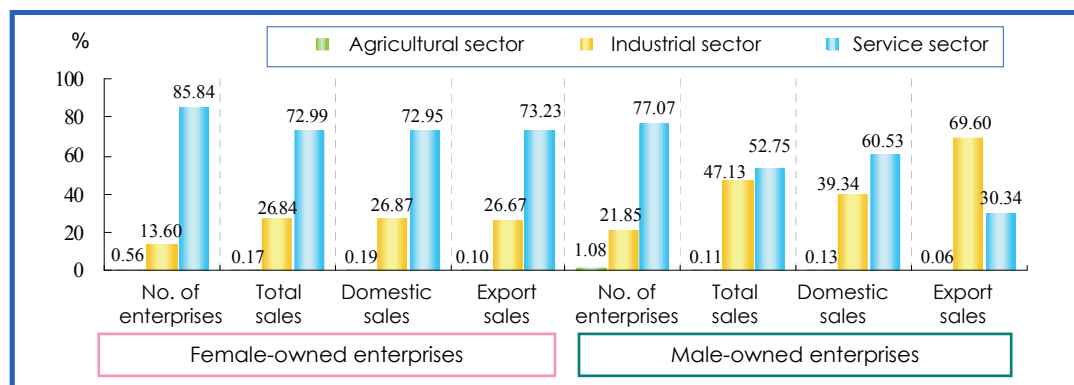
Notes and Source: See Table 2-1-1 above.

4. Female-owned SMEs are Heavily Concentrated in the Service Sector

The service sector accounts for the largest share of the total number of female-owned SMEs, and also for the largest share of female-owned SME total sales and domestic sales. The service sector's share of the total number of female-owned SMEs is particularly high, at 85.84%. While the service sector also accounts for a high percentage of male-owned SMEs, at 77.07%, the total sales of male-owned SMEs in the service sector are roughly equivalent to those in the manufacturing and construction sector, and the export sales of male-owned SMEs in the manufacturing and construction sector are significantly higher than those in the service sector,

with the manufacturing and construction sector accounting for 69.60% of the total export sales of all male-owned SMEs (Figure 2-3-1).

Figure 2-3-1 SME Performance Indicators in 2009 – by Sector and Sex of Enterprise Owner



Notes and Source: See Table 2-0-1 above.

IV Survey and Analysis of the Operational Status of Manufacturing Industry

To gain a clearer understanding of the current operational status of Taiwan's manufacturing industry, in July 2009 the Ministry of Economic Affairs undertook the *Survey of the Operational Status of Manufacturing Industry*. Questionnaires were submitted to a total of 3,100 firms; 2,889 completed questionnaires were returned, giving a completion rate of 93.19%. The survey results as they relate to production and marketing, operational trends, market development and exports, and human resources, are outlined below.

1. Production and Marketing

(1) Domestic Production Accounts for the Largest Share of Manufacturing Industry's Output

In 2008, Taiwanese manufacturing industry secured orders worth a total of NT\$20,391.1 billion. Large enterprises (defined as those with 200 or more employees) secured orders worth NT\$16,944.8 billion, which was significantly higher than the totals for medium-sized and small enterprises (defined as those with between 100 and 200 employees, and with less than 100 employees, respectively) (Table 2-4-1).

Domestic production accounted for 70.94% of manufacturing industry's total output, indicating that the core of Taiwanese manufacturing remains located in Taiwan. Of the 29.06% of total production that was undertaken overseas, China-based production accounted for the largest share (24.27%), followed, in order, by the U.S. (1.53%), Southeast Asia (1.08%), Europe (0.89%), and Japan (0.80%). The large share of China-based production reflects China's importance as Taiwanese manufacturing industry's main overseas manufacturing location.

Table 2-4-1 Domestic versus Overseas Production in Taiwan's Manufacturing Industry in 2008

Units: NT\$ billions; %

Item	Total	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
Total value of orders received	20,391.1	16,944.8	1,669.3	1,777.0
All production locations	100.00	100.00	100.00	100.00
Taiwan-based production	70.94	66.82	87.78	94.33
Overseas production				
Sub-total	29.06	33.18	12.22	5.67
China	24.27	28.23	6.50	3.22
U.S.A.	1.53	1.69	0.97	0.53
Southeast Asia	1.08	1.05	2.05	0.53
Europe	0.89	0.96	0.37	0.71
Japan	0.80	0.82	0.96	0.41
Other	0.49	0.43	1.36	0.26

Source: Survey of the Operational Status of Manufacturing Industry (2009).

(2) Production and Sales are Oriented More towards the Domestic Market

In 2008, domestic sales accounted for 54.43% of Taiwanese manufacturing industry's total sales, with export sales accounting for only 45.57%. In the case of medium-sized and small manufacturing firms, domestic sales' share of total sales was 59.13% and 59.93%, respectively, compared to 53.01% for large manufacturing firms (Table 2-4-2).

Table 2-4-2 Sales Destinations of Taiwan-based Output of Taiwanese Manufacturing Industry in 2008

Unit: %

Item	Total	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
Total sales flow	100.00	100.00	100.00	100.00
Domestic sales				
Sub-total	54.43	53.01	59.13	59.93
Private-sector factories	33.79	33.01	38.13	35.30
Wholesalers and retailers	13.68	13.31	13.88	16.06
Public-sector agencies	3.33	3.59	2.59	2.22
Consumers	1.72	1.47	2.37	2.86
Other	1.91	1.65	2.16	3.50
Export sales				
Sub-total	45.57	46.99	40.87	40.07
China	11.84	12.07	9.94	11.93
U.S.A.	10.44	10.62	9.56	9.99
Southeast Asia	7.72	8.13	7.02	5.59
Europe	6.30	6.54	6.33	4.61
Japan	3.61	3.57	3.95	3.61
Other	5.65	6.05	4.07	4.34

Source: Survey of the Operational Status of Manufacturing Industry (2009).

The largest share of manufacturing industry's domestic sales went to private-sector factories (33.79% of total domestic and export sales), followed by sales to retailers and wholesalers (13.68%) and sales to public-sector agencies (3.33%).

China was the main export market for Taiwanese manufacturing industry in 2008, taking 11.84% of total sales. The U.S. was the second most important export market, with 10.44%, followed by Southeast Asia with 7.72%, Europe with 6.30%, and Japan with 3.61% (Table 2-4-2). The U.S. and China were the most important export markets for manufacturing firms of all sizes; in every case these markets took around 10% of total sales (Table 2-4-2).

(3) Sources of Raw Materials for Manufacturing Industry – More than Half of All Raw Materials Used are Supplied from Within Taiwan

In 2008, 76.25% of Taiwanese manufacturing firms reported that raw materials accounted for over half of their total costs. Fluctuations in the price of raw materials can thus have a serious impact on the earnings performance of manufacturing enterprises. The share of enterprises reporting raw materials costs in excess of 50% of total costs was 79.71% in the case of small enterprises, compared to 70.59% for large enterprises (Table 2-4-3).

More than 56% of Taiwanese manufacturing industries use raw materials supplied from within Taiwan, with 44.36% relying on private-sector factories, while 4.63% are supplied with raw materials by wholesalers and retailers. 3.53% of manufacturing firms produce their own raw materials; only 1.87% of firms are supplied by public-sector agencies (Table 2-4-4).

Table 2-4-3 Raw Material Expenses as a Percentage of Total Costs in 2008

Unit: %

Item	Total	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
Total	100.00	100.00	100.00	100.00
Less than 50% of total costs	23.75	29.41	25.49	20.30
50% or more of total costs	76.25	70.59	74.50	79.71

Source: Survey of the Operational Status of Manufacturing Industry (2009).

Table 2-4-4 Sources of Raw Materials Used in Taiwan-based Production

Unit: %

Item	Total	Enterprise Size			
		Large Enterprises	Medium-sized Enterprises	Small Enterprises	
Total	100.00	100.00	100.00	100.00	
Domestic source	Sub-total	56.55	52.46	65.78	76.09
	Private-sector factories	44.36	41.79	48.94	57.67
	Wholesalers and retailers	4.63	3.70	6.96	8.85
	Produced in-house	3.53	3.46	4.58	3.07
	Public-sector agencies	1.87	1.51	3.41	2.94
	Other	2.17	2.00	1.89	3.56
Overseas source	Sub-total	43.45	47.54	34.22	23.91
	Japan	9.86	10.64	7.30	6.81
	Southeast Asia	4.90	5.06	5.43	3.32
	U.S.A.	4.84	5.01	4.94	3.54
	China	3.76	3.47	6.09	3.70
	Europe	3.74	4.13	2.17	2.42
	Other	16.35	19.21	8.29	4.11

Source: Survey of the Operational Status of Manufacturing Industry (2009).

Just under 44% of manufacturing enterprises use imported raw materials, with Japan being the single most important source (9.86%), followed by Southeast Asia (4.90%), the U.S. (4.84%), China (3.76%) and Europe (3.74%). The share of medium-sized and small manufacturing firms relying on domestically-produced raw materials (65.78% and 76.09%, respectively) is significantly higher than the corresponding percentage for large enterprises (52.46%). The single most important source of raw materials is domestic private-sector suppliers; the smaller the manufacturing enterprise, the more likely it is to be purchasing its raw materials from this

category of supplier, rising to a 57.67% share in the case of small enterprises. Large manufacturers are most likely to rely mainly on imported raw materials (47.54% of large enterprises); regardless of enterprise size, Japan is the single most important source of imported raw materials.

2. Operational Trends

(1) Other Taiwanese Firms and Chinese Enterprises are Taiwanese Manufacturing Firms' Main Competitors

In 2009, 60.28% of Taiwanese manufacturing firms reported that other Taiwanese firms were the main competitors in the Taiwanese domestic market; Chinese firms were the second most important source of competition (15.50%), followed by Taiwanese-owned businesses operating overseas (9.09%), Japanese firms (5.82%) and South Korean firms (3.60%) (Table 2-4-5). In comparison with the situation in 2008, the shares of Taiwanese manufacturing firms reporting that Chinese firms and Japanese firms were their most important source of competition had risen by 0.86 percentage points and 0.79 percentage points respectively, while the share reporting that other Taiwanese firms constituted their main source of competition had declined by 2.66 percentage points.

In terms of enterprise size, in the Taiwanese domestic market medium-sized and small manufacturing firms are significantly more affected by competition from other Taiwanese firms and from Chinese firms than are large manufacturers. Large manufacturing firms are most affected by competition from Japanese, South Korean, European and North American enterprises (Table 2-4-5).

31.76% of manufacturing firms reported that China (with its cheap labor and high-volume production capability) was their biggest source of competition in export markets. 21.03% reported that other Taiwanese manufacturers constituted their main source of competition, while 12.49% regarded Taiwanese-owned firms operating overseas as their main competitive threat (Table 2-4-6).

As regards disparities in the situation faced by enterprises of different sizes, the intensity of the competition in export markets from Chinese companies and from Taiwanese-owned firms operating overseas faced by small manufacturers is significantly greater than that faced by medium-sized and large manufacturers. For large manufacturers, the main sources of competition in export markets are Japan, South Korea, North America and Europe.

Table 2-4-5 Manufacturing Firms' Main Sources of Competition in the Taiwanese Domestic Market (weighted)

Unit: %

Region	Domestic Rivals	China	Overseas Taiwanese Firms	Japan	South Korea	Europe	North America	Vietnam	Thailand	Malaysia	Singapore	Other
2008 (all enterprises)	62.94	14.64	8.82	5.03	2.94	1.40	1.51	1.08	0.51	0.35	0.17	0.62
2009 (all enterprises)	60.28	15.50	9.09	5.82	3.60	1.68	1.46	0.92	0.52	0.32	0.18	0.62
By enterprise size												
Large enterprises	56.23	12.92	8.87	8.44	5.91	2.47	2.68	0.76	0.49	0.27	0.21	0.73
Medium-sized enterprises	61.21	15.38	8.54	6.66	2.77	1.52	1.15	1.18	0.59	0.33	0.07	0.59
Small enterprises	62.07	16.96	9.46	4.02	2.72	1.33	0.93	0.90	0.50	0.33	0.22	0.58

Source: Survey of the Operational Status of Manufacturing Industry (2009).

Table 2-4-6 Manufacturing Firms' Main Sources of Competition in Export Markets (weighted)

Unit: %

Region	Domestic Rivals	China	Overseas Taiwanese Firms	Japan	South Korea	Europe	North America	Vietnam	Thailand	Malaysia	Singapore	Other
2008 (all enterprises)	19.30	33.86	12.42	8.65	7.00	5.28	5.73	2.60	1.60	1.06	0.78	1.72
2009 (all enterprises)	21.03	31.76	12.49	8.93	7.60	5.27	5.46	2.07	1.73	1.29	0.69	1.67
By enterprise size												
Large enterprises	20.79	26.64	10.58	11.36	9.89	6.37	7.84	1.56	1.27	1.18	0.61	1.90
Medium-sized enterprises	20.48	32.39	11.06	9.72	7.01	5.42	5.45	2.67	2.12	1.08	0.85	1.74
Small enterprises	21.49	34.78	14.46	6.94	6.41	4.47	3.91	2.11	1.84	1.47	0.66	1.49

Source: Survey of the Operational Status of Manufacturing Industry (2009).

(2) Manufacturers' Strengths and Weaknesses

The survey results show that the source of strength most commonly reported by Taiwanese manufacturers was “product quality” (36.33% of firms), followed (in order) by “price” (9.96%), “company reputation” (9.94%), “product uniqueness” (8.80%), “speed of delivery” (7.12%), “after-sales service” (7.06%), and “new product development capability” (6.94%) (Table 2-4-7).

Table 2-4-7 Manufacturers' Main Sources of Competitive Advantage with Respect to Competitors (weighted)

Unit: %

Item	2009 (All Enterprises)	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
Product quality	36.33	33.45	36.30	37.77
Price	9.96	9.49	9.99	10.18
Company reputation	9.94	10.76	9.45	9.76
Product uniqueness	8.80	8.60	9.18	8.73
Speed of delivery	7.12	6.66	5.58	8.03
After-sales service	7.06	5.92	8.03	7.20
New product development capability	6.94	9.22	7.92	5.38
Production efficiency	6.86	6.78	6.44	7.09
Marketing and distribution channels	2.98	4.53	2.74	2.32
Operational and management capabilities	2.20	2.90	2.66	1.65
Payment terms and conditions	1.39	0.86	1.56	1.58
Other	0.41	0.84	0.16	0.32

Source: Survey of the Operational Status of Manufacturing Industry (2009).

The survey results indicated that, for large manufacturers, “company reputation,” “new product development capability,” “marketing and distribution channels” and “operational and managerial capabilities” were a significantly more important source of competitive advantage than they were for medium-sized and small enterprises. For small enterprises, “product quality,” “price,” “speed of delivery,” “production efficiency” and “payment terms and conditions” constituted more important sources of competitive advantage.

In response to the global economic slowdown, there has been a trend for consumers to switch over to purchasing lower-priced products. Just over 33% of manufacturing firms reported that, because of production costs that were higher than those of their competitors, and because of inability to achieve economies of scale, “price” was their main source of weakness with respect

to their competitors, followed by “marketing and distribution channels” (12.97%) and “product uniqueness” (11.07%). Clearly, possession or lack of adequate marketing and distribution channels and whether one’s products are sufficiently unique can play a major role in determining whether a manufacturing firm succeeds or fails in the marketplace. The other main sources of weakness that manufacturing firms reported were, in order: “new product development capability” (10.78%), “payment terms and conditions” (8.26%), “speed of delivery” (5.61%), “production efficiency” (4.61%), “product quality” (2.64%), “operational and managerial capabilities” (2.24%), “after-sales service” (1.50%), and “company reputation” (0.54%). The share of small enterprises reporting that “price” and “marketing and distribution channels” were a significant source of weakness for them was higher than the corresponding share for large enterprises, while large enterprises were more likely than small enterprises to report that “product uniqueness” and “payment terms and conditions” constituted a major source of weakness for them (Table 2-4-8).

Table 2-4-8 Manufacturers’ Main Sources of Weakness with Respect to Competitors (weighted)

Unit: %

Item	2009 (All Enterprises)	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
Price	33.87	31.66	33.11	35.29
Marketing and distribution channels	12.97	11.93	13.27	13.36
Product uniqueness	11.07	13.32	10.41	10.24
New product development capability	10.78	10.71	10.41	10.98
Payment terms and conditions	8.26	9.16	8.46	7.72
Speed of delivery	5.61	6.63	6.13	4.86
Production efficiency	4.61	4.47	4.97	4.53
Product quality	2.64	2.94	2.61	2.50
Operational and management capabilities	2.24	1.89	2.39	2.35
After-sales service	1.50	1.50	1.76	1.38
Company reputation	0.54	0.78	0.50	0.44
Other	5.92	5.02	5.97	6.34

Source: Survey of the Operational Status of Manufacturing Industry (2009).

(3) Manufacturing Firms Believe Shrinking Market Demand to Be Their Main Source of Operational Difficulty

34.37% of manufacturing firms reported that falling market demand was one of the main factors affecting their operations. The next most commonly reported factor affecting manufacturers’ operations was intense competition within the industry (29.28% of firms). The percentage of manufacturers that reported rising raw materials prices as being a major factor affecting their operations fell from 34.47% in 2008 to 15.20% in 2009. This suggests that raw materials prices have fallen sufficiently to reduce the cost pressure that manufacturers are under, easing their operational difficulties. Other factors that were reported by a sizeable percentage of manufacturers included: pressure from key customers to cut prices (5.09%), losing export orders to competitors (4.02%), difficulty in developing new customers (3.81%), difficulty in securing working capital (1.97%), a bleak outlook for the industry as a whole (1.38%), etc. (Table 2-4-9).

Just over 33% of large enterprises gave intense competition within the industry as a major factor affecting their operations; the larger the enterprise, the more likely this factor was to be reported. Small enterprises were more likely than medium-sized or large enterprises to report being affected by contracting market demand, rising raw materials prices and pressure from key customers to cut prices.

Table 2-4-9 The Ten Main Factors Reported by Manufacturers as Affecting Their Operations (weighted)

Unit: %

Item	2008 (All Enterprises)	2009 (All Enterprises)	Enterprise Size		
			Large Enterprises	Medium-sized Enterprises	Small Enterprises
Falling market demand	11.64	34.37	31.90	34.50	35.49
Intense competition	24.38	29.28	33.70	28.40	27.56
Rising raw material prices	34.47	15.20	12.90	15.73	16.06
Pressure from key customers to cut prices	9.04	5.09	4.58	4.89	5.42
Loss of export orders	—	4.02	4.16	3.51	4.16
Difficulty in developing new customers	6.86	3.81	3.05	4.43	3.90
Difficulty in securing working capital	1.59	1.97	2.08	2.29	1.78
Bleak outlook for the industry	1.83	1.38	1.39	1.07	1.52
Oversupply causing prices to fall	1.03	0.97	2.22	1.07	0.33
Strict environmental protection regulations	2.02	0.87	1.11	0.46	0.93

Source: *Survey of the Operational Status of Manufacturing Industry* (2009).

(4) Cutting Prices is the Main Measure Adopted by Manufacturers in Response to Competition Affecting Their Main Products

Nearly 15% of manufacturing firms reported that the main strategy which they adopted in response to competition affecting their main products was to cut prices. 13.62% reported that they responded to such competition by building up their R&D capability, and 12.70% reported increasing product value-added. Other response strategies reported by more than 10% of firms included: developing new products (10.39%), product differentiation (10.35%), developing new customers (10.30%), etc. (Table 2-4-10).

When their main products are affected by competition from rival firms, large manufacturers are significantly more likely than small manufacturers to respond by building up their R&D capabilities, raising product value-added, developing new products, and product differentiation. Smaller enterprises are more likely to respond by cutting prices, working to develop new customers, and strengthening their after-sales service.

3. Developing Export Sales

(1) The Main Overseas Market That Taiwanese Manufacturers are Interested in Developing in the Future is the Chinese Market

Reflecting the immense business opportunities that the Chinese market offers, nearly 45% of Taiwanese manufacturing firms reported that this was the overseas market that they were most

interested in developing. The other overseas markets that Taiwanese manufacturers were particularly interested in developing were, in order: Europe (35.27%), North America (34.16%), Southeast Asia (33.75%), emerging markets (including India, Central and South America, and the Middle East) (31.39%), and Japan and South Korea (21.01%) (Table 2-4-11).

Table 2-4-10 Measures Adopted by Manufacturing Firms in Response to Competition Affecting Their Main Products (weighted)

Unit: %

Item	2009 (All enterprises)	Enterprise Size		
		Large enterprises	Medium-sized enterprises	Small enterprises
Cutting prices	14.22	11.09	12.96	16.32
Strengthening R&D capability	13.62	14.56	14.31	12.85
Boosting product value-added	12.70	13.95	12.44	12.19
Developing new products	10.39	10.71	10.17	10.33
Product differentiation	10.35	12.36	10.75	9.18
Developing new customers	10.30	7.47	10.67	11.54
Expanding distribution channels and enhancing sales capability	8.94	9.75	8.70	8.66
Strengthening after-sales service	6.66	5.33	6.11	7.56
Reducing product development time	4.91	6.95	5.35	3.72
Adopting new equipment	2.93	2.21	3.95	2.84
Diversification	2.83	2.47	2.69	3.08
Implementing vertical or horizontal integration	1.37	2.37	1.24	0.93
None	0.45	0.07	0.63	0.56
Other	0.32	0.70	0.03	0.27

Source: Survey of the Operational Status of Manufacturing Industry (2009).

Table 2-4-11 Export Markets That Manufacturing Firms are Interested in Developing in the Future

Unit: %

Item	China	Europe	North America	Southeast Asia	Emerging Markets	Japan and South Korea	Vietnam	Other
2009 (all enterprises)	44.51	35.27	34.16	33.75	31.39	21.01	3.70	12.29
By enterprise size								
Large enterprises	55.62	42.16	40.64	36.48	38.42	24.69	4.30	5.96
Medium-sized enterprises	43.97	39.08	35.57	32.21	32.06	21.98	3.05	9.77
Small enterprises	39.46	30.34	30.47	33.11	27.76	18.84	3.70	16.39
By the four main industry categories								
Metals and machinery	44.12	39.28	37.22	35.98	37.94	21.44	4.64	7.53
Information and electronics	54.11	40.91	42.42	30.52	34.42	25.32	3.68	6.71
Chemical industry	44.26	27.73	25.49	41.32	29.83	20.03	4.48	14.43
Consumer products industry	39.30	33.78	33.38	25.57	22.48	18.71	1.75	19.92

Note: 1. "Emerging markets" include India, Central and South America, and the Middle East.

2. Respondents could give multiple answers.

Source: Survey of the Operational Status of Manufacturing Industry (2009).

Manufacturing enterprises of all sizes were most interested in developing the China market – 55.62% of large enterprises, 43.97% of medium-sized enterprises, and 39.46% of small enterprises. The larger the enterprise, the more likely it was to be interested in developing the European or North American market; besides the Chinese market, small enterprises were also particularly likely to be interested in developing the ASEAN market (33.11%).

(2) Areas Where Manufacturers Would Like the Government to Assist Them in the Development of Overseas Markets

In the last few years, Taiwan has found itself faced with an increasingly challenging economic and trading environment. The international trend towards regional economic integration – including “ASEAN + 1,” “ASEAN + 3,” and the eastward expansion of the EU – has created a situation where Taiwan’s exporters are in danger of being marginalized. While working actively to globalize their operations and identify new, low-cost production locations, Taiwanese manufacturers are also looking for assistance from the government, with 22.67% hoping that the government will sign trade agreements that secure preferential treatment for Taiwan and eliminate tariff barriers, and 20.18% hoping that the government will negotiate tariff reductions with Taiwan’s major trading partners. Other types of assistance that a significant percentage of firms were hoping the government would provide included: provision of tax drawback for exportation and improved bank financing services (13.30%), helping business enterprises to attend overseas trade fairs and organize trade missions (8.20%), provision of market information and information regarding the legal and regulatory environment in export markets (8.15%), provision of foreign trade business opportunities databases (6.90%), and enhancement of the services provided by Taiwan’s trade offices in other countries (Table 2-4-12).

Table 2-4-12 Types of Assistance That Manufacturers Hope the Government Will Provide to Support the Development of Export Sales (weighted)

Unit: %

Item	2009 (All Enterprises)	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
Signing of trade agreements and elimination of tariff barriers	22.67	26.82	23.03	20.39
Negotiating with major trading partners to reduce tariff barriers	20.18	23.84	19.09	18.82
Provision of tax drawback for exportation and improved bank financing services	13.30	10.59	14.36	14.20
Helping business enterprises to attend overseas trade fairs and organize trade missions	8.20	7.75	9.12	8.02
Provision of market information and information regarding the legal and regulatory environment in export markets	8.15	8.84	7.95	7.88
Provision of foreign trade business opportunities databases	6.90	5.80	7.33	7.26
Enhancement of the services provided by Taiwan’s trade offices in other countries	5.15	5.18	5.63	4.91
Intellectual property rights protection	2.97	2.47	2.66	3.38
Provision of consulting services relating to customs clearance, etc.	2.91	2.99	3.08	2.79
Arranging overseas product and catalog exhibitions	1.87	1.27	1.93	2.16
Mediating trade disputes	0.96	0.82	0.87	1.07
Other	6.74	3.64	4.95	9.12

Source: *Survey of the Operational Status of Manufacturing Industry* (2009).

Demand for the signing of trade agreements and elimination of tariff barriers, and for negotiation with Taiwan’s main trading partners to reduce tariff barriers, is particularly strong among large enterprises; 26.82% of large manufacturers expressed the hope that the government would provide support through the signing of trade agreements and the elimination of tariff barriers. By contrast, medium-sized and small firms expressed more demand than large

enterprises for the provision of tax drawback and improved bank financing services, for measures to help business enterprises attend overseas trade fairs and organize trade missions, and for the provision of foreign trade business opportunity databases.

(3) The Impact of Direct Cross-strait Transportation Links

The survey results showed that 26.62% of manufacturers felt that the establishment of direct “cross-strait” transportation links between Taiwan and China was beneficial to investment in China by Taiwanese manufacturers, compared to just 2.01% who felt that it was having a negative impact, giving an expectation indicator [(percentage of firms that feel that direct cross-strait trade links are beneficial – percentage that feel they have had a negative impact) ÷ 2] of 12.31%. The share of manufacturers that felt direct cross-strait transportation links were beneficial to exports and to company operations exceeded 27% in both cases, with just under 10% feeling that it had had a negative impact, giving an expectation indicator of 10.47% for the impact on exports and 10.09% for the impact on company operations. With regard to domestic investment and market demand within Taiwan, although the general attitude towards the impact of direct cross-strait transportation links on these two items was favorable, in both cases the percentage of manufacturers that felt that the establishment of direct cross-strait transportation links had had a favorable impact in these areas was under 15%, giving expectation indicators of 3.29% and 0.45%. Overall, the survey results indicate that Taiwanese manufacturers feel that the establishment of direct cross-strait transportation links has contributed to a reduction in the operating costs of Taiwanese firms operating in China, and that the decision by the government to abolish the 40% cap on investment in China has had a significant positive impact on investment in China, exports, and company operations; however, half of the firms surveyed felt that the impact on domestic demand in Taiwan had been negative (Table 2-4-13).

As regards the attitudes held by enterprises of different sizes, while small enterprises felt that the establishment of direct cross-strait transportation links had had a negative impact on market demand in Taiwan (expectation indicator of –1.23%), for all other items the general attitude was positive. The larger the enterprise, the more likely it was to feel positively about the impact of direct cross-strait transportation links on all aspects of operations; in particular, the share of large enterprises that felt that direct cross-strait transportation links had had a positive impact on company operations, investment in China, and exports was over 37% in all three cases, giving expectation indicators of 19.00%, 18.45% and 16.30% respectively. It can be assumed that the main reason for this situation is that the establishment of direct cross-strait transportation links has enabled large enterprises to build greater economies of scale by allowing them to utilize their existing resources more efficiently.

4. Human Resources

In the survey results for 2009, 14.12% of the total number of firms that returned completed questionnaires were suffering from a shortage of workers. This represented a significant reduction compared to the corresponding figures for 2005 (47.60%) and 2007 (41.76%), suggesting that, as a result of the global financial crisis, labor shortages were no longer as pressing an issue for manufacturers as they had been (Table 2-4-14).

The highest percentage of enterprises experiencing labor shortages was found among large manufacturers (16.09%); the corresponding shares for medium-sized and small manufacturers were both around 13%. Of the four main industry categories, the information and electronics industry had the highest share of manufacturers reporting a labor shortage, at 16.88%; the percentage was lowest in the metals and machinery industry, at 11.86%.

Among the 408 enterprises that reported labor shortages, the three main job categories in which firms were experiencing labor shortages were: ordinary factory operatives (46.32%), technology development and applied research personnel (36.03%), and production technology personnel (35.54%). Other job categories for which the percentage of firms reporting a labor shortage in that category exceeded 10% included marketing personnel (25.00%), automated production equipment operatives (16.42%), and equipment maintenance personnel (12.25%).

Large manufacturers were more likely than medium-sized or small manufacturers to report labor shortages in the following job categories: ordinary factory operatives (49.14%), automated production equipment operatives (19.83%), equipment maintenance personnel (17.24%), and overseas assignment personnel (14.66%). The disparity was particularly pronounced in the case of overseas assignment personnel (a disparity of more than 10 percentage points with respect to both medium-sized and small manufacturing firms).

Table 2-4-13 The Impact of Direct Cross-strait Transportation Links

Unit: %

Item	2009 (All Enterprises)	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
Impact on Investment in Taiwan				
All respondents	100.00	100.00	100.00	100.00
Beneficial	13.46	15.95	13.28	12.36
Detrimental	6.89	6.24	5.80	7.67
No impact	79.65	77.81	80.92	79.97
Expectation indicator	3.29	4.86	3.74	2.35
Impact on Investment in China				
All respondents	100.00	100.00	100.00	100.00
Beneficial	26.62	37.86	27.73	22.08
Detrimental	2.01	0.97	1.37	2.78
No impact	71.37	61.17	73.89	75.15
Expectation indicator	12.31	18.45	11.68	9.65
Impact on Market Demand in Taiwan				
All respondents	100.00	100.00	100.00	100.00
Beneficial	14.33	16.50	14.35	13.28
Detrimental	13.43	10.68	11.15	15.73
No impact	72.24	72.82	74.50	70.98
Expectation indicator	0.45	2.91	1.60	-1.23
Impact on Exports				
All respondents	100.00	100.00	100.00	100.00
Beneficial	27.76	37.17	26.56	23.79
Detrimental	6.82	4.58	6.11	8.20
No impact	65.42	58.25	67.33	68.01
Expectation indicator	10.47	16.30	10.23	7.80
Impact on Company Operations				
All respondents	100.00	100.00	100.00	100.00
Beneficial	28.42	42.44	27.63	22.08
Detrimental	8.24	4.44	7.63	10.31
No impact	63.34	53.12	64.73	67.61
Expectation indicator	10.09	19.00	10.00	5.89

Note: Expectation indicator = (percentage of firms that feel that direct cross-strait trade links are beneficial – percentage that feel that they have been detrimental) ÷ 2
Source: Survey of the Operational Status of Manufacturing Industry (2009).

Table 2-4-14 Types of Work with Respect to Which Manufacturers were Experiencing a Labor Shortage

Units: enterprises; %

Item	2005 (All Enterprises)	2007 (All Enterprises)	2009 (All Enterprises)	Enterprise Size		
				Large Enterprises	Medium-sized Enterprises	Small Enterprises
No. of enterprises experiencing labor shortages	1380	1216	408	116	88	204
Share of total	47.60	41.76	14.12	16.09	13.44	13.48
Type of work with respect to which the enterprise experienced a labor shortage (enterprises could select more than one type of work)						
Ordinary factory operatives	46.88	47.94	46.32	49.14	42.05	46.57
Technology development and applied research personnel	40.36	34.79	36.03	34.48	40.91	35.80
Production technology personnel	35.29	35.69	35.54	36.21	30.68	37.25
Marketing personnel	22.39	19.00	25.00	24.14	25.00	25.49
Automated production equipment operatives	12.32	12.25	16.42	19.83	18.18	13.73
Equipment maintenance personnel	13.12	12.99	12.25	17.24	12.50	9.31
Managerial and planning staff	7.03	6.74	9.31	8.62	10.23	9.31
Basic research personnel	5.94	5.10	7.60	7.76	4.55	8.82
Overseas assignment personnel	9.93	10.53	7.11	14.66	4.55	3.92
Computer software/hardware design personnel	9.71	9.70	5.88	8.62	3.41	5.39
Financial planning and financial operations personnel	5.00	4.44	4.19	6.03	4.55	2.94
Other	2.46	1.73	2.21	1.72	1.14	2.94

Note: Respondents could give multiple answers.

Source: Survey of the Operational Status of Manufacturing Industry (2009).

Nearly 52% of manufacturers reported that difficulty in replacing employees who had left the company was the main cause of their labor shortage problems. The next most commonly reported causes were, in order: expansion of operations, facilities or organization (28.43% of manufacturers), unsatisfactory results in regular recruitment activities (18.14%), unsatisfactory results in graduate recruitment (15.69%), anticipation of an upturn in the economy (9.07%), approaching a busy season for the industry to which the firm belongs (7.84%), and anticipation of rush orders (7.60%) (Table 2-4-15).

Medium-sized and large manufacturing firms were more likely than small manufacturers to attribute their labor shortage problems to difficulty in replacing employees who had left the company, or to expansion of operations, facilities or organization. The smaller the enterprise, the more likely it was to give unsatisfactory results in regular recruitment activities or unsatisfactory results in graduate recruitment as a cause of labor shortages. Nearly 15% of large manufacturers reported experiencing an urgent need for more workers because they were expecting rush orders.

The three main reasons given by manufacturers for not being able to lessen labor shortages were: inability to find personnel with the right experience or technical capabilities (65.93%), inability to offer salaries that were high enough to be attractive (20.83%), and the need to work night shifts (20.59%). Other reasons given included: dangerous or tiring work (18.14%), long hours (12.01%), remote workplace location (10.29%), and heavy workload (4.17%) (Table 2-4-16).

Table 2-4-15 Reasons Given for Experiencing Labor Shortages

Unit: %

Item	2009 (All Enterprises)	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
Difficulty in replacing employees who have left	51.96	54.31	55.68	49.02
Expansion of operations, facilities or organization	28.43	36.21	34.09	21.57
Unsatisfactory results in regular recruitment activities	18.14	11.21	17.05	22.55
Unsatisfactory results in graduate recruitment	15.69	13.79	15.91	16.67
Anticipating an upturn in the economy	9.07	11.21	6.82	8.82
Approaching the busy season	7.84	12.93	3.41	6.86
Anticipating rush orders	7.60	14.66	6.82	3.92
Other	10.54	6.90	15.91	10.92

Note: Respondents could give multiple answers.

Source: *Survey of the Operational Status of Manufacturing Industry* (2009).

Table 2-4-16 Reasons for Being Unable to Lessen Labor Shortages

Unit: %

Item	2009 (All Enterprises)	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
Inability to find personnel with the right experience or technical capabilities	65.93	60.34	69.32	67.65
Inability to offer salaries that are high enough to be attractive	20.83	17.24	19.32	23.53
Need to work night shifts	20.59	20.69	22.73	19.61
Dangerous or tiring work	18.14	12.07	19.32	21.08
Long hours	12.01	12.93	12.50	11.27
Remote workplace location	10.29	9.48	13.64	9.31
Heavy workload	4.17	6.90	3.41	2.94
Other	9.07	19.83	3.41	5.39

Note: Respondents could give multiple answers.

Source: *Survey of the Operational Status of Manufacturing Industry* (2009).

As regards the measures being adopted by manufacturers to deal with labor shortages, 33.58% reported a desire to employ foreign contract laborers (for the kinds of low-paying, dangerous jobs with long hours that Taiwanese workers are unwilling to perform). The next most widely reported measures were paying overtime pay (32.60%) and improving training to enhance productivity (31.37%). Over 20% of manufacturers reported adopting production automation, adjusting employees' holiday entitlement or outsourcing production; other measures adopted included the use of contract (agency) workers (14.95%), raising salaries or improving benefits (10.78%), computerizing operations (8.33%), moving production overseas (5.15%), and reducing the number of orders taken on (2.94%) (Table 2-4-17).

The survey results showed that 310 manufacturing firms (10.73% of the sample) were planning to lay off employees in the second half of 2009. The main reasons given for this were: the laying off of workers no longer required because of the elimination of business areas (59.03%), regular termination of low-performing and unsuitable employees (40.97%), and laying off workers who displayed a bad attitude towards their work (32.90%) (Table 2-4-18).

Table 2-4-17 Measures Adopted in Response to Labor Shortages

Unit: %

Item	2009 (All Enterprises)	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
Intention to hire foreign laborers	33.58	30.17	31.82	36.27
Payment of overtime pay	32.60	35.34	35.23	29.90
Improving training to enhance productivity	31.37	31.90	34.09	29.90
Automating production	22.30	18.97	34.09	19.12
Adjusting employee leave scheduling	20.34	24.14	15.91	20.10
Outsourcing production	20.34	16.38	11.36	26.47
Use of agency (contract) workers	14.95	36.21	7.95	5.88
Raising salary or improving benefits	10.78	11.21	7.95	11.76
Computerizing operations	8.33	10.34	12.50	5.39
Moving production overseas	5.15	3.45	4.55	6.37
Reducing the number of orders taken on	2.94	0.00	3.41	4.41
Other	8.09	9.48	6.82	7.84

Note: Respondents could give multiple answers.

Source: Survey of the Operational Status of Manufacturing Industry (2009).

Table 2-4-18 Reasons Given for Planning to Lay Off Employees in the Second Half of 2009

Units: enterprises; %

Item	All Enterprises	Enterprise Size		
		Large Enterprises	Medium-sized Enterprises	Small Enterprises
No. of enterprises planning to lay off workers	310	69	79	162
As % of all enterprises	10.73	9.57	12.06	10.71
Factors leading enterprises to lay off workers (enterprises could give more than one reason)				
Laying off of workers no longer required because of the elimination of business areas	59.03	60.87	51.90	61.73
Regular termination of low-performing and unsuitable employees	40.97	55.07	51.90	29.63
Laying off workers who displayed a bad attitude towards their work	32.90	30.43	32.91	33.95
Adjustment of enterprise's organizational structure	24.52	31.88	24.05	21.60
Needing to reinvigorate the enterprise with new blood	10.32	17.39	10.13	7.41
Termination of employees with poor technical capabilities	7.10	4.35	6.33	8.64
Outsourcing operations or using agency (contract) workers	5.48	8.70	7.59	3.09
Termination of employees whose salaries are too high	3.55	2.90	2.53	4.32
Termination of employees with poor human relations skills	3.23	4.35	0.00	4.32
Termination of recently-joined employees	1.29	0.00	1.27	1.85
Termination of employees with disabilities that prevent them from performing their work adequately	0.32	0.00	0.00	0.62
Other	5.16	1.45	6.33	6.17

Note: Respondents could give multiple answers.

Source: Survey of the Operational Status of Manufacturing Industry (2009).

Nearly 28% of manufacturing firms anticipated hiring new employees in the second half of 2009; the larger the enterprise, the more likely it was to be planning new hires, with 36.34% of large manufacturers expected to take on new people. In the four main industry categories, the percentage of manufacturers expecting to hire new employees ranged between 22% and just under 37%; the highest percentage (36.58%) was found in the information and electronics industry. It

appears that manufacturing firms were generally optimistic about the prospects for an upturn in the economy in the second half of 2009, and were planning to take on new employees to cope with an anticipated increase in new orders, as well as to develop new products (Table 2-4-19).

The main job types with respect to which manufacturers were planning to take on new employees were technology development and applied research personnel (44.04%), marketing personnel (31.64%), and ordinary factory operatives (31.51%). Manufacturers are clearly expecting a steady, gradual economic recovery in which they will need not only technology development and R&D staff but also marketing personnel to promote their new products.

Table 2-4-19 Planned New Hiring by Manufacturers in the Second Half of 2009 – Job Types

Units: enterprises; %

Item	All Enterprises	Enterprise Size		
		Large enterprises	Medium-sized enterprises	Small enterprises
No. of enterprises planning to hire new workers	806	262	187	357
As % of all enterprises	27.90	36.34	28.55	23.60
Job types for which new hiring was planned				
Technology development and applied research personnel	44.04	46.18	49.73	39.50
Marketing personnel	31.64	29.01	37.97	30.25
Ordinary factory operatives	31.51	35.88	25.13	31.65
Production technology personnel	30.02	32.82	26.20	29.97
Automated production equipment operatives	14.64	16.79	17.11	11.76
Equipment maintenance personnel	11.17	12.60	11.23	10.08
Managerial and planning personnel	9.06	11.07	9.63	7.28
Basic research personnel	8.81	10.69	10.16	6.72
Overseas assignment personnel	7.82	13.36	6.42	4.48
Computer software/hardware design personnel	4.71	4.58	3.74	5.32
Financial planning and financial operations personnel	3.97	4.20	4.81	3.36
Other	2.23	2.29	1.07	2.80

Source: *Survey of the Operational Status of Manufacturing Industry* (2009).

V Survey and Analysis of the Operational Status of the Taiwanese Wholesaling and Retailing Industry in 2009

With the aim of gaining a clearer picture of the operational environment and development strategies of Taiwan's wholesaling and retailing companies, in March 2009 the Department of Statistics, Ministry of Economic Affairs implemented the *Survey of the Operational Status of the Wholesaling and Retailing Industry*. A total of 3,200 questionnaires were sent out, of which 2,738 completed questionnaires were returned, giving a completion rate of 85.56%. The survey results are outlined below.

1. Product Sales Flow and Materials Sources in the Wholesaling and Retailing Industry

(1) Overall Product Sales Growth

The survey results show that, in 2008, the total product sales of Taiwan's wholesaling and retailing industry came to NT\$11,851.9 billion, of which the wholesaling industry accounted for NT\$8,627.4 billion and the retailing industry for NT\$3,224.4 billion. In comparison with the 2007 total of NT\$11,602.1 billion, overall wholesaling and retailing industry product sales grew by 2.15% in 2008. The depressed state of the import/export business held sales growth in the wholesaling segment down to 3.59%, while reduced consumer spending due to the economic downturn led to product sales in the retail segment contracting by 1.50%.

Large wholesaling and retailing enterprises with 200 or more employees posted combined sales of NT\$5,500.1 billion in 2008 (representing 46.41% of the total sales of all wholesaling and retailing firms). Wholesaling and retailing enterprises with 5 – 49 employees posted combined sales of NT\$3,326.1 billion (28.06% of the total), those with 50 – 99 employees had sales of NT\$1,431.6 billion (12.08%), those with 100 – 199 employees had NT\$1,355.2 billion (11.43%), and those with less than 5 employees had NT\$238.9 billion (2.02%) (Table 2-5-1).

Table 2-5-1 Total Wholesaling and Retailing Industry Product Sales in 2008

Item	All Enterprises	Enterprise Size					Industry	
		Less than 5 Persons	5 – 49 Persons	50 – 99 Persons	100 – 199 Persons	200 or more Persons	Wholesaling	Retailing
Total sales (NT\$ billions)	11,851.9	238.9	3,326.1	1,431.6	1,355.2	5,500	8,627.4	3,224.4
Share of total (%)	100.00	2.02	28.06	12.08	11.43	46.41	72.79	27.21

Source: *Survey of the Operational Status of the Wholesaling and Retailing Industry* (2009).

(2) Product Sales Flow – Domestic Sales Far Exceed Export Sales

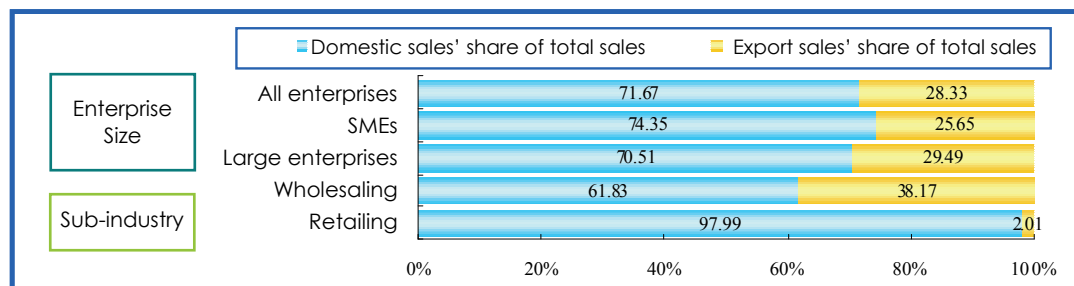
In 2008, domestic sales accounted for 71.67% of the total sales of Taiwan's wholesaling and retailing industry, with exports accounting for 28.33%. By contrast, in manufacturing industry domestic sales accounted for only 50.31% of total sales (based on the *Survey of the Operational Status of Manufacturing Industry* data presented in the previous section). The wholesaling and retailing industry are thus heavily oriented towards the Taiwanese domestic market. However, it is worth pointing out that, over the last three years, the domestic sales' share of total sales has tended to fall, and that the domestic sales' share in 2008 was 3.96 percentage points down on 2006.

Among small and medium-sized wholesaling and retailing firms, the domestic sales' share of total sales was 74.35% in 2008, while for large enterprises the percentage was 70.51%. The domestic sales' share of total sales was highest among enterprises with fewer than 5 employees, where it reached 89.49%, and lowest among enterprises with 100 – 199 employees (67.70%) (Figure 2-5-1).

Of that part of wholesaling and retailing industry sales that falls under the category of domestic sales, the largest share (25.03% of total sales) goes to consumers, followed by sales to other wholesalers and retailers (24.80%). Other main recipients include private-sector factories (14.80%), domestic trading companies (4.54%), public-sector enterprises (1.79%) and government agencies (0.71%) (Figure 2-5-2).

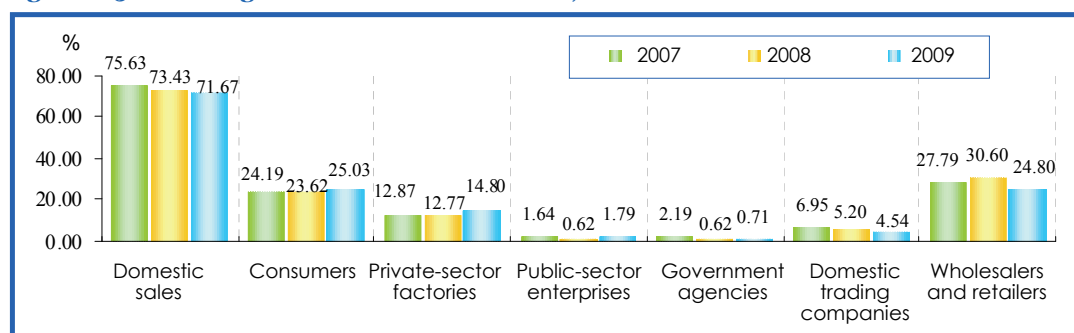
Domestic sales' share of total sales fell by 1.76 percentage points in 2008 compared to 2007; the most pronounced fall was in the share held by sales to other wholesalers and retailers (5.8 percentage points) (Figure 2-5-2).

Figure 2-5-1 Domestic Sales' and Export Sales' Shares of Total Sales in 2008



Source: Survey of the Operational Status of the Wholesaling and Retailing Industry (2009).

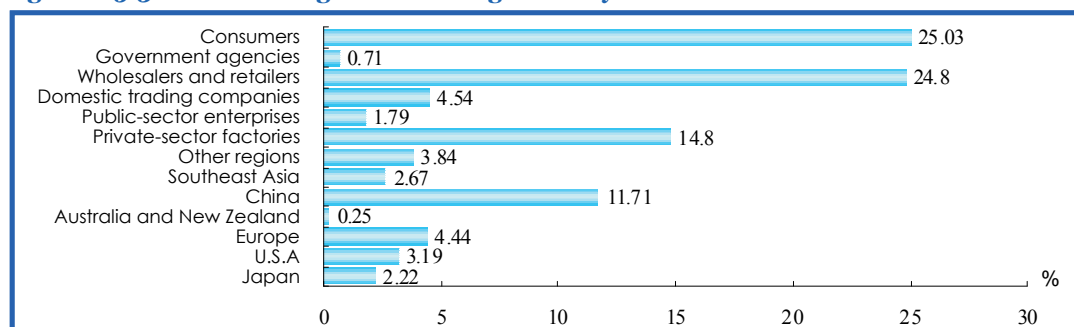
Figure 2-5-2 Changes in Domestic Sales Flow, 2006–2008



Source: Survey of the Operational Status of the Wholesaling and Retailing Industry (2009).

The single largest export market for the wholesaling and retailing industry is China (including Hong Kong and Macao), which takes 11.71% of the industry's total sales, followed by Europe (4.44%), the U.S. (3.19%), Southeast Asia (2.67%), Japan (2.22%), and Australia and New Zealand (0.25%) (Figure 2-5-3). China (including Hong Kong and Macao) is the largest export market for both large wholesaling and retailing firms and small and medium-sized wholesaling and retailing firms.

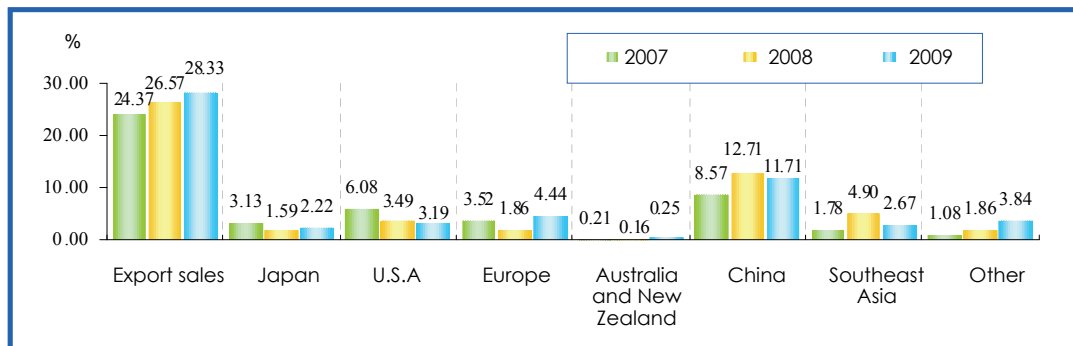
Figure 2-5-3 Wholesaling and Retailing Industry Product Sales Flow Structure in 2008



Source: Survey of the Operational Status of the Wholesaling and Retailing Industry (2009).

The greatest increase in the share of export sales was held by sales to Europe (2.5 percentage points) (Figure 2-5-4).

Figure 2-5-4 Changes in Export Sales Flow, 2006–2008



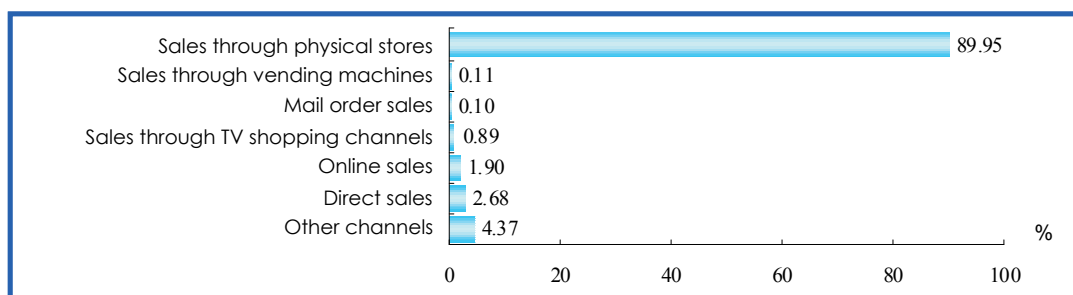
Source: Survey of the Operational Status of the Wholesaling and Retailing Industry (2009).

(3) Sales through Physical Stores Account for the Largest Share of Sales to Consumers

In 2008, sales through physical, bricks-and-mortar stores accounted for the largest share of the wholesaling and retailing industry’s sales to consumers (at 89.95% of the total), indicating that consumers still like to be able to browse through goods in a physical store. Direct sales accounted for the next largest share of sales to consumers (2.68%), followed by online sales (1.90%) (Figure 2-5-5).

The share of sales to consumers going through physical stores is significantly higher for large enterprises than for SMEs, reflecting the advantage that large companies enjoy when it comes to expanding a network of retail outlets. By contrast, sales through direct marketing and online sales account for a significantly larger share of SMEs’ sales to consumers than they do of large enterprises’ sales to consumers.

Figure 2-5-5 Channels Used for Sales to Consumers in 2008



Source: Survey of the Operational Status of the Wholesaling and Retailing Industry (2009).

(4) The Total Purchasing Volume of Large Wholesalers and Retailers is Far Larger Than That of Small and Medium-sized Wholesalers and Retailers

The survey results showed that the total purchasing volume of the Taiwanese wholesaling and retailing industry in 2008 was NT\$9,821.6 billion; wholesalers accounted for NT\$7,377.2 billion of this, and retailers for NT\$2,444.4 billion.

Large enterprises with 200 or more employees accounted for the largest share of total wholesaling and retailing industry purchasing volume in 2008, at NT\$4,610.5 billion (46.94% of the total), followed, in order, by enterprises with 5 – 49 employees at NT\$2,879.7 billion (29.32%), those with 100 – 199 employees at NT\$1,074.0 billion (10.93%), and those with 50 – 99 employees at NT\$1,048.4 billion (10.67%); enterprises with fewer than 5 employees accounted for the smallest share of total purchasing volume, at NT\$209.0 billion (2.13%) (Table 2-5-2).

Table 2-5-2 The Wholesaling and Retailing Industry's Total Purchasing Volume in 2008

Item	All Enterprises	Enterprise Size					Sub-industry	
		Less than 5 Persons	5 – 49 Persons	50 – 99 Persons	100 – 199 Persons	200 or more Persons	Wholesaling	Retailing
Purchasing volume (NT\$ billions)	9,821.6	209.0	2,879.7	1,048.4	1,074.0	4,610.5	7,377.2	2,444.4
Share of total (%)	100.00	2.13	26.32	10.67	10.93	46.94	75.11	24.89

Source: Survey of the Operational Status of the Wholesaling and Retailing Industry (2009).

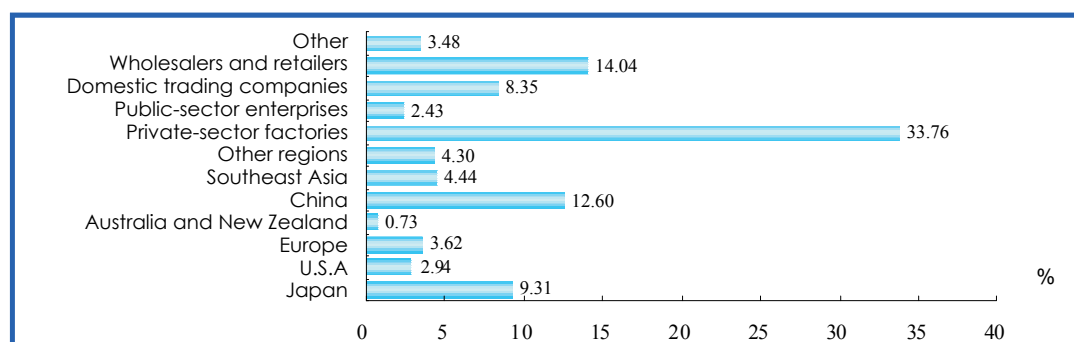
(5) Domestic Purchasing Accounts for the Largest Share of Total Wholesaling and Retailing Industry Purchasing

In 2008, 62.06% of the total purchasing volume of Taiwan's wholesaling and retailing industry was procured from domestic sources, with 37.93% being purchased from overseas.

Domestic purchasing's share of total procurement is significantly higher in the case of SMEs than it is in the case of large enterprises. Domestic purchasing's share is highest for small enterprises with fewer than 5 employees (82.27%), and lowest for enterprises with 100 – 199 employees (39.13%).

The single largest share of total purchasing that falls under the domestic procurement category is purchasing from private-sector factories in Taiwan (33.76% of total purchasing), followed by purchasing from other wholesalers and retailers (14.04%) and purchasing from domestic trading companies (8.35%); the smallest share is held by purchasing from public-sector agencies (Figure 2-5-6).

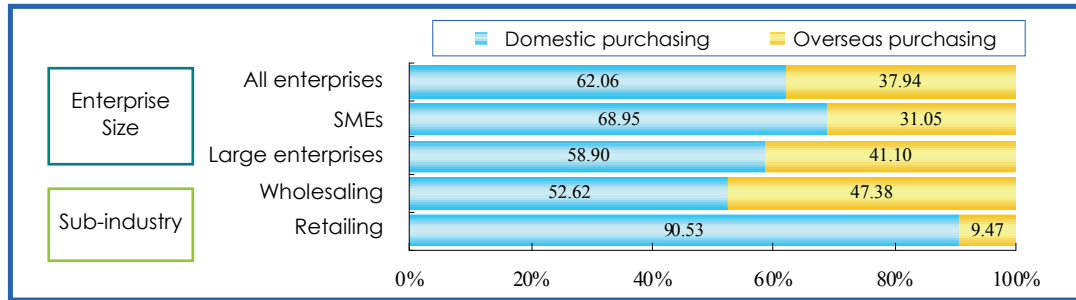
Figure 2-5-6 Wholesaling and Retailing Industry Purchasing Structure in 2008



Source: Survey of the Operational Status of the Wholesaling and Retailing Industry (2009).

The share of total purchasing held by purchasing from private-sector factories, public-sector enterprises and domestic trading companies is significantly higher in the case of SMEs than it is in the case of large enterprises; for large enterprises, the share of total procurement held by purchasing from other wholesalers and retailers is higher than it is for SMEs (Figure 2-5-7).

Figure 2-5-7 Domestic Purchasing's and Overseas Purchasing's Shares of Total Purchasing in 2008



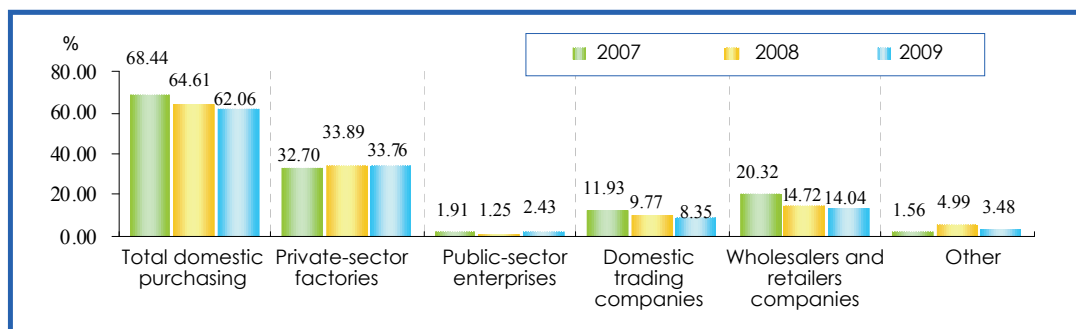
Source: Survey of the Operational Status of the Wholesaling and Retailing Industry (2009).

The largest share of overseas purchasing was held by procurement from China (including Hong Kong and Macao), which accounted for 12.60% of total purchasing. Japan was in second place with 9.31%.

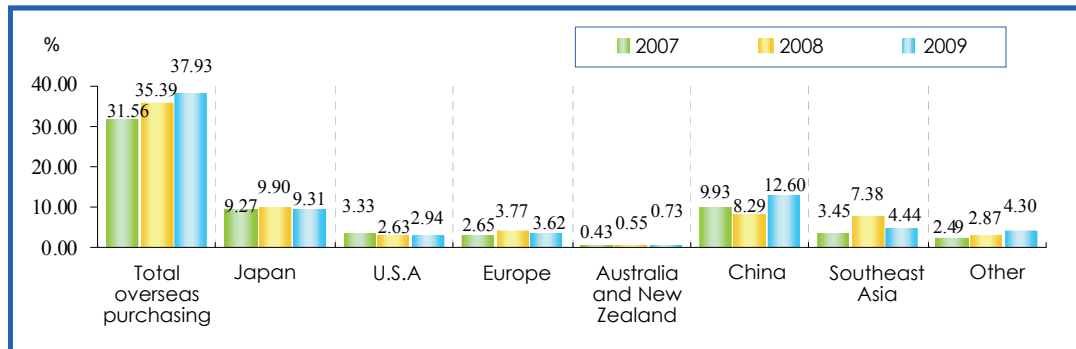
A relatively high share of SMEs' overseas purchasing is from the U.S., Europe, Australia and New Zealand, and Southeast Asia, while for large enterprises the share of total procurement accounted for by purchasing from Japan and from China (including Hong Kong and Macao) is higher than the corresponding percentage for SMEs.

The share of total procurement held by domestic purchasing fell by 2.55 percentage points in 2008 compared to 2007. The largest decline was seen in the share of total procurement held by purchasing from domestic trading companies (which was down by 1.42%). In overseas purchasing, the most pronounced increase was that in purchasing from China (including Hong Kong and Macao), which rose by 4.31 percentage points. The last three years have seen a steady decline in domestic purchasing's share of total procurement, which by 2008 was 6.38 percentage points lower than in 2006, while there has been a corresponding rise in overseas purchasing's share (Figures 2-5-8 and 2-5-9).

Figure 2-5-8 Domestic Purchasing's Share of Total Procurement, 2006–2008



Source: Survey of the Operational Status of the Wholesaling and Retailing Industry (2009).

Figure 2-5-9 Overseas Purchasing's Share of Total Procurement, 2006–2008

Source: *Survey of the Operational Status of the Wholesaling and Retailing Industry* (2009).

2. Business Environment and Business Strategies

(1) The Main Source of Operational Difficulties is the Loss of Customers Due to the Economic Downturn

With the rapid pace of change in technology, the dawning of a new era of e-enablement and product diversification, changing consumer habits, the large-scale adjustment of production systems and distribution networks, and the widespread adoption of international management techniques, Taiwan's wholesaling and retailing industry has experienced a major transformation of the way in which it operates. The traditional retail model has been gradually declining; in its place, there has been a trend towards ever larger enterprise size, hybridization, the growth of chain stores, diversification, the growth of online business, and the emergence of virtual retailing. What challenges has this period of rapid change in the business environment created for business enterprises in the wholesaling and retailing industry?

It can be seen from the weighted survey results (Table 2-5-3) that the most widely reported problem experienced by enterprises in the wholesaling and retailing industry due to the business environment is loss of customers due to the economic downturn (30.47% of enterprises), followed by intense market competition (22.96%) and difficulty in keeping purchasing costs down because of rising raw materials prices (11.32%). It can thus be seen that the aspects of their operations that firms in the wholesaling and retailing industry find most difficult to control are the macroeconomic climate and market competition.

The shares of SMEs reporting loss of customers due to the economic downturn, difficulty in keeping purchasing costs down, falling prices, heavy tax burdens and difficulty in securing working capital were all higher than the corresponding percentages for large enterprises. By contrast, the shares of large enterprises reporting problems with intense market competition, high land prices and high rentals, and changes in consumer preferences, were higher than the corresponding shares for SMEs.

Table 2-5-3 Operational Difficulties Experienced by Firms in the Wholesaling and Retailing Industry (weighted)

Unit: %

Item	All Enterprises (2008)	Enterprise Size		Sub-industry	
		SMEs	Large Enterprises	Wholesaling	Retailing
Loss of customers due to the economic downturn	30.47	31.07	28.07	29.10	32.59
Intense market competition	22.96	22.59	24.44	23.10	22.73
Difficulty in keeping purchasing costs down	11.32	11.38	11.06	12.27	9.86
Falling prices	7.91	7.91	7.89	9.79	5.01
Excessively heavy tax burden	7.61	7.75	7.07	7.22	8.23
Difficulty in securing working capital	4.50	4.88	2.94	4.57	4.38
High land prices and high rentals	3.35	3.13	4.23	2.00	5.43
Changes in consumer preferences	2.83	2.71	3.30	2.57	3.23
Shorter product life-cycles	2.29	2.33	2.15	2.70	1.67
High labor costs	2.20	2.16	2.34	2.14	2.30
High employee turnover	0.85	0.77	1.19	0.69	1.10
The ease with which innovative service models can be imitated by rival firms	0.67	0.58	1.02	0.59	0.78
Unreasonable regulatory requirements (including general business regulations and labor laws)	0.54	0.47	0.83	0.42	0.72
Difficulty in obtaining industry and market information	0.50	0.52	0.40	0.56	0.40
Unsatisfactory logistics systems	0.37	0.32	0.56	0.38	0.35
Other	1.64	1.43	2.51	1.91	1.23

Note: The weighted percentages were obtained by dividing the importance score for each item by the total value of all items for all respondents; a value of 3 denoted most important, 2 denoted of secondary importance, and 1 denoted less important.

Source: *Survey of the Operational Status of the Wholesaling and Retailing Industry* (2009).

(2) Improving the Quality of Service Provided to Customers is the Most Widely Adopted Business Strategy in the Wholesaling and Retailing Industry

It can be seen from the weighted survey results (Table 2-5-4) that the five business strategies most widely adopted by enterprises in the wholesaling and retailing industry are: improving the quality of service provided to customers (17.97%), developing new sales channels (16.40%), adopting a low-margin, high-volume strategy (15.64%), specialization and expansion of existing sales outlets (10.25%), and ongoing product development and innovation (8.83%).

The most pronounced disparity between SMEs and large enterprises in terms of business strategy is with regard to the adoption of a low-margin, high-volume strategy; the percentage of SMEs reporting the adoption of such a strategy is 11.16 percentage points higher than the corresponding percentage for large enterprises. This suggests that SMEs enjoy more flexibility than large enterprises when it comes to unit price, and are better placed to achieve profitability through a high-volume, low-unit-price strategy. Large enterprises, on the other hand, are better able to leverage their strengths in terms of capitalization and human resources to achieve ongoing development and innovation, to undertake aggressive advertising and promotional campaigns, and to expand their operations through the establishment of new direct outlets and/or franchise stores.

Table 2-5-4 Business Strategies Adopted by Firms in the Wholesaling and Retailing Industry (weighted)

Unit: %

Item	All Enterprises (2008)	Enterprise Size		Sub-industry	
		SMEs	Large Enterprises	Wholesaling	Retailing
Improving the quality of service provided to customers	17.97	17.87	18.40	15.62	21.62
Developing new sales channels	16.40	16.95	14.23	18.97	12.44
Adopting a low-margin, high-volume strategy	15.64	17.89	6.73	14.33	17.67
Specialization and expansion of existing sales outlets	10.25	10.07	10.96	10.16	10.38
Ongoing product development and innovation	8.83	8.30	10.90	10.37	6.45
Active, ongoing development and innovation	5.29	4.83	7.12	3.54	7.98
Strengthening logistics capabilities	4.92	5.13	4.11	4.99	4.81
Product internationalization	4.35	4.05	5.53	5.57	2.46
Developing new business areas	3.66	3.38	4.79	4.61	2.21
Adopting a high-quality, high unit price strategy	3.63	3.40	4.56	3.96	3.12
Adoption of innovative business models	3.45	3.19	4.56	3.29	3.70
Increasing the number of direct outlets and/or franchise stores	3.13	2.66	4.98	2.08	4.74
Strategic alliances (collaboration with other enterprises)	1.77	1.63	2.36	1.75	1.81
Other	0.70	0.65	0.87	0.75	0.61

Note: The same as Table 2-5-3.

Source: *Survey of the Operational Status of the Wholesaling and Retailing Industry* (2009).

(3) Superior Quality is the Main Source of Product Competitive Advantage

The weighted survey results (Table 2-5-5) show that 18.49% of firms in the wholesaling and retailing industry believe that high product quality is the main factor that makes their products competitive, followed by reasonable pricing (17.78%), practical usefulness (15.01%), meeting consumers' needs (11.95%) and brand reputation (10.32%).

Table 2-5-5 Key Sources of Competitiveness of the Products of Firms in the Wholesaling and Retailing Industry (weighted)

Unit: %

Item	All Enterprises (2008)	Enterprise Size		Sub-industry	
		SMEs	Large Enterprises	Wholesaling	Retailing
High product quality	18.49	18.37	18.96	19.76	16.53
Reasonable pricing	17.78	18.72	14.06	17.99	17.45
Product usefulness	15.01	15.92	11.42	14.18	16.28
Products meet consumers' needs	11.95	11.81	12.50	10.70	13.85
High brand reputation	10.32	9.49	13.61	10.76	9.64
Comprehensive range of products	8.54	8.31	9.43	8.69	8.31
Product uniqueness	7.50	7.49	7.54	7.84	6.98
Fashionable appeal	3.42	3.30	3.88	2.68	4.55
Products embody a sense of value	3.35	3.14	4.18	3.31	3.41
Innovative products	2.63	2.51	3.10	3.06	1.98
Other	1.03	0.95	1.34	1.03	1.02

Note: The same as Table 2-5-3.

Source: *Survey of the Operational Status of the Wholesaling and Retailing Industry* (2009).

Large enterprises are more likely than SMEs to report brand reputation as being a major source of competitiveness, while SMEs are more likely than large enterprises to emphasize reasonable pricing and the practical usefulness of their products. Wholesalers are significantly more likely than retailers to report high product quality as being their main source of competitiveness, while retailers are more likely to give the practical usefulness of their products and meeting consumers' needs as being their single most important source of product competitiveness.

(4) Tax Reduction is the Main Area Where Firms in the Wholesaling and Retailing Industry Look to the Government for Guidance and Assistance

It can be seen from the weighted survey results (Table 2-5-6) that the area with respect to which enterprises in the wholesaling and retailing industry are most likely to express a desire for assistance from the government is tax reduction (32.12% of enterprises), followed by the maintenance of stable exchange rates (20.18%), and increased availability of low-interest loans for business enterprises (17.82%).

Large wholesaling and retailing firms are more likely than SMEs to hope for government assistance with manpower cultivation, whereas SMEs are more likely than large enterprises to express the wish that the government expand the provision of low-interest loans for business enterprises and step up the activities of the SME Credit Guarantee Fund. These results reflect the fact that SMEs tend to be less well-funded than large enterprises, and are thus more likely to feel the need for financial support from the government.

Table 2-5-6 Areas Where Firms in the Wholesaling and Retailing Industry Look for Assistance from the Government

Unit: %

Item	All Enterprises (2008)	Enterprise Size		Sub-industry	
		SMEs	Large Enterprises	Wholesaling	Retailing
Reduction of business enterprises' tax liability	32.12	32.10	32.19	30.57	34.52
Maintenance of stable exchange rates	20.18	20.06	20.64	23.57	14.92
Improved availability of low-interest loans for business enterprises	17.82	18.38	15.57	17.13	18.89
Creation of new business opportunities	8.96	8.92	9.13	9.03	8.86
Diffusion of new managerial knowledge and techniques	4.90	4.98	4.60	4.45	5.60
Assistance with the creation of strategic alliances	3.26	3.14	3.71	3.12	3.47
Support for manpower cultivation	3.07	2.70	4.56	2.79	3.50
Assistance with e-enablement	2.94	2.86	3.24	2.53	3.57
Enhanced provision of credit guarantees by the SME Credit Guarantee Fund	2.47	2.68	1.63	2.79	1.98
Speeding up the development of industrial/commercial districts	2.17	2.23	1.91	1.96	2.50
Other	2.11	1.94	2.83	2.07	2.19

Note: The same as Table 2-5-3.

Source: *Survey of the Operational Status of the Wholesaling and Retailing Industry* (2009).

CHAPTER 3

Financial Status of SMEs

Financial analysis has a vital role to play in facilitating an understanding of the current state of Taiwan's SMEs and the outlook for their future development; the various financial indicators can be used to examine SMEs' operational management. The first section of this chapter presents an overview of the financial status of Taiwan's SMEs, using business income tax return data for 2008 provided by the Tax Data Center of the Ministry of Finance; there is thus a one-year time lag as compared with the data presented in the other chapters of this White Paper. The second section examines the interaction between SMEs and the banking sector, using survey data from the Financial Supervisory Commission. The third section outlines the assistance that the SME Credit Guarantee Fund provides to SMEs with respect to credit guarantees and helping SMEs to obtain financing.

The definition of SMEs used in the first section of this chapter is based on the revised Standard for the Determination of SME Status promulgated by the Ministry of Economic Affairs (MOEA) in July 2005. The data presented in the second section of this chapter are taken mainly from Statistics of Banking Business, compiled by the Financial Supervisory Commission, Executive Yuan, the Directorate General of Budget, Accounting and Statistics (DGBAS), Executive Yuan, and the Central Bank; the definition of SMEs used in the second section is the same as that used in the first section.

I Overall Financial Status of SMEs

In this section, consolidated balance sheet data (where the figures for each account in the balance sheet are converted into percentages of total assets) are used to examine the fund utilization and asset allocation status of SMEs, so as to gain an overall understanding of SMEs' financial structure.

1. Analysis of Asset Allocation by SMEs

(1) Inadequate Current Assets, an Increased Inventory Ratio, and an Insufficiently Strong Ability to Cope with Changes in the Wider Environment

As can be seen from Table 3-1-1, for large enterprises the share of total assets accounted for by current assets increased by 0.11 percentage points in 2008 (compared to the previous year), rising to 62.34%. For SMEs, this percentage increased by 5.85 percentage points, to 49.76%. Although there was an improvement in short-term repayment ability compared to 2007, it is significant that the share of SME total assets accounted for by current assets was still less than 50%. With regard to the impact of the global economic downturn that followed the financial crisis which began in the U.S. in the second half of 2008, while cash's share of total assets remained roughly the same in 2008 as in 2007 for both large enterprises and SMEs, for large enterprises the percentage was

24.87%, while for SMEs it was 15.13%, reflecting the fact that SMEs are less flexible and less able to respond rapidly to changing circumstances than large enterprises.

Table 3-1-1 Consolidated Financial Data for Taiwanese Enterprises, 2006–2008

Unit: %

Item	Size / Year	Large Enterprises			SMEs		
		2006	2007	2008	2006	2007	2008
Current assets		74.25	62.23	62.34	76.84	43.91	49.76
Cash		21.79	24.32	24.87	49.32	14.54	15.13
Accounts receivable		37.36	27.64	28.27	10.87	11.37	12.8
Inventories		10.81	8.06	5.75	14.17	14.72	17.89
Advance payments		0.56	0.52	1.19	1.08	1.37	1.46
Other current assets		3.74	1.69	2.26	1.41	1.91	2.48
Funds and long-term investments		1.58	17.73	18.15	3.87	31.69	22.61
Fixed assets		19.22	15.55	15.22	17.00	21.15	24.08
Land and buildings		8.57	6.53	6.52	10.29	14.39	13.85
Machinery		9.17	8.1	7.84	5.50	5.7	8.92
Other fixed assets		1.48	0.92	0.85	1.21	1.06	1.31
Intangible and other assets		4.95	4.49	4.29	2.29	3.26	3.56
Total assets = Liabilities + Net worth		100.00	100	100	100.00	100	100.00
Liabilities		82.20	72.54	74.66	59.73	51.48	52.80
Current liabilities		62.78	52.93	55.19	52.13	42.39	43.60
Short-term loans		41.66	34.5	37.34	13.62	11.45	11.55
Accounts payable		11.55	10.22	8.06	13.65	11.82	11.37
Income received in advance		3.81	3.93	5.39	4.74	2.96	3.81
Other current liabilities		5.75	4.27	4.4	20.12	16.16	16.87
Long-term liabilities		10.93	10.94	11.49	5.93	6.76	7.02
Long-term loans repayable		3.85	4.25	4.55	4.98	4.96	5.11
Other long-term liabilities		7.09	6.7	6.94	0.94	1.8	1.90
Other liabilities		8.49	8.67	7.98	1.67	2.33	2.18
Net worth		17.80	27.46	25.34	40.27	48.52	47.20

Source: Ministry of Finance, Business income tax return data.

As can be seen from Table 3-1-1, inventories' share of large enterprises' total assets has continued to fall, declining to 5.75% in 2008. For SMEs, on the other hand, inventories' share of total assets has continued to rise; in 2008, it stood at 17.89%. These figures reflect the higher level of risk that SMEs experience compared to large enterprises during an economic downturn, because of their limited managerial capabilities.

(2) A Trend towards More Cautious Management Reflected in Funds and Long-term Investments Ratios That Have Remained High

Long-term investments are investments undertaken by an enterprise for financial or operational reasons, where the investments are held over the long term, for example in the form of shares or convertible bonds, etc. Long-term investments are generally defined as investments that the enterprise does not intend to convert into cash within the coming year. As can be seen from Table 3-1-1, for large enterprises the share of total assets held by funds and long-term investments rose by 0.42 percentage points in 2008 to 18.15%, while for SMEs it fell by 9.08 percentage points to 22.61%. In 2007, a bullish stock market and rising raw materials prices caused the share of SMEs' total assets held by funds and long-term investments to rise by 27.82 percentage points, from 3.87% in 2006 to 31.69% in 2007. Despite the decline in 2008, the share of SMEs' total assets held by funds and long-term investments remained high, at 22.61%, far higher than the corresponding percentage for large enterprises. The fact that funds and long-term investments

have remained high both for large enterprises and SMEs suggests that, following the impact of the global financial crisis in 2008, firms are experiencing a high level of uncertainty regarding the future. In the new era of low-interest rates, enterprises are unwilling to leave funds sitting in the bank earning meager returns; they have therefore been adjusting their asset mix, increasing the share of total assets held by funds and investments, and making use of different investment tools to secure higher returns.

(3) A Rise in Fixed Assets for SMEs

As can be seen from Table 3-1-1, for large enterprises the share of total assets held by fixed assets fell by 0.33 percentage points in 2008 compared to 2007, down to 15.22%, while for SMEs the share rose by 2.93 percentage points to 24.08%.

2. Analysis of SMEs' Financial Structure

Examination of the asset allocation of Taiwan's SMEs shows that, in 2006, SMEs had a current asset ratio of 76.84%. The impact of the financial crisis in the U.S. caused this figure to fall to 43.91% in 2007; in 2008 it rose slightly to 49.76%. Looking at the SMEs' debt structure as well can give a more comprehensive picture of the SMEs' overall financial status. In 2006, the SMEs' current liability ratio stood at 52.13%; this fell dramatically to 42.39% in 2007 before rising very slightly to 43.6% in 2008.

(1) A Downward Trend in the Current Liabilities Ratio, But Short-term Funding Pressure Remains High

As regards current liabilities, the SMEs' current liability ratio had been falling steadily for four years since 2004, standing at 60.45% in 2004, 55.33% in 2005, 52.13% in 2006, and 42.39% in 2007; however, in 2008 the ratio rose slightly to 43.6%. This small increase in the current liability ratio in 2008 reflects an increase in the short-term funding pressure to which SMEs are subject. Although the SMEs' current liabilities ratio in 2008 was lower than that of large enterprises (55.19%), current liabilities as a share of total liabilities for SMEs in 2008 remained very high, at 82.58%, significantly higher than the corresponding percentage for large enterprises (73.92%). This disparity reflects the generally high level of short-term funding pressure that SMEs are under. Ideally, SMEs should try to increase their long-term liabilities at the expense of short-term borrowing, so as to reduce this kind of short-term funding pressure.

(2) An Increase in the Long-term Liabilities Ratio

In 2008, the SMEs' long-term liabilities ratio rose by 0.26 percentage points, to 7.02% (Table 3-1-1). Long-term liabilities represent debt that does not have to be repaid within the next year, such as bonds payable and long-term bills payable. Most SMEs are family businesses with inadequate capitalization, finances that are not especially transparent, and inadequate managerial capabilities. As a result, financial institutions are often reluctant to lend to SMEs, which tends to make for a low long-term liabilities ratio. SMEs bore the brunt of the negative impact of the economic downturn resulting from the global financial crisis that began in the second half of 2008. The government introduced the "Three Supports" policy (whereby the government would support the banks, the banks would support business enterprises, and business enterprises would support their

employees); in line with the “Three Supports” policy, banks were willing to continue lending to SMEs despite the financial crisis. The result was a slight increase in the SMEs’ long-term borrowings ratio, from 4.96% in 2007 to 5.11% in 2008 (Table 3-1-1).

3. Analysis of SMEs’ Profit and Loss

(1) A Large Increase in the Operating Cost Ratio That Has Seriously Eroded Profitability

As regards operating costs’ share of net operating income, as can be seen from Table 3-1-2, in 2008 the large enterprises’ operating cost ratio rose slightly to 93.12%, while the SMEs’ operating cost ratio rose substantially by 7.47 percentage points to 83.7%. As a result, the SME sector as a whole went into the red, with negative current term profit. It can thus be seen that the global financial crisis of 2008 led to an increase in operating costs for both large enterprises and SMEs, but that SMEs were more seriously affected than large enterprises, experiencing a substantial rise in costs that eroded their profits and in many cases must have threatened the very survival of the enterprise.

Table 3-1-2 Profit and Loss of Taiwanese Enterprises, 2006–2008

Unit: %

Item	Size/Year	Large Enterprises			SMEs		
		2006	2007	2008	2006	2007	2008
Net operating income		100.00	100.00	100.00	100.00	100.00	100.00
Less: Operating costs		94.44	92.34	93.12	80.35	76.23	83.70
Gross operating profit		5.92	7.66	6.88	19.97	23.77	16.30
Less: Operating expenses		3.98	5.00	5.44	18.26	17.14	17.35
Net operating profit		2.39	2.66	1.45	3.82	6.63	-1.05
Plus: Non-operating profit		1.15	1.64	2.14	1.46	2.60	1.70
Less: Interest expenses		0.66	0.84	1.51	1.29	0.92	1.25
Less: Other non-operating expenses		0.25	0.36	0.41	0.75	0.69	0.74
Current term profit (loss)		1.82	3.09	1.67	0.80	7.62	-1.34

Source: Ministry of Finance, Business income tax return data.

(2) An Increase in SMEs’ Operating Expenses Ratio, Which Significantly Exceeds That of Large Enterprises

The term “operating expenses” is used to refer to expenditure derived from an enterprise’s sales and management activities, including sales expenses, management expenses, R&D expenses, etc. In 2008, the SMEs’ operating expenses ratio was 17.35%, up 0.21 percentage points from 17.14% in 2007, and significantly higher than the corresponding figure of 5.44% for large enterprises (Table 3-1-2).

A saving of one dollar in operating expenses represents an extra dollar in earnings for the enterprise. In an era of low profit margins, the fastest way for an enterprise to boost its profit margin is to implement cost-down initiatives. Regardless of whether they are making a profit or making a loss, most firms are constantly trying to think of ways to cut costs and reduce operating expenses. The pronounced disparity between the operating expenses ratio of SMEs and that of large enterprises may be due to SMEs’ limited managerial capabilities, coupled with their small scale of operation and limited bargaining power, which make it difficult for them to squeeze costs. At the same time, large enterprises are able to benefit from economies of scale; SMEs have

to make do with the surplus resources that are left over, so naturally their operating expenses ratios are higher than those of large enterprises.

(3) Negative Net Operating Profit Due to High Operating Expenses and a Dramatic Increase in Operating Costs

As noted above, the SMEs' operating expenses ratio is far higher than that of large enterprises; however, their operating costs are far lower than those of large enterprises, so in the past SMEs as a whole have always maintained positive net operating profit. However, 2008 saw a dramatic increase in SMEs' operating costs, in addition to a slight increase in operating expenses; as a result, SMEs found themselves posting a negative net operating profit (Table 3-1-2) for the first time since 2000.

(4) Current Term Profit and Loss Turns Negative, Reflecting the Serious Challenges SMEs Have Been Facing

As can be seen from Table 3-1-2, the global financial crisis of 2008 led to a fall in earnings for both large enterprises and SMEs. In 2008, large enterprises' current term profit or loss fell by 1.42 percentage points to 1.67%, although it at least remained in the black. SMEs' current term profit and loss fell dramatically by 8.96 percentage points to -1.34%. Net operating profit turned negative; non-operating income fell slightly (by 0.9 percentage points) to 1.7%, while the interest expenditure ratio and non-operating expenses ratio both rose slightly. The main reason for SMEs as a whole posting negative current profit and loss in 2008 was the pronounced increase in the operating cost ratio. Clearly, the SMEs' inability to respond flexibly to the crisis has put them in a difficult situation.

Taiwan, which is heavily dependent on foreign trade, was seriously affected by the global economic downturn that was sparked off by the financial crisis in the U.S. in the second half of 2008. SMEs are inherently less stable than large enterprises because of their operational circumstances and the limited resources available to them. The fall in the consumer spending and the deterioration in the overall business environment were bound to have a negative impact on SMEs' operations. SMEs need to think carefully about how to reduce their excessively high operating expenses, by keeping sales and management expenses and expenditure on R&D within reasonable bounds. When all is said and done, the allocation of funds to operating expenses is only worthwhile if the rate of increase in sales revenue and operating profit exceeds the rate of increase in operating expenses. Reducing operating expenses is the only realistic way for SMEs as a whole to improve their earnings performance.

II Analysis of SMEs' Financial Ratios

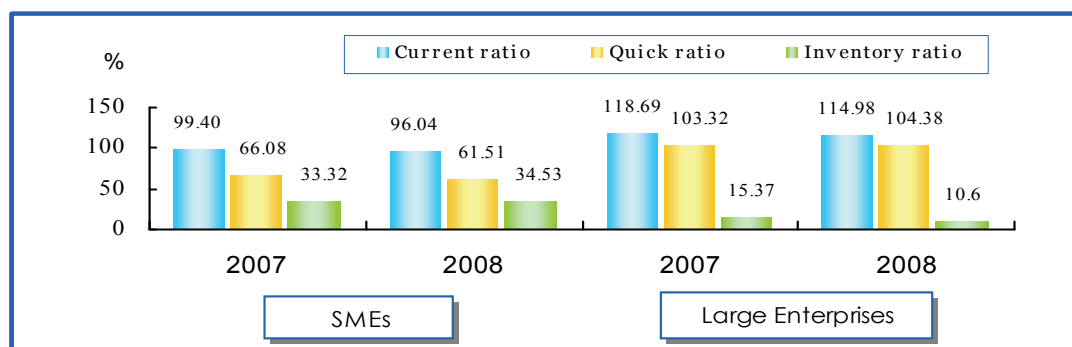
1. Low Short-term Repayment Ability, Implying Increased Operational Risk

The current ratio of Taiwan's SMEs stood at 99.40% in 2007; in 2008 it fell by 3.36 percentage points to 96.04%, while the quick ratio also fell by 4.57 percentage points to 61.51% (Figure 3-2-1). The current ratio is a measure of enterprises' short-term repayment ability; ideally, a

company that is in good financial health should have a current ratio of around 200%, indicating that the enterprise has NT\$2 of current assets available to repay every NT\$1 of current liabilities. The reference value for the quick ratio is 100%, indicating that the enterprise has NT\$1 of immediately realizable current assets available to repay every NT\$1 of current liabilities. The fall in both the current ratio and quick ratio of Taiwan's SMEs in 2008 denotes a deterioration in the SMEs' short-term repayment ability. A current ratio of just 96.04% and a quick ratio of only 61.51% indicate that the SMEs' short-term repayment capability is in fact seriously deficient, and definitely inadequate to cope with the impact of an external economic crisis. With a current ratio and quick ratio this low, any severe external shock, or the withdrawal of funding support from the bank, would immediately put the SME at risk of going out of business. It is significant that the SMEs' inventory ratio rose by 1.21 percentage points in 2008 to 34.53%, while the large enterprises' inventory ratio fell by 4.77 percentage points to 10.6%. An excessively high inventory ratio will affect an SME's ability to realize its assets. Particularly during a global financial crisis, when the economy is heading downhill, consumer spending is falling, orders are dropping off, and the outlook for future growth is uncertain, having an excessively high level of inventory can cause serious problems for a business enterprise.

Turning to the short-term repayment ability of Taiwan's large enterprises, in 2008 large enterprises as a whole had a current ratio of 114.98%. While this represented a decline of 3.71 percentage points compared to 2007 (Figure 3-2-1), the quick ratio rose by 1.06 percentage points in 2008 to 104.38%, which was over the 100% reference value. These data show that the large enterprises' short-term repayment ability remained reasonably strong in 2008, and that their ability to cope with external shocks actually improved. The large enterprises' inventory ratio of 10.6% was 4.77 percentage points down on 2007 (Figure 3-2-1), and far lower than the corresponding figure for SMEs (34.53%). The large enterprises' financial situation has thus continued to improve; not only do large enterprises have short-term repayment ability that is superior to that of SMEs, but their ability to respond flexibly in the face of external shocks is also superior.

Figure 3-2-1 Short-term Liquidity of Taiwanese Enterprises, 2007 and 2008



Notes: 1. Current ratio = current assets ÷ current liabilities × 100% (reference value = 200; ideally, the ratio should be higher than the reference value)

2. Quick ratio = (current assets – inventories) ÷ current liabilities × 100% (reference value = 100; ideally, the ratio should be higher than the reference value)

3. Inventory ratio = inventories ÷ current liabilities × 100% (reference value = 100; ideally, the ratio should be higher than the reference value)

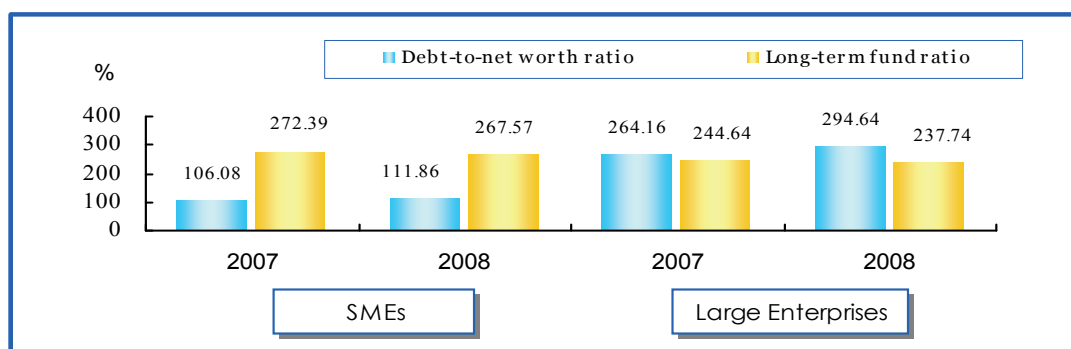
Source: Ministry of Finance, Business income tax return data.

As can be seen from the SME current ratio, quick ratio and inventory ratio data presented above, the ability of Taiwan's SMEs to cope with changes in the business environment is inadequate. SMEs need to focus on achieving rigorous control of their current asset and current liability structure, enhance their short-term repayment ability, and implement effective inventory management. Otherwise, any external economic shock that leads to a short-term funding shortage will put the enterprise under serious, immediate financial pressure, and may even threaten its survival.

2. An Improvement in Enterprises' Long-term Stability

For the debt-to-net-worth ratio, a reference value of 100% is normally used, indicating that the enterprise has NT\$1 of capital available for every NT\$1 of debt. The higher the debt-to-net-worth ratio, the more heavily leveraged the enterprise is. In 2008, the average debt-to-net-worth ratio of Taiwan's SMEs was 111.86%, representing an increase of 5.78 percentage points compared to the 2007 figure of 106.08%. For large enterprises, the debt-to-net-worth ratio in 2008 was 294.64%, up 30.48 percentage points from 264.16% in 2007 (Figure 3-2-2). The main reason for the increase in the debt-to-net-worth ratio of both SMEs and large enterprises in 2008 was the impact of the global financial crisis, which led to higher levels of debt.

Figure 3-2-2 Long-term Stability of Taiwanese Enterprises in 2007 and 2008



Notes: 1. Debt-to-net-worth ratio = $\text{debt} \div \text{net worth} \times 100\%$ (reference value = 100; ideally, the ratio should be below the reference value)

2. Long-term funds ratio = $(\text{equity} + \text{long-term debt}) \div \text{fixed assets} \times 100\%$ (reference value = 100; ideally, the ratio should be above the reference value)

Source: Ministry of Finance, Business income tax return data.

The fact that the SMEs' debt-to-net-worth ratio was close to the reference value means that creditors can be reasonably sure that their capital is protected; from the investor's point of view, it means that enterprise managers are making appropriate use of borrowing to enhance the firm's revenue performance. The debt-to-net-worth ratio of large enterprises is far higher than the reference value, indicating that large enterprises are using a high level of financial leverage. In an era of low interest rates, when the economy is starting to pick up again, taking on a reasonable level of leverage through low-interest borrowing can help firms to achieve higher earnings; however, enterprises must be careful not to become over-leveraged, otherwise the firm's financial health may be threatened.

The long-term funds ratio is mainly used to gauge whether a firm's long-term funding operations are appropriate. Ideally, enterprises should rely mainly on long-term funds for their funding of fixed asset purchases. In 2008, although the long-term funds ratios of both SMEs and

large enterprises fell, in both cases the ratio remained higher than the reference value of 100%, which is conducive to the maintenance of long-term stability by the enterprise. The SMEs' long-term funds ratio stood at 272.39% in 2007; in 2008 this figure fell slightly by 4.82 percentage points to 267.57%, but this was still superior to the corresponding ratio for large enterprises of 237.74% (Figure 3-2-2). For both SMEs and large enterprises, the long-term funds ratio is adequate to meet long-term asset purchase needs, indicating sound long-term fund allocation.

As regards debt-to-net-worth ratios in individual industries, SMEs' creditors still enjoy a reasonable level of protection. At the level of the individual industry, however, of the 18 industries, there are four industries where the SMEs' debt-to-net-worth ratio is lower than 100%: construction, transportation and warehousing, finance and insurance, and supporting services. In all four of these industries, large enterprises have a debt-to-net-worth ratio that is higher than the reference value; in the case of the finance and insurance industry, the ratio for large enterprises is 968.65% (it is 459.81% for the construction industry and 355.93% for the supporting services industry).

Turning to the long-term funds ratio, overall both SMEs and large enterprises have reasonable long-term funds ratios. However, of the 18 industries, there are 4 industries where SMEs have a long-term funds ratio lower than 100% – agriculture, forestry, fisheries and animal husbandry, the hotel and restaurant industry, educational services, and arts, entertainment and leisure services – indicating that the long-term stability of SMEs is inferior to that of SMEs in other industries.

3. An Across-the-board Fall in Turnover Ratios, Indicating a Decline in Operating Capability

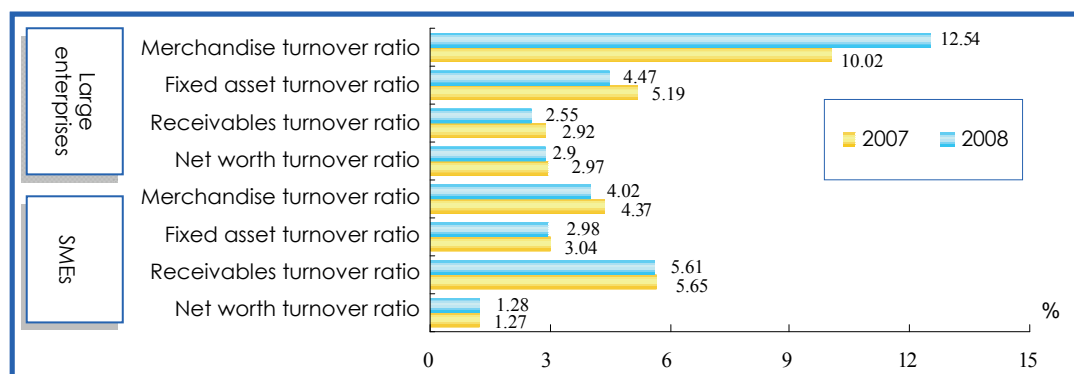
An enterprise's operational efficiency can be gauged by examining its efficiency of merchandise utilization, efficiency of fixed asset utilization, efficiency of collections and efficiency of capital utilization. Merchandise turnover is an indicator that can be used to determine whether an enterprise is managing to achieve a reasonable balance between inventory and sales; fixed asset turnover is used to measure the efficiency of utilization of a firm's buildings, machinery, land and other fixed assets; receivables turnover measures the efficiency of a company's collection activities. Net worth turnover denotes the number of own capital recovery turns; if this figure is too high, it implies that the enterprise has insufficient capital and is not sufficiently stable; if it is too low, it indicates that the firm has too much capital, or that its sales revenue is too low.

Examination of the data for 2008 shows that receivables turnover for SMEs fell from 5.65 turns in 2007 to 5.61 in 2008, while merchandise turnover fell from 4.37 to 4.02. This indicates that the SMEs' operating ability declined in 2008 compared to 2007. Turning to large enterprises, receivables turnover for large enterprises fell from 2.92 in 2007 to 2.55 in 2008, but merchandise turnover rose from 10.02 to 12.54, suggesting that the large enterprises' operating ability was superior to that of SMEs in 2008 (Figure 3-2-3).

Examination of the net worth turnover and fixed asset turnover indicators shows that, for SMEs, fixed asset turnover fell from 3.04 in 2007 to 2.98 in 2008, while net worth turnover rose slightly from 1.27 to 1.28. For large enterprises, fixed asset turnover fell from 5.19 in 2007 to

4.47 in 2008, and net worth turnover fell from 2.97 to 2.90. Although the SMEs' net worth turnover did not decline in 2008, it was clear that the efficiency of the SMEs' fixed asset utilization had deteriorated compared to 2007 (Figure 3-2-3).

Figure 3-2-3 Operating Capability of Taiwanese Enterprises in 2007 and 2008



Notes: 1. Net worth turnover ratio = net sales / net worth; 2. Receivables turnover ratio = net sales / receivables
 3. Fixed asset turnover ratio = net sales / fixed assets; 4. Merchandise turnover ratio = net sales / inventories
 Source: Ministry of Finance, Business income tax return data.

To summarize, the global financial crisis of 2008 affected the operational performance of both large enterprises and SMEs; the operating capability of both categories of enterprise was inferior to that displayed in 2007. In terms of inventory management, the performance of large enterprises was superior to that of SMEs.

4. Earnings Went into the Red, Reflecting an Increasingly Difficult Business Environment

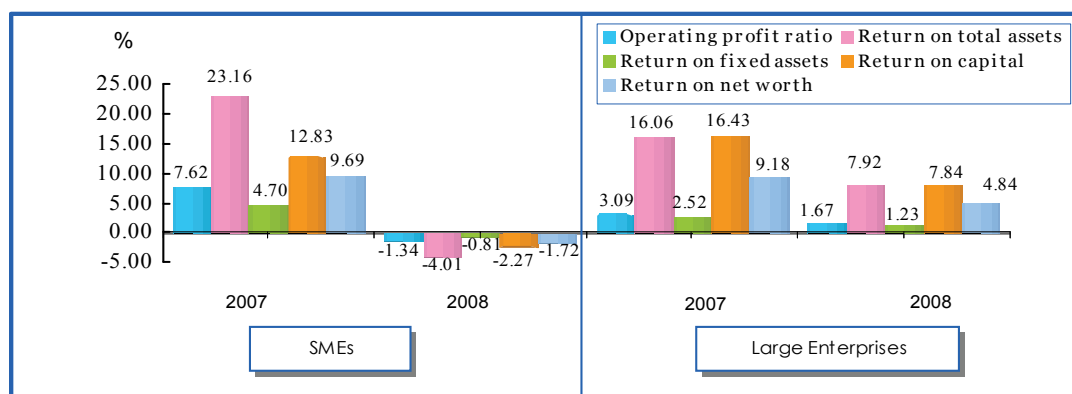
2008 saw a significant change in SMEs' earnings performance; all profitability indicators – including operating profits, the return on total assets, return on fixed assets, return on capital, and return on net worth – turned negative (Figure 3-2-4). SMEs clearly had difficulty adjusting to the severe economic climate, and found themselves experiencing steadily worsening operational difficulties. For large enterprises, all profitability indicators were lower than in 2007. However, large enterprises displayed cost control ability superior to that of SMEs, and were able to maintain positive growth in all earnings indicators. Overall, although large enterprises' earnings were negatively impacted by the global economic crisis, their performance was, on the whole, better than that of SMEs.

III Financial Institutions and SME Financing

Funding is the lifeline of an enterprise, and this is particularly true for SMEs, which tend to have inadequate funds. Ready access to funds and efficient fund management are among the keys to the successful operation of SMEs.

The range of funding channels open to SMEs is somewhat limited; generally speaking, SMEs remain dependent on indirect financing in the form of bank loans. The following sections analyze the provision of funding to SMEs by the banking sector (Tables 3-3-1, 3-3-2 and 3-3-3).

Figure 3-2-4 Profitability of Taiwanese Enterprises in 2007 and 2008



Notes: 1. Operating profit ratio = current profit / net operating income; 2. Return on fixed assets = current profit / fixed assets
 3. Return on total assets = current profit / total assets; 4. Return on capital = current profit / net worth
 5. Return on net worth = current profit / net worth
 Source: Ministry of Finance, Business income tax return data.

1. Taiwan Cooperative Bank Still Has a Higher Total of Outstanding Loans to SMEs Than Any Other Bank

As in 2008, Taiwan Cooperative Bank had a higher total of outstanding loans to SMEs than any other financial institution in Taiwan in 2009 (for the purposes of this section, “outstanding loans” include overdue loans). As of December 31, 2009, Taiwan Cooperative Bank’s outstanding loans to SMEs came to NT\$400.4 billion, representing an increase of NT\$19,868 million compared to December 31, 2008; the Bank’s share of the SME loan market rose from 12.01% in 2008 to 12.40% in 2009. First Commercial Bank was in second place, with outstanding loans to SMEs of NT\$357 billion, giving it market share of 11.05%. The SME loan market in Taiwan is heavily concentrated, with the top 10 banks providing 76.23% of all outstanding loans to SMEs (Table 3-3-1).

Table 3-3-1 Top 10 Banks by Amount of Loans to SMEs in 2009

Bank	Loans Outstanding	Market Share	Loans to SMEs as % of Total Loans
Total	2,461,773	76.23	-
Taiwan Cooperative Bank	400,424	12.40	22.84
First Commercial Bank	356,969	11.05	36.97
Taiwan Business Bank	313,882	9.72	35.89
Hua Nan Commercial Bank	294,865	9.13	28.10
Chang Hwa Commercial Bank	229,127	7.10	24.57
Bank of Taiwan	228,994	7.09	11.75
Land Bank of Taiwan	220,035	6.81	14.38
Mega International Commercial Bank	217,107	6.72	23.57
E. Sun Commercial Bank	113,457	3.51	21.84
Shanghai Commercial & Savings Bank	86,913	2.69	31.05

Source: Banking Bureau, Financial Supervisory Commission, Executive Yuan, *Statistics of Banking Business*, No. 388, 2010.

Of the top ten providers of loans to SMEs, apart from E.Sun Bank, which is a “new bank” established in 1994, and Shanghai Commercial & Savings Bank, which is also not a state-run bank, the other banks are all either state-run or partially state-run; between them, these banks account for 70.03% of all outstanding loans to SMEs. While this situation may be partly

explained by the fact that the “new banks” were late entrants to the market, it does appear that the establishment of the “new banks” has so far had little positive impact on the volume of loans made available to SMEs. It also appears that state-run banks have been more willing to collaborate with the government’s policy of strengthening the provision of loans to SMEs.

2. First Commercial Bank Had the Highest Percentage of Loans Extended to SMEs in 2009

As regards the percentage of a bank’s total outstanding loans that were loans made to SMEs, in 2008 Taichung Business Bank had the highest SME loan ratio, but in 2009 First Commercial Bank took the number one spot with an SME loan ratio of 36.97%; the First Commercial Bank’s total outstanding loans to SMEs came to approximately NT\$357 billion (Table 3-3-2).

Taiwan Business Bank was in second place; as a specialized “SME bank,” Taiwan Business Bank naturally has a high percentage of its loans going to SMEs. In 2009, Mega International Commercial Bank and Taiwan Cooperative Bank both moved up into the top ten banks with the highest percentage of loans extended to SMEs, while Cosmos Bank and E.Sun Bank dropped out of the top ten; there were also some changes in terms of the respective positions held within the top ten.

Table 3-3-2 Top 10 Banks by the Percentage of Total Loans Going to SMEs in 2008 and 2009

Units: NT\$ millions; %

Bank	2008		2009	
	Loans Outstanding	Loans to SMEs as % of Total Loans	Loans Outstanding	Loans to SMEs as a % of Total Loans
First Commercial Bank	341,462	34.13	356,969	36.97
Taiwan Business Bank*	308,988	36.46	313,882	35.89
Taichung Business Bank	74,378	36.87	74,808	34.45
Shanghai Commercial & Savings Bank	74,059	28.82	86,913	31.05
Hua Nan Commercial Bank	300,046	28.45	294,865	28.10
Chang Hwa Commercial Bank	225,241	25.74	229,127	24.57
EnTie Commercial Bank	54,220	30.71	43,428	24.32
King’s Town Bank	22,516	21.31	23,051	24.23
Mega International Commercial Bank	194,085	23.78	217,107	23.57
Taiwan Cooperative Bank	380,556	21.25	400,424	22.84

Note: An asterisk (*) denotes a specialist SME bank.

Source: Banking Bureau, Financial Supervisory Commission, Executive Yuan, *Statistics of Banking Business*, No. 388, 2010.

3. Outstanding Loans to SMEs by Banking Subsidiaries of Financial Holding Companies Increased, But More Slowly Than Loans by Other Commercial Banks

Since the Financial Holding Company Law came into effect in late 2001, a number of financial holding companies have been established in Taiwan. As of December 2009, there were 15 banks in Taiwan that were subsidiaries of financial holding companies. According to statistics compiled by the Financial Supervisory Commission, between them, these banks had total outstanding loans to SMEs of NT\$1,611.7 billion, representing an increase of NT\$27.5 billion (1.73%) compared with the 2008 total of NT\$1,584.2 billion. The rate of increase was less than the rate of increase in loans to SMEs by all banks in 2009 (1.94%), and less than the rate of increase in loans to SMEs by banks that are not subsidiaries of financial holding companies (2.15%). It can thus be

seen that, while outstanding loans to SMEs by the banking subsidiaries of financial holding companies did rise slightly in 2009, the increase was smaller than the increase in loans to SMEs by other banks (Table 3-3-3).

Table 3-3-3 Outstanding Loans to SMEs by the Banking Subsidiaries of Financial Holding Companies in 2008 and 2009

Units: NT\$ millions; %

Bank	2008		2009			
	Outstanding Loans to SMEs	Loans to SMEs as % of Total Loans	Outstanding Loans to SMEs	Loans to SMEs as % of Total Loans	Increase in Loans to SMEs	Annual Growth Rate
Total (all regular commercial banks)	3,167,759	18.19	3,229,362	18.45	61,602	1.94
First Commercial Bank	341,462	34.13	356,969	36.97	15,507	4.54
Hua Nan Commercial Bank	300,046	28.45	294,865	28.10	-5,181	-1.73
Chang Hua Bank	225,241	25.74	229,127	24.57	3,886	1.73
Bank of Taiwan	221,015	11.76	228,994	11.75	7,979	3.61
Mega International Commercial Bank	194,085	20.95	217,107	23.57	23,022	11.86
E. Sun Commercial Bank	118,322	23.78	113,457	21.84	-4,865	-4.11
Bank SinoPac	71,379	13.00	82,811	14.36	11,432	16.02
Cathay United Bank	82,689	11.40	75,180	10.30	-7,509	-9.08
Taipei Fubon Commercial Bank	80,627	11.84	68,145	8.87	-12,482	-15.48
Chinatrust Commercial Bank	74,686	10.55	60,011	8.35	-14,675	-19.65
Yuanta Bank	44,207	19.34	41,240	18.18	-2,967	-6.71
Taiwan Shin Kong Commercial Bank	30,786	11.24	32,412	11.73	1,626	5.28
Taishin International Bank	12,638	2.63	27,962	6.01	15,324	121.25
Jih Sun Commercial Bank	9,747	7.29	10,358	8.67	611	6.27
China Development Industrial Bank	2,554	3.55	2,210	3.69	-344	-13.47

Source: Banking Bureau, Financial Supervisory Commission, Executive Yuan, *Statistics of Banking Business*, No. 388, 2010.

4. A Slight Increase in Total Bank Loans to SMEs Compared to 2008

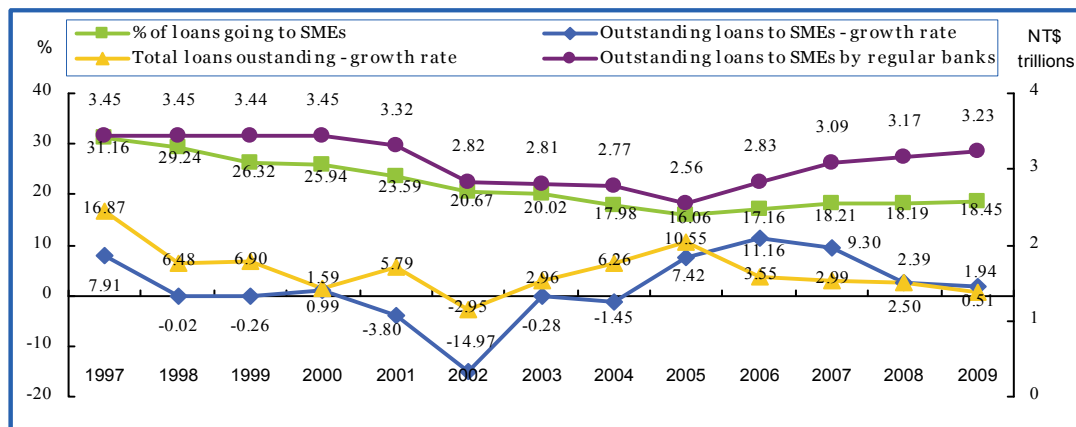
The global financial crisis led to pronounced economic volatility in 2008. According to data compiled by the Directorate General of Budget, Accounting and Statistics (DGBAS), Executive Yuan, Taiwan's economic growth rate in the first quarter of 2008 was 6.88%. By the third quarter, Taiwan was experiencing negative growth due to the dramatic contraction in demand both domestically and overseas, and in the fourth quarter the economic growth rate fell still further to -7.11%. Subsequently, however, as governments throughout the world have taken measures to revitalize their economies, the negative impact of the crisis has gradually eased. Due to their small size and limited resources, SMEs have been particularly severely affected by the global economic crisis. The government has responded by introducing a number of initiatives to assist SMEs, helping them to secure working capital and get through the crisis; these measures appear to have been quite effective.

As of the end of 2009, the total outstanding loans of ordinary commercial banks in Taiwan (including the Taiwan branches of foreign banks, but excluding overseas loans) came to NT\$3,229.4 billion, representing an increase of NT\$61.6 billion (19.4%) compared to the end of 2008. The share of total loans going to SMEs rose slightly, from 18.19% in 2008 to 18.45% in 2009 (Figure 3-3-1). Financial Supervisory Commission data give the total volume of loans to SMEs by domestic banks as NT\$3,204.3 billion accounting for 42.66% of loans to all business enterprises, and representing an increase of NT\$66.7 billion on the 2008 total of NT\$137.6

billion; the SMEs' share of all bank loans rose by 2.15 percentage points. The financial crisis will have led financial institutions to become more conservative in their lending policies; the fact that loans to SMEs have continued to grow is due mainly to the government's active implementation of measures relating to the "Three Supports" policy.

Both outstanding loans to SMEs (including overdue loans) by ordinary commercial banks and the share of total loans going to SMEs rose in 2009 compared to end-2008; the rate of growth of ordinary commercial banks' outstanding loans to SMEs, at 1.94%, was significantly higher than the overall growth rate of outstanding loans to all enterprises (0.51%).

Figure 3-3-1 Changes in Bank Loans to SMEs by Regular Banks, 1994–2009



Note: "Total loans outstanding" was calculated using the following formula: regular banks' outstanding loans to SMEs (including overdue loans) divided by loans to SMEs as a percentage of total loans.

Source: Banking Bureau, Financial Supervisory Commission, Executive Yuan, *Statistics of Banking Business*, consecutive years.

The Financial Supervisory Commission data indicate that, in 2009, the share of total bank loans by domestic banks was 42.66%; this percentage represents an increase of 2.15 percentage points compared to the figure for 2008, which was 40.51%. This suggests that, thanks to the support provided by the government, the SMEs' access to financing has not deteriorated, despite the impact of the financial crisis and the global economic downturn.

5. Domestic Banks' Outstanding Loans to SMEs Have Continued to Rise

To help SMEs overcome their financing problems, government agencies – including the Financial Supervisory Commission, the SMEA and the SME Credit Guarantee Fund – have introduced various guidance and credit guarantee measures that can help SMEs to obtain the funding they need.

Implementation of the Financial Supervisory Commission's Plan for Increasing Loans to SMEs by Domestic Banks began in July 2005. The economic downturn that was triggered by the global financial crisis in the second half of 2008 threatened the very survival of many of Taiwan's SMEs. In response, the government adopted the "Three Supports" policy, and towards the end of 2008 the SME Credit Guarantee Fund launched the SME Credit Guarantee Fund "Golden Jack" Program to help SMEs obtain the funding they needed during the downturn; this program appears to have been quite successful in helping SMEs to get through this difficult period.

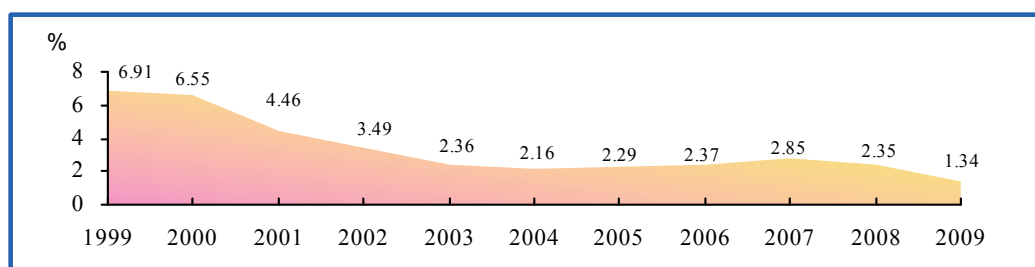
Before the implementation of the Financial Supervisory Commission's Plan for Increasing Loans to SMEs by Domestic Banks began, in June 2005 total outstanding loans to SMEs by domestic banks stood at NT\$2,366.6 billion. By the end of December 2008 this figure had risen to NT\$3,137.6 billion, and by the end of 2009 it had increased still further to NT\$3,204.3 billion, representing 42.66% of outstanding loans to all business enterprises. Loans to SMEs had thus grown by NT\$837.7 billion since June 2005, a growth rate of 35.40%. This steady increase in outstanding loans to SMEs since 2005 shows that implementation by domestic banks of the measures initiated by the government to strengthen the availability of funding to SMEs have borne fruit.

6. A Fall in the Cost of Financing in 2009

In 2002, Taiwan's economy began to recover from the economic downturn of the previous year (the economic growth rate in 2001 was -1.65%; in 2002 it was 4.64%). By 2004, the economic growth rate had risen to 6.15%. To prevent the economy from overheating, and in line with the international trend towards interest rate rises, in late 2004 the Central Bank gradually began to increase interest rates, putting an end to the government's loose monetary policy. In June 2008, the rediscount rate reached 3.625%, its highest level since 2001. Subsequently, the impact of the global financial crisis and the resulting economic downturn pushed interest rates down again. The Central Bank implemented several downward revisions of the rediscount rate, which by February 19, 2009 had fallen to 1.25%, its lowest level since June 2008.

Central Bank data show that the average interest rate on new loans extended by Taiwan's five largest banks had fallen steadily from 7.58% in 1998 to 2.16% in 2004. In 2006, the rate rose to 2.37%, and in 2007 it climbed still further to 2.85%. The average interest rate on new loans then fell back to 2.35% in 2008 due to the impact of the global financial crisis, and in 2009 it fell even further, to 1.34%, making the cost of financing for business enterprises slightly lower in 2009 than it had been in 2007 (Figure 3-3-2).

Figure 3-3-2 The Average Interest Rate on New Loans Extended by Taiwan's Five Largest Banks, 1998–2009



Note: 1. The interest rates given in the figure are weighted averages for the month of December in each year.

2. Up until October 2008, the five largest banks in Taiwan were the Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank and Chang Hwa Commercial Bank; from November 2008 onwards the five largest banks were the Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank and Land Bank of Taiwan.

Source: Central Bank of China (Taiwan).

CHAPTER 4

Employment in the SME Sector in the Aftermath of the Global Financial Crisis

In 2008, the world gradually became enmeshed in the global financial crisis, which did not begin to ease until mid-2009. The Taiwanese economy was not spared, with the economic growth rate falling to 0.73% in 2008, and to -1.91% in 2009. The situation in the first and second quarters of 2009 was particularly severe, with the economy contracting by 9.06% and 6.85%, respectively. With respect to economic downturns, unemployment is a lagging indicator; as a result, although the economy had already started to pick up again, the unemployment rate in Taiwan did not peak until August 2009 (at 6.13%), before gradually starting to fall. This chapter will examine small and medium enterprise (SME) manpower utilization, working conditions, and manpower cultivation in 2009.

The official criteria for determining whether a business enterprise should be classed as an SME were revised in September 2009. With respect to the mining and quarrying, manufacturing and construction industries, the definition of an SME as being an enterprise with 200 or fewer employees has been retained, while for other industries the cutoff point for SME status has been revised upwards. In the past, enterprises in other industries were classed as SMEs if they had 50 or fewer employees. However, this figure has now been raised to 100 or fewer employees. Data for 2009 use this new definition of SMEs. Nevertheless, to facilitate comparison with 2008, the data for 2009 are also presented using the old definition (the definition used will be noted in the text).

I Job Creation by the SME Sector

In 2009, the workforce in Taiwan totaled 10,917,000 people, including 10,279,000 employed persons and 639,000 unemployed persons; the labor participation rate was 57.90%, and the unemployment rate averaged 5.85% over the course of the year. Although the workforce had increased compared to 2008, the impact of the global financial crisis caused the number of employed persons to fall, while the number of unemployed persons rose by 189,000 compared to 2008. The following section examines SME labor utilization in 2009.

1. The SME Sector Provided 8,066,000 Jobs in 2009

Using the revised definition of SMEs that was introduced in September 2009, whereby enterprises in industries other than mining and quarrying, manufacturing and construction that have 100 or fewer employees are classed as SMEs, in 2009 the number of employed persons working in SMEs in Taiwan totaled 8,066,000, accounting for 78.47% of all employed persons in Taiwan. If the old definition of SMEs is used, then in 2009 the number of employed persons working in SMEs in Taiwan totaled 7,793,000, representing a decline of 173,000 compared to 2008; the SME sector thus accounted for 75.82% of all employed persons in Taiwan. The number

of employed persons working for SMEs fell by 2.17% in 2009, while the number of employed persons working for large enterprises fell by 2.23%; by contrast, the number of employed persons working for the government rose by 8.56%. This situation probably reflects the various employment creation schemes introduced by the government in response to the global financial crisis.

Table 4-1-1 The Number of Employed Persons and Paid Employees Working in SMEs in 2008 and 2009

Units: thousand persons; %

Industry	No. of Employed Persons				No. of Paid Employees			
	2008	2009	Share of Total	Growth Rate	2008	2009	Share of Total	Growth Rate
Total (Total)¹	7,966	7,793	100.00	-2.17	5,469	5,408	100.00	-1.12
		(8,066)	(100.00)			(5,679)	(100.00)	
Agriculture, forestry, fisheries and animal husbandry	529	537	6.88	1.51	75	78	1.44	4.00
Mining and quarrying	5	4	0.05	-20.00	4	4	0.07	0.00
Manufacturing	2,191	2,111	27.09	-3.65	1,907	1,843	34.08	-3.36
Electric power and gas	2	2	0.03	0.00	2	2	0.04	0.00
Water supply and pollution control	28	25	0.33	-10.71	22	18	0.34	-18.18
Construction	823	769	9.87	-6.56	686	640	11.83	-6.71
Wholesaling and retailing	1,652	1,627	20.88	-1.51	879	901	16.66	2.50
Transportation and warehousing	275	263	3.37	-4.36	175	171	3.15	-2.29
Hotel and restaurant	659	665	8.54	0.91	353	367	6.79	3.97
Information, communications and broadcasting	119	123	1.57	3.36	108	111	2.06	2.78
Finance and insurance	228	228	2.93	0.00	224	225	4.16	0.45
Real estate	68	61	0.79	-10.29	59	54	0.99	-8.47
Professional, scientific and technical services	238	234	3.00	-1.68	162	166	3.06	2.47
Supporting services	194	196	2.51	1.03	171	174	3.21	1.75
Educational services	208	199	2.56	-4.33	171	168	3.11	-1.75
Medical, healthcare and social welfare services	157	166	2.13	5.73	121	133	2.46	9.92
Arts, entertainment and leisure services	76	70	0.90	-7.89	54	51	0.94	-5.56
Other service industries	513	512	6.57	-0.19	294	302	5.59	2.72

Notes: 1. Data for 2009 are based on the revised definition of SMEs, whereby enterprises in industries other than mining and quarrying, manufacturing and construction that have 100 or fewer employees are classed as SMEs.

2. Data for individual industries are based on the old definition of SMEs.

Source: DGBAS, *Monthly Bulletin of Manpower Statistics*, 2008 and 2009.

The number of employed persons working in SMEs in the manufacturing sector in 2009 stood at 2,111,000, accounting for 27.09% of all employed persons working in SMEs. The wholesaling and retailing industry had the second largest number of employed persons working in SMEs, at 1,627,000 (20.88% of all employed persons working in SMEs), followed by the construction industry, with 769,000 (9.87%) (Table 4-1-1). In terms of the number of paid employees, in 2009 the manufacturing sector had the largest number of paid employees working in SMEs, at 1,843,000 (34.08% of all paid employees working in SMEs), followed by the wholesaling and retailing industry with 901,000 (16.66% of the total), and the construction industry with 640,000 (11.83%).

Employed persons working in SMEs are mostly aged between 25 and 55. Male employed persons continue to account for the largest share of all employed persons working in SMEs, but women's share of employed persons working in SMEs has continued to increase. Although persons educated to senior vocational school level continue to account for the largest share of

employed persons working in SMEs, the percentage of employed persons working in SMEs who were educated to university level rose significantly in 2009. Besides the expansion of the higher education sector in Taiwan, the increase in the percentage of employed persons working in SMEs who have been educated to junior college level or above may also be related to the special program implemented by the Ministry of Education in 2009 whereby junior college and university graduates could receive a NT\$22,000 stipend (Table 4-1-2).

Table 4-1-2 Characteristics of Employed Persons in Taiwan in 2008 and 2009

Units: thousand persons; %

Item \ Year	2008			2009		
	SMEs	Large Enterprises	Government Employees	SMEs	Large Enterprises	Government Employees
Total No. of Persons (Share of total)	7,966 76.58	1,479 14.22	958 9.21	7,793 75.82	1,446 14.07	1,040 10.11
(Total No. of Persons)¹ (Share of total)¹				(8,066) (78.47)	(1,173) (11.41)	(1,040) (10.11)
Age	100.00	100.00	100.00	100.00	100.00	100.00
15 - 24	8.42	7.76	3.73	7.88	6.63	3.71
25 - 40	43.92	60.79	42.25	44.05	61.11	41.37
41 - 55	37.44	27.45	45.68	37.41	27.91	45.07
56 - 65	8.28	3.80	8.08	8.66	4.10	9.47
Or over 65	1.94	0.20	0.27	2.01	0.25	0.37
Sex	100.00	100.00	100.00	100.00	100.00	100.00
Male	57.96	53.58	51.40	57.36	53.26	51.53
Female	42.04	46.42	48.60	42.64	46.74	48.47
Education	100.00	100.00	100.00	100.00	100.00	100.00
Illiterate	0.51	0.02	0.02	0.45	0.03	0.02
Self-taught	0.13	0.04	0.01	0.11	0.04	0.01
Elementary school	12.03	1.94	2.54	11.23	1.49	2.73
Junior high school	17.49	4.69	3.66	16.91	4.46	3.72
Senior high school	9.22	6.17	5.78	9.14	5.85	5.95
Senior vocational school	29.45	20.62	14.11	29.05	19.97	13.44
Junior college	15.38	23.17	22.81	15.51	22.73	22.09
University	13.68	30.74	35.97	15.19	31.69	35.96
Master's	2.02	11.00	12.46	2.28	12.01	13.56
Ph.D.	0.10	1.62	2.64	0.11	1.73	2.52

Notes: 1. See Table 4-1-1.

2. Data on the characteristics of employed persons is based on the old definition of SMEs.

Source: DGBAS, *Monthly Bulletin of Manpower Statistics*, 2008 and 2009.

2. A Total of 5,679,000 Paid Employees were Working for SMEs in 2009

The total number of paid employees in Taiwan averaged 7,889,000 in 2009 (excluding government employees), representing a decline of 13,000 (0.16%) compared to 2008; of this total of 7,889,000 paid employees, 5,679,000 (71.98% of all paid employees) were working in SMEs (Table 4-1-3).

If the figure of 5,408,000 paid employees of SMEs obtained using the old definition of SMEs is used, then the percentage of all paid employees working in SMEs fell from 69.21% in 2008 to 68.55% in 2009, representing a decline of 61,000 persons, or 1.12%.

Broadly speaking, the characteristics of paid employees working in SMEs are similar to those of employed persons working in SMEs, although for paid employees there is a high concentration in the 25–40 age range (52.27%). Women account for over 45% of paid employees working in SMEs, a higher share than the corresponding percentage for female employed persons. The

percentage of employed persons who are educated to junior college level or above rose by nearly 2 percentage points in 2009 compared to 2008 (Table 4-1-3).

Table 4-1-3 Characteristics of Paid Employees in Taiwan in 2008 and 2009

Units: thousand persons; %

Item \ Year	2008			2009		
	SMEs	Large Enterprises	Government Employees	SMEs	Large Enterprises	Government Employees
Total No. of Persons	5,469	1,475	958	5,408	1,442	1,040
Share of total	69.21	18.67	12.12	68.55	18.28	13.18
(Total No. of Persons)¹ (Share of total)¹				(5,679) (71.98)	(1,171) (14.84)	(1,040) (13.18)
Age	100.00	100.00	100.00	100.00	100.00	100.00
15 - 24	11.36	7.78	3.73	10.50	6.64	3.71
25 - 40	51.91	60.92	42.25	52.27	61.22	41.37
41 - 55	31.85	27.39	45.68	32.18	27.89	45.07
56 - 65	4.56	3.72	8.08	4.68	4.03	9.47
Over 65	0.33	0.19	0.27	0.37	0.22	0.37
Sex	100.00	100.00	100.00	100.00	100.00	100.00
Male	55.40	53.49	51.40	54.60	53.19	51.53
Female	44.60	46.51	48.60	45.40	46.81	48.47
Education	100.00	100.00	100.00	100.00	100.00	100.00
Illiterate	0.15	0.02	0.02	0.14	0.03	0.02
Self-taught	0.05	0.04	0.01	0.05	0.04	0.01
Elementary school	7.84	1.93	2.54	6.93	1.48	2.73
Junior high school	16.23	4.68	3.66	15.48	4.45	3.72
Senior high school	9.02	6.16	5.78	8.79	5.85	5.95
Senior vocational school	30.31	20.64	14.11	29.91	19.98	13.44
Junior college	17.25	23.20	22.81	17.32	22.75	22.09
University	16.60	30.71	35.97	18.51	31.69	35.96
Master's	2.42	10.98	12.46	2.77	12.00	13.56
Ph.D.	0.12	1.63	2.64	0.11	1.72	2.52

Note: See Table 4-1-2.

Source: DGBAS, *Monthly Bulletin of Manpower Statistics*, 2008 and 2009.

3. There were Around 468,000 SME Employers in Taiwan in 2009

There were around 468,000 SME employers in Taiwan in 2009, and approximately 2,000 large enterprise employers. Using the old definition of SMEs, the number of SME employers fell by just over 37,000 (7.39%) in 2009, from 504,000 in 2008 to 467,000 in 2009. At the same time, the number of large enterprise employers fell by approximately 289, a decline of 8.38%. This gives some idea of the severe impact that the global financial crisis had on both SMEs and large enterprises. SME employers are concentrated in the 25–55 age range. In 2009, the number of SME employers in the 15–24 age group fell by 50,000, while the number in the 25–40 age group fell by over 10,000. SME employers in the 41–55 age group account for more than half of all SME employers. While the share of all SME employers held by those in the 41–55 age group continued to increase, in absolute terms the number of employers in this age group fell in 2009 compared to 2008, whereas the number of SME employers in the 56 or over age group rose by nearly 6,000. Clearly, the trend towards greater entrepreneurial activity among older people became even more pronounced during the period of the global financial crisis, while large numbers of younger entrepreneurs have been forced out of business by the deteriorating economic climate (Table 4-1-4).

Table 4-1-4 Characteristics of Employers in 2008 and 2009

Units: thousand persons; %

Item \ Year	2008		2009	
	SMEs	Large Enterprises	SMEs	Large Enterprises
Total No. of Persons (Share of total)	504.24 (99.32)	3.45 (0.68)	466.95 (99.33)	3.16 (0.67)
(Total No. of Persons)¹ (Share of total)¹			(468.08) (99.57)	(2.03) (0.43)
Age	100.00	100.00	100.00	100.00
15 - 24	0.40	—	0.39	—
25 - 40	25.58	4.43	24.38	9.52
41 - 55	58.37	51.28	57.78	38.80
56 - 65	13.50	36.89	15.04	36.47
Over 65	2.15	7.40	2.41	15.22
Sex	100.00	100.00	100.00	100.00
Male	82.29	90.19	81.32	92.58
Female	17.71	9.81	18.68	7.42
Education	100.00	100.00	100.00	100.00
Illiterate	0.09	—	0.04	—
Self-taught	0.04	—	0.06	—
Elementary school	8.84	3.59	8.29	5.92
Junior high school	15.62	5.36	14.93	4.19
Senior high school	9.97	8.86	10.48	5.84
Senior vocational school	28.69	8.71	27.87	7.77
Junior college	18.50	9.73	18.94	13.70
University	14.90	45.51	15.67	31.60
Master's	3.09	18.02	3.30	23.76
Ph.D.	0.26	0.21	0.42	7.23

Note: See Table 4-1-2.

Source: DGBAS, *Monthly Bulletin of Manpower Statistics*, 2008 and 2009.

4. An Increase in the Number of Middle-aged and Elderly Self-employed Persons

The self-employed either work alone or as part of a partnership; they may be assisted by persons who are working without pay, but they do not have any paid employees. Self-employed persons can thus all be classed as SMEs. The number of self-employed persons in Taiwan peaked in 1991–1992 at around 1,572,000. Since then, it has tended to fall, dropping to 1,331,000 in 2009; this figure represented a decline of around 43,000 compared to 2008. The share of self-employed persons aged between 25 and 40 fell most dramatically, by 1.27 percentage points. By contrast, the share of self-employed persons aged 56 or over rose, by 1.38 percentage points. This may be related to the difficulty that middle-aged and elderly persons have in finding work, which may encourage them to start up their own business instead (Table 4-1-5).

5. There were Nearly 427,000 Female SME Owners and Self-employed Persons in Taiwan in 2009

In 2009, there were 87,290 female SME owners in Taiwan and 339,737 female self-employed persons, giving a combined total of 427,027.

Using the old definition of SMEs, there were 87,214 female SME owners in Taiwan in 2009 (representing a decline of 2,076 compared to 2008), and 339,737 female self-employed persons (representing a decline of 13,601). Overall, the combined total for female SME owners and female

self-employed persons in 2009 was 426,951 persons, reflecting a decrease of 15,677 (3.54%) persons compared with 2008. The global financial crisis led to a severe, worldwide economic downturn; as a result, the number of female SME owners – which had been climbing steadily for many years – fell in both 2008 and 2009. While the number of female self-employed persons rose by around 3,000 in 2008, this figure too fell in 2009, by over 13,000. These data give some idea of just how severe the impact of the global financial crisis has been, with SMEs experiencing the worst effects.

Female SME owners are highly concentrated in the wholesaling and retailing industry, followed by the hotel and restaurant industry, with manufacturing in third place and “other service industries” in fourth. The female self-employed are mainly found in the wholesaling and retailing industry, and in the “other service industries,” followed by the hotel and restaurant industry. As regards female owners of large enterprises, the finance and insurance industry accounts for a particularly large share. Overall, female entrepreneurial activity is heavily concentrated in the wholesaling and retail industry and in the hotel and restaurant industry.

Table 4-1-5 Characteristics of Self-employed Persons in 2008 and 2009

Units: thousand persons; %

Item	Year	2008	2009
Total No. of Persons (Share of total)		1,374 100.00	1,331 100.00
Age		100.00	100.00
15 - 24		0.67	0.69
25 - 40		22.60	21.33
41 - 55		49.71	49.58
56 - 65		19.62	20.78
65 or over		7.39	7.61
Sex		100.00	100.00
Male		74.29	74.48
Female		25.71	25.52
Education		100.00	100.00
Illiterate		1.46	1.30
Self-taught		0.40	0.34
Elementary school		26.10	26.03
Junior high school		22.68	22.88
Senior high school		9.71	9.84
Senior vocational school		24.79	24.16
Junior college		9.19	9.44
University		4.88	5.15
Master's		0.77	0.79
Ph.D.		0.03	0.07

Note: See Table 4-1-2.

Source: DGBAS, *Monthly Bulletin of Manpower Statistics*, 2008 and 2009.

6. More Than 410,000 Temporary and Contract Workers were Working in SMEs in 2009

According to the data presented in the 2008 and 2009 Taiwan Region Manpower and Employment Survey, there has been an increase in the use of part-time workers by SMEs, large enterprises, and government agencies. Overall, the utilization of part-time workers is most common in the service sector, especially in the wholesaling and retailing industry. Clearly, both SMEs and service sector enterprises feel a real need for part-time workers.

7. An Increase in the Share of Foreign Laborers Employed by SMEs

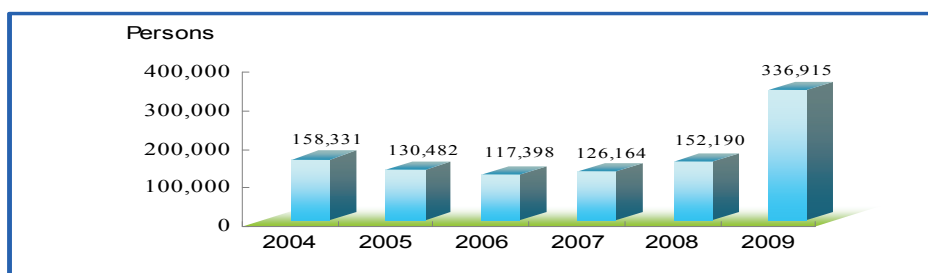
With the impact of the global financial crisis on business enterprises' operations and the number of orders received, as well as the government's adjustment of its policy regarding the employment of foreign contract laborers in Taiwan, 2009 saw a decline in both the number of applications to employ foreign laborers and the number of foreign laborers actually working in Taiwan. As a result, in 2009 the number of foreign laborers in Taiwan fell to its lowest level for 10 years. The number of approvals fell to 188,185 (down 32,511 on 2008), while the number of foreign laborers actually working in Taiwan declined to 169,621 (down 22,147 on 2008). The fall in the number of foreign laborers in 2009 was attributable mainly to large enterprises, where the number of foreign laborer approvals fell by 23,483, compared to only 9,028 among SMEs; similarly, the number of foreign laborers actually in Taiwan and working for large enterprises declined by 17,274, while the number of foreign laborers in Taiwan and working for SMEs fell by 4,873. As a result of these changes, the SMEs' share of all foreign laborers rose from 52.40% in 2008 to 56.37% in 2009.

8. An Increase in the Number of SME Employees Becoming Involuntarily Unemployed

In 2009, the number of unemployed persons in Taiwan rose by 189,000 compared to 2008, and the unemployment rate increased to 5.85%. 465,000 of the unemployed had previously been working in SMEs. If the old definition of SMEs is used, then the number of unemployed persons who had previously been working in an SME rose from 306,000 in 2008 to 454,000 in 2009, while the number of unemployed who had previously been working in a large enterprise increased from 38,000 to 63,000 (Table 4-1-6).

The gradual spread of the effects of the global financial crisis led to a pronounced increase in the number of unemployed in 2009, compared to the previous year. The number of unemployed persons who had lost their job because of layoffs or factory closures had been rising gradually since 2007; in 2009, the figure more than doubled (compared to 2008) to reach 336,915 (Figure 4-1-1).

Figure 4-1-1 No. of Workers Becoming Unemployed Because of Layoffs or Factory Closures, 2004–2009



Source: DGBAS, *Monthly Bulletin of Manpower Statistics*, 2004–2009.

2009 saw a dramatic increase in the number of persons becoming unemployed because of layoffs or factory closures. 302,000 of the workers who became unemployed in this manner had previously worked for SMEs. Using the old definition of SMEs, just over 295,000 had previously been employed by SMEs, representing an increase of 157,000 compared to 2008; slightly over

38,000 had previously been working for large enterprises, an increase of 25,000 compared to 2008. The global financial crisis has thus caused a pronounced increase in the number of employees of both SMEs and large enterprises who have become involuntarily unemployed. The main reason why government employees became unemployed was the termination of seasonal or temporary employment; this situation is probably related to the government's implementation of job creation schemes that operate for a period of six months (Table 4-1-7).

Table 4-1-6 Characteristics of the Unemployed in 2008 and 2009

Unit: thousand persons; %

Item \ Year	2008			2009		
	SMEs	Large Enterprises	Government Employees	SMEs	Large Enterprises	Government Employees
Total No. of Persons	306.36	37.57	13.07	453.76	63.07	19.35
Share of total	85.82	10.52	3.66	84.63	11.76	3.61
(Total No. of Persons)¹ (Share of total)¹				(465.68) (86.85)	(51.16) (9.54)	(19.35) (3.61)
Age	100.00	100.00	100.00	100.00	100.00	100.00
15 - 24	14.77	12.23	12.58	12.67	10.94	8.40
25 - 40	50.58	61.60	50.41	50.81	65.77	48.29
41 - 55	30.44	23.92	29.95	31.71	21.69	35.18
56 - 65	4.17	2.23	6.83	4.79	1.61	8.02
Over 65	0.04	0.03	0.23	0.02	—	0.11
Sex	100.00	100.00	100.00	100.00	100.00	100.00
Male	63.11	56.20	40.31	66.39	57.37	47.82
Female	36.89	43.80	59.69	33.61	42.63	52.18
Education	100.00	100.00	100.00	100.00	100.00	100.00
Illiterate	0.11	—	0.04	0.07	—	0.04
Self-taught	0.07	—	0.12	0.11	—	—
Elementary school	8.58	2.31	9.36	8.86	1.75	9.15
Junior high school	20.01	7.51	7.27	20.77	5.95	9.92
Senior high school	10.12	8.06	7.00	9.54	7.83	4.44
Senior vocational school	32.15	26.45	18.01	31.21	25.58	22.27
Junior college	14.52	18.18	14.70	13.99	24.32	14.26
University	13.17	31.05	34.71	14.15	27.03	33.63
Master's	1.20	5.62	8.79	1.30	7.21	5.78
Ph.D.	0.08	0.83	—	0.00	0.32	0.50

Notes: 1. See Table 4-1-1.

2. The enterprise types given in the table are those in which the unemployed worked before becoming unemployed.

Source: DGBAS, *Monthly Bulletin of Manpower Statistics*, 2008 and 2009.

Table 4-1-7 Reasons Given for Leaving One's Previous Job in 2008 and 2009

Units: thousand persons; %

Item \ Year	2008			2009		
	SMEs	Large Enterprises	Government Employees	SMEs	Large Enterprises	Government Employees
Total no. of persons	306.36	37.57	13.07	453.76	63.07	19.35
(Total No. of Persons)¹				(465.68)	(51.16)	(19.35)
Layoffs, or employer went out of business	44.94	35.35	9.31	65.13	61.27	14.22
Dissatisfaction with previous job	38.15	51.81	16.58	21.66	29.23	12.29
Poor state of health	2.61	3.07	0.30	1.79	1.99	1.62
Previous job was seasonal or temporary work	11.14	3.97	59.69	9.37	3.61	62.95
Marriage or pregnancy (women)	0.72	1.40	1.08	0.30	0.51	0.38
Retirement	0.24	2.05	6.86	0.20	1.14	4.80
Needed to devote self to housework	0.69	0.49	1.99	0.48	0.52	1.18
Other	1.51	1.85	4.19	1.08	1.72	2.55

Notes: 1. See Table 4-1-1.

2. The enterprise types given in the table are those in which the unemployed worked before becoming unemployed.

Source: DGBAS, *Monthly Bulletin of Manpower Statistics*, 2008 and 2009.

9. An Increase of Around 2,000 in the Number of SME Employees Changing Jobs

In 2009, a total of 518,000 SME employees changed jobs; 91.14% of these people went to work for another SME, with only 4.69% taking up a position with a large enterprise, and just 4.17% getting a job with the government. If the old definition of SMEs is used, then the number of SME employees that changed jobs in 2009 was 476,000. Due to the impact of the global economic downturn, this figure was only about 2,000 up on 2008. 89.41% of the SME employees who changed their job in 2009 went to work for another SME, which was just over two percentage points up on 2008; the share that found work with a large enterprise was over three percentage points down on 2008, while the share that found work with the government was very slightly higher than in 2008. The combined total of those who took up jobs with large enterprises and those who went to work for the government was around 10% of all those SME employees who changed their job in 2009; this figure has remained relatively stable for some years now, suggesting that it is not easy for former SME employees to find work with large enterprises or in the public sector (Table 4-1-8).

Table 4-1-8 Choice of New Employer by Former SME Employees, 2004–2009

Units: thousand persons; %

Year	Total	Going to Work for Another SME		Going to Work for a Large Enterprise		Going to Work for a Government Agency	
		No. of Persons	Share of Total	No. of Persons	Share of Total	No. of Persons	Share of Total
2004	501	433	86.32	43	8.62	25	5.05
2005	438	394	89.95	36	8.22	8	1.83
2006	428	367	85.79	48	11.27	13	2.95
2007	439	390	88.65	38	8.62	12	2.73
2008	474	413	87.13	46	9.70	15	3.16
2009	476	426	89.41	31	6.50	19	4.09
2009*	518	472	91.14	24	4.69	22	4.17

Note: * Data for 2009 are based on the revised definition of SMEs, whereby enterprises in industries other than mining and quarrying, manufacturing and construction that have 100 or fewer employees are classed as SMEs.

Source: DGBAS, *Taiwan Region Manpower and Employment Survey*, 2004–2009.

10. SMEs Have Adopted a Wide Range of Measures in Response to the Global Economic Downturn

A study commissioned by the Council of Labor Affairs that was carried out in late 2009 found that, faced with the impact of the global financial crisis of 2008 – 2009, besides adjusting their business strategy, SMEs have also been making changes to working conditions. Over 70% of SMEs reported cutting wages (including both the reduction of base pay and reduction of bonuses); in most cases the reduction was between 6% and 10%. More than 60% of SMEs have reduced working hours (which included hiring part-time workers, giving employees unpaid leave, cutting scheduled working hours or introducing job-sharing schemes, etc.); here again, at most firms the reduction in working hours has been in the range of 6 – 10%. Besides making adjustments to wages and working hours, the impact of the global financial crisis has also led SMEs to cut expenditure on things like training, financial support to help employees undergo further education, welfare benefits (including company outings), etc. Reductions in welfare benefits have been particularly common. Around 70% of SMEs have adopted manpower adjustment measures

(including deciding not to replace employees who leave, laying off Taiwanese workers or encouraging them to take early retirement, laying off foreign laborers, replacing in-house workers with agency (contract) workers, outsourcing work to other companies, etc.). The most widely reported measures included failing to replace employees who leave the company, and laying off Taiwanese workers or encouraging them to take early retirement (Table 4-1-9).

Table 4-1-9 Measures Adopted by SMEs in Response to the Impact of the Global Financial Crisis

Units: enterprises; %

Measures Adopted	Managers	Employees	Scale of Adjustment			
			5% or less	6% - 10%	11% - 15%	Over 15%
Measures relating to the reduction of wages	233 firms (71.69%)					
(a) Cutting basic pay (including overtime)	123	105	35	55	29	21
(b) Cutting bonuses (including performance-based bonuses and annual bonuses)	123	136	24	46	36	29
Measures relating to the reduction of working hours	202 firms (62.15%)					
(a) Hiring part-time workers	19	102	26	40	17	16
(b) Unpaid leave, reduction of scheduled working hours, and job-sharing schemes	86	128	25	50	28	22
Measures relating to manpower adjustment	234 firms (72%)					
(a) Leaving vacancies unfilled	75	141	59	49	21	15
(b) Laying off Taiwanese workers or encouraging them to take early retirement	28	58	16	22	12	9
(c) Laying off foreign laborers	0	22	6	5	3	7
(d) Using agency (contract) workers	2	31	10	14	6	4
(e) Outsourcing work to other companies	7	31	8	12	12	6
Measures not directly related to working conditions	192 firms (59.08%)					
(a) Reduced expenditure on in-service training and subsidies to help employees undergo further education	54	57	20	21	11	14
(b) Reduction of employee welfare benefits (such as company outings)	131	147	32	52	28	27

Source: Council of Labor Affairs, Executive Yuan.

11. The Government Has Been Working Actively to Stimulate the Creation of New Jobs

Since the global financial crisis first began in the second half of 2007, the unemployment rate in Taiwan has risen steadily. To tackle the unemployment problem, besides working to revitalize the economy and implementing manpower cultivation plans, the government has also introduced a number of short-term job creation schemes to boost employment, including the “Instant Jobs Plan,” “Public-sector Short-term Employment Plan,” the “Corporate Manpower Cultivation Project,” the “Quality Manpower Development and Employment Promotion Plan,” the “Value-added Recharging Plan,” the “2006–2008 University and Junior College Graduate Business Enterprise and Educational Foundation Internship Program,” and the “2006–2008 Graduate School, University and Junior College Graduate Industry-Academia-Incubator Linkage Plan,” etc. As the economy did not start to show signs of picking up again until mid-2009, implementation of short-term employment creation schemes continued into 2009, with the aim of helping the unemployed to find new jobs as quickly as possible and mitigating the impact of job loss on the unemployed.

As regards the results of the various short-term job creation schemes implemented over the period 2008–2009, in 2008 a total of 38,820 jobs were created, of which 20,438 continued to exist in 2009. An additional 53,671 job opportunities were created in 2009, of which 52,840 were filled, giving a cumulative total of 73,278 jobs created as of December 31, 2009 (Table 4-1-10).

Table 4-1-10 Jobs Created by Short-term Employment Promotion Schemes over the Period 2008–2009

Job Creation Target for 2009	Jobs Created in 2008 that Continued to Exist in 2009 (A)	New Jobs Created in 2009	Jobs Filled (B)		Cumulative Jobs Filled in 2008–2009 (A+B)	
			Persons	%	Persons	%
74,112	20,438	53,671	52,840	98	73,278	99

Note: Data cover the period up to June 15, 2009.

Source: Council for Economic Planning and Development, Executive Yuan, <http://www.cepd.gov.tw/m1.aspx?sNo=0010828&ex=1&ic=0000015>.

The 2009–2012 Employment Promotion Plan provides for the creation of 103,000 new jobs in 2010, and for the provision of training to 240,000 people. In April 2010, the various government agencies set a combined employment creation target of 45,576 persons and a training target of 33,775 persons. As of April 19, a total of 54,137 jobs had already been created, giving an implementation rate of 119%, and meeting the annual target; in addition, training had been provided to 44,235 people, giving an implementation rate of 131%, which represented 19% of the annual target (Table 4-1-11).

Table 4-1-11 The 2009–2012 Employment Promotion Plan – Implementation Status as of 2010

Category	Employment Promotion Items	Annual Target	Target for April (A)	Implementation Status as of April 19, 2010	
				No. of Persons (B)	(B)/(A)
Training (persons)	Expanding collaboration between industry and the university sector	50,100	20,000	20,000	100
	Strengthening training to stimulate job creation	187,350	13,775	24,235	176
Sub-total		237,450	33,775	44,235	131
Jobs Created (persons)	Improving the success rate for matching job-seekers with job vacancies	24,380	7,115	7,292	103
	Providing wage subsidies to make it easier for job-seekers to find work	43,352	12,110	22,435	186
	Helping persons who wish to start their own business or become self-employed	4,918	1,115	1,960	176
	Strengthening short-term job creation schemes	30,467	25,236	22,450	89
Sub-total		103,117	45,576	54,137	119

Note: Data cover the period up to April 19, 2010.

Source: Council for Economic Planning and Development, Executive Yuan, <http://www.cepd.gov.tw/m1.aspx?sNo=0010829&ex=1&ic=0000015>.

In addition, the National Youth Commission, Executive Yuan has established Youth Career Development Association service centers in northern, central and southern Taiwan, to provide personalized consulting service to young people who are interested in starting their own business. In all, free business consulting service has been provided to 2,715 people, and individual consultant or team guidance has been provided to a further 8,733, thereby helping a total of 4,593

young people to set up their own business. Of these, 1,224 have succeeded in securing loans, with a combined value of around NT\$570 million. These new businesses have created a total of 4,334 jobs (including the business owners).

In 2009, the Council of Labor Affairs held Introduction to Entrepreneurship Classes that were attended by a total of 8,940 people, Intermediate Entrepreneurship Classes that were successfully completed by 5,050 people, and Advanced Entrepreneurship Classes that were attended by 1,822 people, giving a combined total of 15,812 participants (Table 4-1-12). The Council provided business start-up consulting services to 4,016 people, of which 2,149 succeeded in establishing their own business, creating a total of 3,067 jobs (Table 4-1-13).

Table 4-1-12 Entrepreneurship Classes Organized by the Council of Labor Affairs

Year	Introductory Classes		Intermediate Classes		Advanced Classes		Annual Total	
March – Dec. 2007	7,356		1,720		535		9,611	
2008	8,243		2,841		2,708		13,792	
2009	Male	2,656	Male	1,297	Male	608	Male	4,561
	Female	6,284	Female	3,753	Female	1,214	Female	11,251
	Sub-total	8,940	Sub-total	5,050	Sub-total	1,822	Sub-total	15,812
Total	24,539		9,611		5,065		39,215	

Source: Council of Labor Affairs, Executive Yuan.

Table 4-1-13 Results Achieved in the Provision of Business Start-up Assistance by the Council of Labor Affairs

Year	No. of Persons Receiving Guidance	No. of Persons Helped to Start Their Own Business	No. of New Jobs Created (including business owner)
March – Dec. 2007	2,024	1,276	576
2008	2,693	1,168	691
2009	4,016	2,149	3,067
Total	8,733	4,593	3,758

Source: Council of Labor Affairs, Executive Yuan.

12. A Continuing Fall in the Number of Workers Being Asked to Take Unpaid Leave

During the global financial crisis, many Taiwanese enterprises responded to the dramatic contraction in the volume of orders received by asking employees to take unpaid leave. According to statistics compiled by the Council of Labor Affairs, the number of firms in Taiwan asking employees to take unpaid leave rose from 416 in January 2009 to a peak of 903 in April 2009; in February 2009, the number of workers taking unpaid leave rose to nearly 240,000. Fortunately, as the crisis began to ease, both the number of firms enforcing unpaid leave and the number of employees affected started to fall in the second half of 2009. By 2010, with the outlook for the global economy as a whole looking brighter, the number of firms using unpaid leave fell to 73 in March, with less than 2,000 employees being affected (Figure 4-1-2).

13. A Relatively Large Number of SMEs Have Been Making Use of Internship Programs and the “Instant Jobs Plan”

Towards the end of 2009, the Council of Labor Affairs, Executive Yuan implemented a survey to determine the extent to which business enterprises were making use of the various job-creation

initiatives implemented by the government. The results showed that a relatively large number of SMEs had been making use of the University and Junior College Graduate Business Enterprise and Educational Foundation Internship Program and the Instant Jobs Plan. The next most widely used schemes were the Value-added Recharging Plan and Subsidy for the Hiring of Unemployed Workers. Relatively few SMEs were making use of the Diversified Employment Development Plan or the Stable Employment Guidance Team (Table 4-1-14).

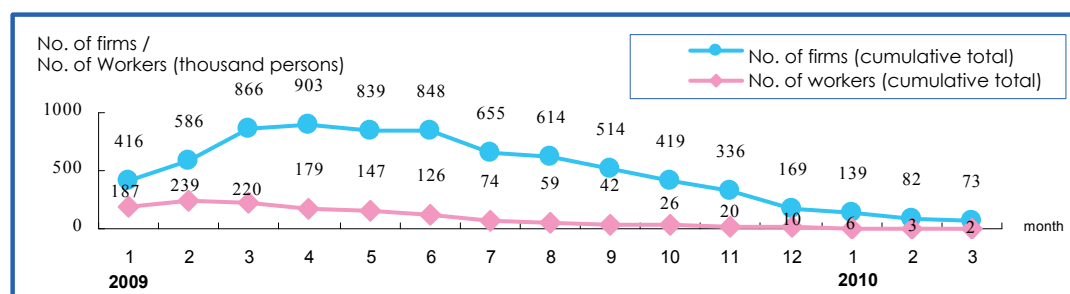
Table 4-1-14 Utilization of Government Employment Creation Schemes, and Benefits Achieved

Unit: enterprises

Employment Promotion Measure	No. of Enterprises Using the Scheme (% of Total)	Benefits Achieved				
		Highly Non-beneficial	Non-beneficial	Moderately Beneficial	Beneficial	Extremely Beneficial
Value-added Recharging Plan	97 (21.09%)	5	14	51	23	4
Instant Jobs Plan	122 (26.52%)	4	19	58	32	9
Diversified Employment Development Plan	64 (13.91%)	5	15	29	13	2
Subsidy for the Hiring of Unemployed Workers	92 (20.00%)	3	18	42	20	9
University and Junior College Graduate Business Enterprise and Educational Foundation Internship Program	140 (30.43%)	7	17	74	27	15
Stable Employment Guidance Team	56 (12.17%)	3	13	28	11	1

Source: Council of Labor Affairs, Executive Yuan.

Figure 4-1-2 The Number of Firms Making Employees Take Unpaid Leave, and the Number of Workers Affected



Source: Council of Labor Affairs, Executive Yuan.

II Labor Conditions in SMEs

1. The Highest Average Salary Levels for SME Employees are Found in the Medical, Healthcare and Social Services Industry

As can be seen from the data presented in Table 4-2-1, in 2009 the industry in which SME employees had the highest average salary level was the medical, healthcare and social services industry, where monthly salaries averaged just over NT\$42,000, followed by the finance and insurance industry, and the professional, scientific and technical services industry at

approximately NT\$40,000. The agriculture, forestry, fisheries and animal husbandry industry had the lowest average pay levels. Among large enterprises, the professional, scientific and technical services industry had the highest average salaries, and the water supply and pollution prevention industry had the lowest.

Table 4-2-1 Average Monthly Salary in 2008 and 2009 – by Industry and Enterprise Size

Unit: NT\$ thousands

Industry	Item	2008			2009		
		SMEs	Large Enterprises	Government Employees	SMEs	Large Enterprises	Government Employees
Agriculture, forestry, fisheries and animal husbandry		21.03	23.49	35.09	20.12	32.57	35.72
Mining and quarrying		36.24	—	64.18	34.37	—	46.77
Manufacturing		33.35	38.43	55.92	32.04	37.78	52.77
Electric power and gas		42.89	41.22	57.85	37.73	42.65	58.08
Water supply and pollution prevention		29.88	32.39	35.82	29.40	27.27	36.14
Construction		36.72	51.13	49.01	33.56	50.86	44.40
Wholesaling and retailing		35.19	36.65	36.18	32.48	36.24	28.41
Transportation and warehousing		36.03	46.47	44.88	34.46	46.79	46.20
Hotel and restaurant		29.86	28.57	78.00	27.98	28.69	30.00
Information, communications and broadcasting		40.25	49.18	39.61	38.31	44.27	55.78
Finance and insurance		41.60	45.77	59.90	40.54	41.85	54.54
Real estate		37.17	48.20	30.86	34.94	28.50	29.43
Professional, scientific and technical services		41.73	56.39	53.03	40.53	58.36	48.28
Supporting services		29.12	32.95	28.26	27.37	28.53	26.93
Educational services		30.89	49.00	49.85	29.75	47.12	48.35
Medical, healthcare and social services		46.55	43.06	53.55	42.20	42.16	49.42
Arts, entertainment and leisure services		31.59	28.85	34.33	27.51	39.81	36.78
Other service industries		30.18	33.40	39.41	28.49	33.68	67.98

Note: The data presented in this table are based on the old definition of SMEs.

Source: DGBAS, *Taiwan Region Manpower and Employment Survey*, 2008 and 2009.

2. Personnel Costs Account for 30–40% of SMEs' Operating Expenses

An enterprise's operating expenses include wages, rental, travel expenses, advertising expenses, water, electricity and gas charges, postal and telecommunications expenses, insurance, entertainment expenses, training expenses, etc. Operating expenses plus business costs give an enterprise's total operating costs. As operating cost structure varies from industry to industry, there is also significant variation in the share of operating expenses or operating costs held by personnel costs. In 2008, in the SME sector, personnel costs accounted for at least 30–40% of operating expenses in all industries except the mining and quarrying industry, the electric power and gas industry, and the water supply and pollution prevention industry. Personnel costs as a share of operating expenses were highest in the medical, healthcare and social services industry, at 53.35% (Table 4-2-2), and lowest in the mining and quarrying industry, at 14.55%. Generally speaking, personnel costs' share of operating expenses is higher among SMEs than it is among large enterprises (although within the industrial sector, personnel costs are relatively low in industries other than manufacturing); in the service sector the only industries where the reverse is true are the transportation and warehousing industry, the hotel and restaurant industry, and the finance and insurance industry. Personnel expenses as a share of SMEs' operating costs (as opposed to operating expenses) tend to be significantly lower, because of the high share of small and medium-sized manufacturing and construction firms' total costs accounted for by raw materials.

3. For Most Industries, 2009 Saw a Slight Fall in the Average Number of Hours Worked Per Week

In 2009, in the SME sector, the hotel and restaurant industry had the longest average working hours in Taiwan, at 48.12 hours per week. The wholesaling and retailing industry was in second place with 47.13 hours (Table 4-2-3).

The industries with the shortest working hours were the construction industry (38.82 hours per week) and the educational services industry (38.83 hours). The trend towards lower average working hours across most industries that began in 2008 continued in 2009. Only the wholesaling and retailing industry, information, communications and broadcasting industry, the real estate industry and the medical, healthcare and social welfare services industry saw a slight increase in average working hours compared to 2008; in the mining and quarrying industry, manufacturing, and the arts, entertainment and leisure services industry, average weekly working hours fell by over 2 hours a week compared to the previous year, reflecting the impact of the economic downturn. Among large enterprises, the number of industries that experienced a decline in average working hours was slightly smaller; however, the mining and quarrying industry saw average working hours fall by over 7 hours a week, more than in any other industry.

Table 4-2-2 Personnel Costs as a Percentage of Operating Costs and Operating Expenses in 2008

Unit: %

Industry	Enterprise Size	Personnel Costs as a Percentage of Operating Expenses		Personnel Costs as a Percentage of Operating Costs	
		SMEs	Large Enterprises	SMEs	Large Enterprises
Agriculture, forestry, fisheries and animal husbandry		32.28	37.10	5.22	5.09
Mining and quarrying		14.55	42.14	2.38	4.61
Manufacturing		33.33	22.61	3.72	1.52
Electric power and gas		26.62	47.02	6.82	1.57
Water supply and pollution prevention		28.38	53.47	8.50	4.24
Construction		38.81	45.64	4.99	1.93
Wholesaling and retailing		42.81	33.43	8.98	3.32
Transportation and warehousing		36.52	43.85	11.54	4.12
Hotel and restaurant		37.73	38.78	17.06	18.64
Information, communications and broadcasting		44.24	30.36	21.46	1.91
Finance and insurance		35.03	41.66	9.56	1.02
Real estate		33.34	21.99	11.87	2.36
Professional, scientific and technical services		42.38	32.59	19.96	7.15
Supporting services		51.62	36.01	0.17	7.57
Educational services		48.22	43.58	34.00	25.82
Medical, healthcare and social welfare services		53.35	41.84	28.12	3.83
Arts, entertainment and leisure services		35.07	33.56	19.16	14.98
Other service industries		38.95	28.11	16.51	9.14
Total (all industries)		38.74	31.37	2.53	1.71

Note: Operating costs include business costs and operating expenses.

Source: Ministry of Finance Tax Data Center, Business income tax data for 2008.

Table 4-2-3 Working Hours per Week in 2008 and 2009 – by Industry

Unit: hours per week

Industry	Item	2008			2009		
		SMEs	Large Enterprises	Government Employees	SMEs	Large Enterprises	Government Employees
Agriculture, forestry, fisheries and animal husbandry		39.78	44.78	40.56	39.66	43.92	42.17
Mining and quarrying		43.62	48.00	39.73	41.00	40.73	42.04
Manufacturing		42.96	42.49	40.34	40.36	42.42	41.18
Electric power and gas		44.60	41.25	39.79	44.42	42.52	40.41
Water supply and pollution prevention		43.59	43.34	41.42	41.89	41.59	41.54
Construction		40.47	42.44	40.54	38.82	41.60	41.31
Wholesaling and retailing		46.28	44.15	40.60	47.13	44.67	40.05
Transportation and warehousing		45.38	43.95	40.32	45.34	43.47	41.56
Hotel and restaurant		48.51	44.65	40.80	48.12	45.50	43.84
Information, communications and broadcasting		42.46	42.84	41.71	43.14	43.48	40.61
Finance and insurance		44.26	41.66	40.60	43.47	42.70	41.31
Real estate		45.47	48.63	38.28	46.61	47.32	41.14
Professional, scientific and technical services		42.86	43.54	39.71	41.85	43.03	39.99
Supporting services		44.67	46.55	40.03	43.24	48.65	40.67
Educational services		39.07	34.44	36.62	38.83	35.53	36.36
Medical, healthcare and social welfare services		44.57	44.17	42.58	45.38	44.24	42.23
Arts, entertainment and leisure services		46.23	43.13	39.98	44.15	43.50	41.36
Other service industries.		46.50	43.35	41.53	46.47	44.34	41.55

Note: The data presented in this table are based on the old definition of SMEs.

Source: DGBAS, *Taiwan Region Manpower and Employment Survey*, 2008 and 2009.

III Manpower Cultivation in SMEs

1. The Economic Downturn Has Led Enterprises to Attach More Importance to Employee Training

Since 2004, the Council of Labor Affairs, Executive Yuan has been providing subsidies for individual enterprises and organizations to arrange training programs for their employees in line with operational needs (“individual training”), while also encouraging enterprises in related industries to join forces with one another to implement employee training on a joint basis (“joint training”). The number of enterprises participating in this scheme peaked in 2006 at 1,551, since when it has fallen off slightly, but the number of training classes arranged and the number of persons receiving training has continued to grow, rising to a historic high of 40,544 classes and 864,001 trainees in 2009. As regards joint training (the “Joint Training Program to Help Business Enterprises Strengthen Their Human Resources”), the aim of this program is to encourage business enterprises to organize employee training on a collaborative basis with other companies or organizations in the same industry or related industries. The Council of Labor Affairs provides subsidies covering 40–70% of the cost of such training. The number of joint training plans reached a historic high of 119 in 2009; the number of enterprises taking part, number of classes organized and number of employees undergoing training also reached new highs of 1,342 firms, 5,163 classes and 140,487 employees, respectively (Table 4-3-1).

Table 4-3-1 Provision of Assistance to Enhance Manpower Cultivation by Business Enterprises, 2004–2009

Year	Item	Individual Training Plans			Joint Training Plans			
		No. of Firms Receiving Subsidies	No. of Training Classes	No. of Training Participants	No. of Projects	No. of Firms Taking Part	No. of Training Classes	No. of Training Participants
2004		1,288	13,828	213,809	76	588	1,282	42,225
2005		1,471	22,115	394,997	89	1,146	3,062	104,153
2006		1,551	22,486	424,311	87	668	2,814	102,867
2007		1,307	26,953	547,805	102	1,891	2,692	108,389
2008		1,415	38,282	733,638	112	2,088	4,583	131,971
2009		1,240	40,544	864,001	119	1,342	5,163	140,487

Source: Bureau of Employment and Vocational Training, Council of Labor Affairs, Executive Yuan, April 2010.

2. A Substantial Increase in the Number of SME Employees Participating in Professional Training in 2008

According to data compiled by the Bureau of Employment and Vocational Training, Council of Labor Affairs, since 2002 there has been a steady increase in the number of people undergoing professional training. The number of trainees per annum broke through the one million mark in 2005, rising to a historic high of 1,776,253 in 2008. The number of employees of large private- and public-sector enterprises with 200 or more employees undergoing professional training has continued to break new records, reaching 1,373,660 by 2008. The number of employees of smaller private- and public-sector enterprises with fewer than 200 employees has also risen substantially; the total of 245,197 trainees in 2008 was the highest figure since 2002, possibly reflecting the various programs that the government had launched to stimulate job creation and encourage workers to participate in professional training (Table 4-3-2).

Table 4-3-2 The Number of Employees Participating in Professional Training, 2002–2008

Year	Item	Unit: persons			
		Total Instances of Participation in Professional Training	Employees of Public or Private Enterprises or Agencies with Less than 200 Employees	Employees of Public or Private Enterprises or Agencies with 200 or More Employees	Other
2002		738,580	160,498	399,128	178,954
2003		859,308	145,503	499,079	214,726
2004		883,921	175,682	541,872	166,367
2005		1,090,745	164,146	718,483	208,116
2006		1,139,902	107,882	842,866	189,154
2007		1,623,920	190,664	1,273,910	159,346
2008		1,776,253	245,197	1,373,660	157,396

Notes: 1. The “Employees of Public or Private Enterprises/Agencies with 200 or More Employees” category includes training organized by public and private enterprises and agencies.

2. The “Employees of Public or Private Enterprises/Agencies with Less than 200 Employees” category includes training organized by public and private enterprises and agencies, and also training provided by training facilities attached to universities, foundations, public training institutions, etc.

3. The “Other” category includes training provided by government training institutions and by training facilities attached to universities, foundations, public training institutions, etc.

Source: Bureau of Employment and Vocational Training, Council of Labor Affairs, Executive Yuan.

Of the various manpower cultivation initiatives that have been launched in response to the impact of the global financial crisis, the Value-added Recharging Plan involves reaching agreement between labor and management to reduce working hours and use the time that becomes available as a result for employee training. The Bureau of Employment and Vocational Training, Council of Labor Affairs provides subsidies that cover the entire cost of training, and also offers

training subsidies for the participating employees. The aim of this program is to encourage the ongoing development of the capabilities that employees need, help participants to maintain their livelihoods, and encourage the enterprises and organizations concerned to retain the participating employees and keep layoffs to a minimum. In 2009, a total of 742 enterprises and organizations took part in this program, with a total of 18,778 employees undergoing training; the program helped a total of 49,327 workers to keep their jobs. Under the Immediate Recharging Plan, the Council of Labor Affairs provides financial assistance to help business enterprises organize professional training. The government provides 100% of the funding for special projects, and 50 – 70% for ordinary corporate applicants. The goal is to encourage enterprises to continue employing workers, and for employees to upgrade their capabilities, thereby achieving an ongoing improvement in the quality of enterprise manpower and in workers' skills, creating a win-win situation. In 2009, a total of 221,270 people underwent training through this scheme. The Industry Manpower Investment is another initiative that seeks to encourage training providers to offer a wider range of practical courses. The Council of Labor Affairs provides a subsidy for each participating worker, up to a maximum of NT\$50,000 per person over a three-year period. This plan aims to encourage employees to adopt a more proactive attitude towards their own learning, and to upgrade their skills; in 2009, a total of 52,986 people underwent training under this plan.

Besides the programs outlined above, the National Youth Commission has organized a total of 96 classes to cultivate entrepreneurial skills among young people, with a total of 7,561 people participating. The Entrepreneurial Skills E-Learning Network has been established to provide online instruction for would-be entrepreneurs; training has been provided for a total of 2,529 people. Under the Flying Geese Plan to encourage female entrepreneurship, a total of 21 entrepreneurship classes were held in 2009, with a combined total of 2,520 trainees; follow-up guidance was also provided to trainees. According to a survey of business start-ups by Flying Geese Plan trainees that was conducted in 2009, nearly 20% of trainees had already succeeded in establishing their own business, and another 52.2% were currently working to get their business off the ground. In 2009 the National Youth Commission also organized 5 Entrepreneurship Skills Classes for University and Junior College Students as part of its efforts to strengthen entrepreneurship training in Taiwan. A total of 463 young people took part in these activities; a further 230 took part in the three Senior High School and Senior Vocational School Student Entrepreneurship Camps that the Commission organized in 2009.

3. A Pronounced Fall in Spending on Professional Training as a Percentage of Total Operating Expenses in Most Industries

For both SMEs and large enterprises, spending on professional training tends to account for only a very small share of total operating expenses. In 2008, the share of total operating expenses held by spending on professional training was highest in the finance and insurance industry, at 0.52%, followed by the medical, healthcare and social welfare services industry and educational services industry, at 0.35% and 0.32%, respectively. Among large enterprises, the industries that attach most importance to professional training are the water supply and pollution prevention industry, the information, communications and broadcasting industry, and the educational services industry. However, if spending on professional training is viewed as a percentage of operating

costs rather than operating expenses, then the educational services industry comes top for both large enterprises and SMEs (Table 4-3-3).

4. Manpower Cultivation among SMEs in Southern Taiwan

(1) SMEs in Southern Taiwan Have Reduced Spending on Professional Training and Come to Rely Mainly on In-house Training

According to a survey conducted by the SME Training Center at National Sun Yat-sen University, the main reason given by SMEs for focusing on providing training in-house was the opportunity to reduce training expenditure; 27% of SMEs gave this as the main reason for relying mainly on in-house training. The next most common reasons for using in-house training were the ability to provide training that more closely addresses the firm's needs (20%), and the fact that in-house training is less costly than training provided by external training providers. Other reasons given included the suggestion that providing training in-house is more likely to stimulate intangible "organizational learning," the fact that trainees may not be able to apply training provided by external training providers effectively within their own company, and employees' greater enthusiasm for training provided within the company.

(2) In-house Training is the Main Type of Manpower Cultivation Used by SMEs

The National Sun Yat-sen University survey found that the most widespread type of in-house manpower cultivation used by SMEs in Southern Taiwan is the apprentice system (36% of firms), followed by classes taught by company managers (28%), the formation of in-company study groups to share experience (14%), and rotating employees between different jobs to help them acquire experience (11%); relatively few SMEs invited outside experts to give management lectures, or issued internal publications to enhance employees' knowledge. SMEs reported that the most benefits were provided by classes taught by company managers (28% of firms), the apprentice system (25%), sharing knowledge through in-company study groups (16%), and rotating employees through different jobs (14%). Inviting outside experts to give talks was felt to be the least beneficial method; this may explain why SMEs are reluctant to spend money on training provided by external training organizations.

(3) The Main Method Used by SMEs to Encourage Employee Participation in Education and Training is to Subsidize Part or All of the Cost of Training

The main reasons given by SMEs as to why they felt in-house manpower cultivation was particularly beneficial were that undertaking manpower cultivation in-house could help to reduce training expenditure (25% of firms), the fact that training course content could be made more relevant to current conditions in the industry, and more practical (20%), the opportunity to solve problems that employees are experiencing in their work (16%), the ability to ensure that managers' experience is passed on (15%), the opportunity to ensure that enterprise know-how is transmitted to other employees (13%), and the opportunity to mold a corporate culture in which employees learn from one another (11%).

Problems that SMEs experienced when attempting to promote in-house manpower cultivation included employees being too busy with work to attend training, and there being no system in place

for other employees to stand in for those attending training sessions (24%), shortages of experienced workers that made it difficult to achieve meaningful exchange of experience (16%), managers being too busy to prepare teaching materials (11%), in-house instructors not being able to express themselves well (11%), employees having trouble absorbing the material presented in inter-departmental training courses (8%), employees whose work takes them away from the workplace being unable to attend in-house training sessions (7%), and the absence of a proper system for planning the cultivation of specialist and managerial capabilities (5%), etc.

The factors that SMEs gave as being the key determinants of the success or failure of in-house manpower cultivation included whether in-house instructors could be cultivated successfully (20%), whether the firm's performance appraisal and bonus system is effectively integrated with the amount of time which employees spend undergoing training (18%), whether a systematic model for in-house manpower cultivation has been put in place (18%), whether senior managers support and collaborate with training course provision (17%), whether employees are eager to acquire new knowledge and new skills (14%), whether external training organizations can provide free consulting services and curriculum design suggestions (13%), whether the enterprise has cultivated a proactive corporate culture (11%), whether training is tailored to meet the needs of employees performing different jobs (7%), etc.

Table 4-3-3 Expenditure on Training as a Percentage of Operating Costs and Operating Expenses in 2008

Unit: %

Enterprise Size Industry	SMEs		Large Enterprises	
	Expenditure on Training as a % of Operating Expenses	Expenditure on Training as a % of Operating Costs	Expenditure on Training as a % of Operating Expenses	Expenditure on Training as a % of Operating Costs
Agriculture, forestry, fisheries and animal husbandry	0.09	0.01	0.02	0.00
Mining and quarrying	0.01	0.00	0.05	0.01
Manufacturing	0.12	0.01	0.22	0.02
Electric power and gas	0.19	0.05	0.27	0.01
Water supply and pollution prevention	0.15	0.04	0.70	0.06
Construction	0.14	0.02	0.24	0.01
Wholesaling and retailing	0.10	0.02	0.19	0.02
Transportation and logistics	0.13	0.04	0.33	0.03
Hotel and restaurant	0.06	0.03	0.17	0.08
Information, communications and broadcasting	0.26	0.13	0.56	0.04
Finance and insurance	0.52	0.14	0.29	0.01
Real estate	0.08	0.03	0.20	0.02
Professional, scientific and technical services	0.28	0.13	0.26	0.06
Supporting services	0.12	0.00	0.11	0.02
Educational services	0.32	0.23	0.52	0.31
Medical, healthcare and social welfare services	0.35	0.19	0.03	0.00
Arts, entertainment and leisure services	0.05	0.03	0.29	0.13
Other service industries	0.17	0.07	0.33	0.11
Total (all industries)	0.13	0.01	0.25	0.01

Source: Ministry of Finance Tax Data Center, Business income tax data for 2008.

CHAPTER 5

SME Innovation, R&D and Market Development

As a result of the global financial crisis which was sparked off by the bankruptcy of Lehman Brothers in the U.S. in the third quarter of 2008, Taiwan experienced a decline in exports, a reduction in the volume of orders that firms received, a rise in the value of the N.T. Dollar against the U.S. Dollar, dramatic fluctuations in the prices of raw materials, and reduced consumer demand within the domestic market. Even when suffering from the impact of a global financial crisis, SMEs still need to think about how they can use innovation, R&D, and new market development to strengthen the firm's operations, as a means of achieving renewed growth in the future. This chapter will analyze the results of a survey of the current status of innovation, R&D and market development among Taiwan's SMEs, in order to gain a clearer understanding of how SMEs have been responding to the changed circumstances in the post-crisis era.

I R&D Inputs of SMEs

When seeking to measure enterprises' innovation and R&D inputs, the most commonly used indicator is firms' R&D expenditure. This section will explore the R&D spending of the nation as a whole and of the corporate sector. At the same time, in order to gain a clearer understanding of the R&D inputs of the overseas operations of Taiwanese business enterprises, we also analyze the original data from the 2009 *Survey of the Operational Status of Taiwanese-invested Business Overseas*, implemented by the Investment Commission, Ministry of Economic Affairs, so as to be able to provide a more comprehensive picture of the current state of the R&D inputs of Taiwan's business enterprises.

1. R&D Expenditure

(1) National R&D Expenditure

According to the data presented in the 2009 edition of Taiwan's *Indicators of Science and Technology*, in 2008 total R&D expenditure in Taiwan came to NT\$351,405 million, representing an annual growth rate of 6.04%. 70.7% of this spending was in the business sector; 16.8% was undertaken by government, 12.2% was in the higher education sector, and just 0.3% was in the nonprofit sector. These data reflect the fact that the business sector has always accounted for the largest share of R&D spending in Taiwan (Table 5-1-1).

(2) R&D Spending in the Corporate Sector

Within the business sector, manufacturing industry accounts for the largest single share of overall R&D spending. Using the definition of "manufacturing firms" specified by the 8th Revision of the R.O.C. Standard Industry Classification, total annual R&D expenditure in the manufacturing

sector in 2009 was approximately NT\$230,434 million, representing 92.78% of all business sector R&D expenditure. The share held by the service sector was 6.87%; the combined total for all other industries (including electric power and gas, water supply, pollution prevention and construction) was just 0.35%. As a rule, manufacturing firms (and particularly those in hi-tech industries) have more need to undertake R&D than firms in the service sector or other industries, which is why R&D expenditure in the manufacturing sector is so much higher than that in other sectors.

Examination of the trends in R&D spending in each sector over the past few years shows a pronounced increase in R&D expenditure in the business sector, rising from NT\$188,390 million in 2005 to NT\$248,363 million in 2008 (representing an annual growth rate of 9.9%). The business sector's share of overall national R&D expenditure has also increased over the same period, from 97.74% in 2005 to 97.99% in 2008. The business sector is the only sector where R&D spending has risen every year since 2005.

Total R&D expenditure by SMEs (defined as enterprises with fewer than 200 employees) has risen for two years in a row, with a growth rate of 12.90% in 2007 and 17.17% in 2008. While R&D spending by large enterprises has also risen, the growth rate in 2008 (compared to 2007) was only 6.68%, significantly lower than the corresponding growth rate for SMEs. Overall, business sector R&D spending has continued to grow steadily every year (Table 5-1-2).

Table 5-1-1 R&D Spending by Sector, 2005–2008

Unit: NT\$ millions

Item	2005	2006	2007	2008
All sectors	280,980	307,037	331,386	351,405
Business sector	188,390	207,238	229,126	248,363
Public sector	59,143	60,965	60,643	58,928
Higher education sector	32,092	37,565	40,400	42,905
Non-profit sector	1,355	1,270	1,218	1,209

Source: National Science Council, Executive Yuan, *Indicators of Science and Technology*, 2009.

Table 5-1-2 Business Sector R&D Expenditure by Enterprise Size, 2005–2008

Unit: NT\$ millions

Item	2005	2006	2007	2008
Total	188,390	207,238	229,126	248,363
SME Sub-total	29,143	33,159	37,437	43,864
0 - 99 employees	16,048	17,803	19,140	23,200
100 - 199 employees	13,095	15,356	18,297	20,664
Large Enterprises Sub-total	159,247	174,078	191,690	204,498
200 - 499 employees	24,017	27,417	31,614	36,039
500 or more employees	135,230	146,661	160,076	168,459

Source: National Science Council, Executive Yuan, *Indicators of Science and Technology*, 2009.

(3) R&D Expenditure by Taiwanese Enterprises' Overseas Operations

Table 5-1-3 is based on the original data from the *2009 Survey of the Operational Status of Taiwanese-invested Businesses Operating Overseas* undertaken by the Investment Commission, Ministry of Economic Affairs. The survey distinguishes between large enterprises and SMEs, and can be used to gain a broad understanding of the R&D inputs of the overseas operations of Taiwanese business enterprises. For these purposes, SMEs are defined as firms with fewer than 200 employees, and large enterprises as firms with 200 or more employees.

Table 5-1-3 R&D Expenditure by the Parent Companies of Taiwanese-invested Enterprises Operating Overseas in 2008

Units: enterprises; US\$ millions; %

Enterprise Size	No. of Respondents	Average Annual Sales Revenue	No. of Respondents	Average Annual R&D Expenditure	Average Annual R&D Expenditure as a % of Annual Sales Revenue
Large enterprises	590	3,060.86	521	76.51	2.50
SMEs	190	571.81	145	11.74	2.05

Source: Investment Commission, Ministry of Economic Affairs, 2009 Survey of the Operational Status of Taiwanese-invested Businesses Operating Overseas.

As can be seen from Table 5-1-3, in 2008 average R&D expenditure by large enterprises with overseas operations was US\$76.51 million, 6.52 times the average R&D spending of SMEs (US\$11.74 million). However, if one looks at R&D spending as a percentage of annual sales revenue, the percentage for SMEs in 2008 was 2.05%, nearly as high as the figure for large enterprises (2.50%), which suggests that the SMEs' enthusiasm for innovation and R&D is nearly as great as that of large enterprises.

The data can be broken down to show R&D spending by Taiwan-based and overseas-based operations, to explore R&D spending by overseas operations. In 2008, Taiwan-based operations accounted for 87.63% of the total R&D expenditure of large enterprises, while the figure for SMEs was even higher, at 92.83%. These data show that Taiwanese enterprises that have invested overseas continue to position their overseas operations mainly as manufacturing facilities, while keeping R&D in Taiwan (Table 5-1-4).

Table 5-1-4 Domestic Operations' and Overseas Operations' Shares of the Total R&D Expenditure of Taiwanese Companies Investing Overseas

Unit: %

Enterprise Size	Item	Share of Total Annual Sales Revenue	Share of Total Annual R&D Revenue
Large enterprises	Taiwan-based operations	71.75	87.63
	Overseas operations	28.25	12.37
SMEs	Taiwan-based operations	79.89	92.63
	Overseas operations	20.11	7.37

Source: Investment Commission, Ministry of Economic Affairs, 2009 Survey of the Operational Status of Taiwanese-invested Businesses Operating Overseas.

2. Major Sources of Technology and Know-how for the Overseas Operations of Taiwanese Enterprises

An examination of the main sources of enterprises' technology and know-how can shed light on the extent to which Taiwanese companies investing overseas have "localized" their R&D operations.

The statistics presented in Table 5-1-5 are based on the original data from the 2009 Survey of the Operational Status of Taiwanese-invested Businesses Operating Overseas (survey conducted in 2008), undertaken by the Investment Commission, Ministry of Economic Affairs. The table shows the main sources of technology and know-how for large enterprises and SMEs investing in China, and those investing in other regions overseas. These are further explained below:

Table 5-1-5 Main Sources of Technology and Know-how for the Overseas Operations of Taiwanese Enterprises

Unit: %

Technology Source	China		Other Overseas Regions	
	Large Enterprises	SMEs	Large Enterprises	SMEs
R&D undertaken locally by the enterprise itself	31.47	26.92	26.42	14.29
Technology purchased locally	1.54	3.85	3.77	0
Technology provided by local joint venture partner	3.09	3.08	3.40	3.17
Parent company in Taiwan	86.87	81.54	77.74	76.19
Taiwanese research institute	11.00	13.85	9.06	12.70
Local research institute	3.47	1.54	3.02	0
Technology transfer from Taiwan (OEM/ODM)	6.56	3.85	2.26	0
Technology transfer from a local company (OEM/ODM)	2.51	2.31	1.51	1.59
Technology licensed from a company in a third country	4.05	1.54	3.02	1.59
Other	1.93	3.08	5.28	11.11

Notes: 1. The total number of enterprises investing in China was 518 large enterprises and 130 SMEs.

2. The total number of enterprises investing in other regions was 265 large enterprises and 63 SMEs.

3. Respondents could give more than one source.

Source: Investment Commission, Ministry of Economic Affairs, 2009 Survey of the Operational Status of Taiwanese-invested Businesses Operating Overseas.

1. China: For large enterprises, the parent company in Taiwan is the main source of technology and know-how (86.87% of enterprises), followed by R&D conducted locally by the company itself (31.47%). The corresponding percentages for SMEs are 81.54% and 26.92%, respectively. One point worth noting is that for 11% of large enterprises and 13.85% of SMEs the main source of technology and know-how was a research institution in Taiwan, suggesting that a significant number of SMEs are purchasing technology from Taiwanese research institutes such as the Industrial Technology Research Institute (ITRI).
2. Other overseas regions: For both large enterprises and SMEs, the main sources of technology and know-how for Taiwanese enterprises investing in regions other than China were the parent company in Taiwan (77.74% of large enterprises and 76.19% of SMEs) and R&D undertaken locally by the company itself (26.42% of large enterprises and 14.29% of SMEs).

It can be seen from the above analysis that, for both large enterprises and SMEs, and regardless of the region in which they are located, the Taiwanese parent company is the main source of technology and know-how for the overseas operations of Taiwanese business enterprises, with over 70% firms reporting this to be their main source of technology and know-how. This share is significantly higher than that held by the next most important source of technology and know-how – R&D conducted locally by the enterprise itself. In most cases, therefore, it is the Taiwan parent company that helps to maintain the technological edge enjoyed by the overseas operations of Taiwanese business enterprises; this is the key factor that has enabled Taiwanese firms to remain competitive despite the impact of economic globalization.

II Characteristics of SME Innovation and R&D Activity

The data presented in this section are mainly based on the results obtained in the 2010 Survey of SME Innovation, R&D and Market Development in Taiwan; the aim is to present an overview of

the characteristics of the innovation and R&D activity undertaken by SMEs (specifically those in the manufacturing sector) in Taiwan. These data are supplemented by additional data from the *2009 Survey of the Operational Status of Taiwanese-invested Businesses Operating Overseas*, and by case studies of SMEs in the service sector, so as to present a more comprehensive picture of SME innovation and R&D.

In April 2010, the Chung-Hua Institution for Economic Research implemented the *Survey of SME Innovation, R&D and Market Development in Taiwan*. This survey used stratified random sampling, with an effective sample size of 306 firms; the population was taken from the 2009 edition of the Taiwan Region Enterprise Directory Database, which lists a total of 30,002 enterprises. The details of the industries to which individual enterprises belonged included in the Database were used to determine whether particular firms were manufacturing industry SMEs; where it was not possible to determine this from the database, the enterprise's status was verified during the interview. With regard to the regional distribution of the manufacturing industry SMEs, the county and city locations given in the Database were used, and stratified sampling was employed to determine which firms should be included in the sample and interviewed. The Chi-square test was used to check the representativeness of the sample; no significant discrepancy was found between the regional distribution of the sample and the regional distribution of the population, indicating that it would be reasonable to assume that the results obtained in the survey applied to the population as a whole (Tables 5-2-1 and 5-2-2). Given the difficulty of defining innovation and R&D in the service sector, the questionnaire survey focused only on innovation and R&D activity in the manufacturing sector.

Table 5-2-1 Regional Distribution of the Population and of the Sample

Region	Population (No. of Firms)	Population (Share of Total)	Effective Sample (No. of Firms)	Effective Sample (Share of Total)
Northern Taiwan	51,933	40.50%	118	38.6%
Central Taiwan	50,707	39.50%	132	43.1%
Southern Taiwan	25,624	20.00%	56	18.3%
All Regions	128,264	100.0%	306	100.0%

Source: Chung-Hua Institution for Economic Research, *Survey of SME Innovation, R&D and Market Development in Taiwan*, 2010.

Table 5-2-2 Sampling Results

Region	No. of Employees					
	Total	Less than 5	5 – 29	30 – 49	55 – 99	100 or more
Northern Taiwan	118	4	51	23	31	9
Central Taiwan	132	25	56	15	29	7
Southern Taiwan	56	3	18	12	16	7
All Regions	306	32	125	50	76	23
Share of Total	10.00	10.5	40.08	16.3	24.8	7.5

Source: See Table 5-2-1.

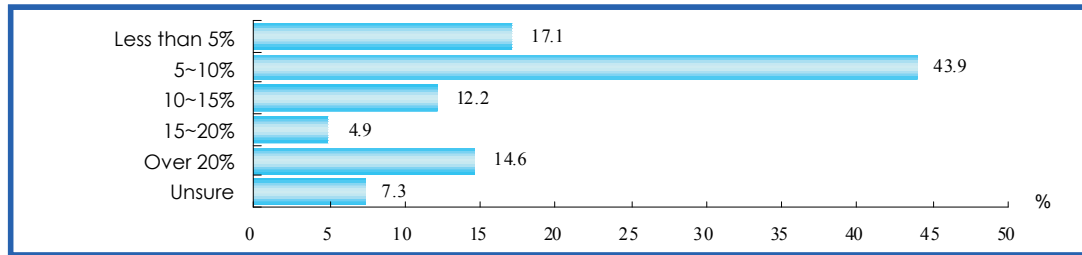
1. Overview of the SMEs Surveyed

This section presents an overview of the basic characteristics of the firms included in the survey and their annual sales performance, as well as the extent to which they were affected by the global financial crisis. 97.7% of the firms surveyed had been established prior to September 2008, and so had been in existence for at least a year and a half.

When asked whether their annual sales had risen or fallen in 2009 compared to 2008, 74.2% of the firms surveyed reported that their overall sales revenue had fallen, 12.4% said that it had remained more or less the same as in 2008, and only 13.4% reported a rise in sales revenue.

Of those SMEs that reported an increase in revenue, the largest share (43.9%) reported a rise of 5–10%, and 17.1% reported a rise of less than 5%; that is to say, over half of the firms that saw their sales revenue rise in 2009 experienced an increase of 10% or less (Figure 5-2-1).

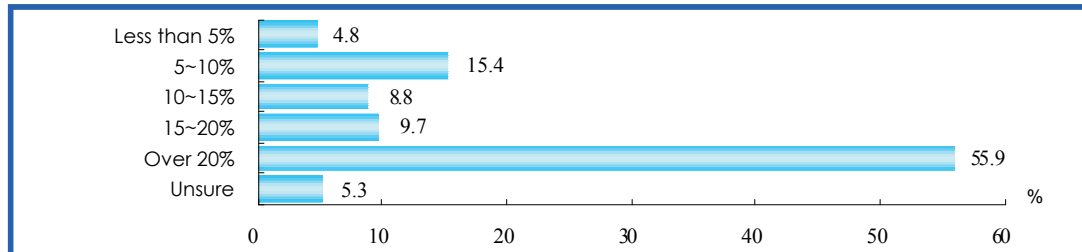
Figure 5-2-1 Extent of Sales Increase Posted by Those Firms That Reported a Rise in Annual Sales in 2009



Note: Total no. of SMEs reporting a rise in sales = 41 firms.
Source: See Table 5-2-1.

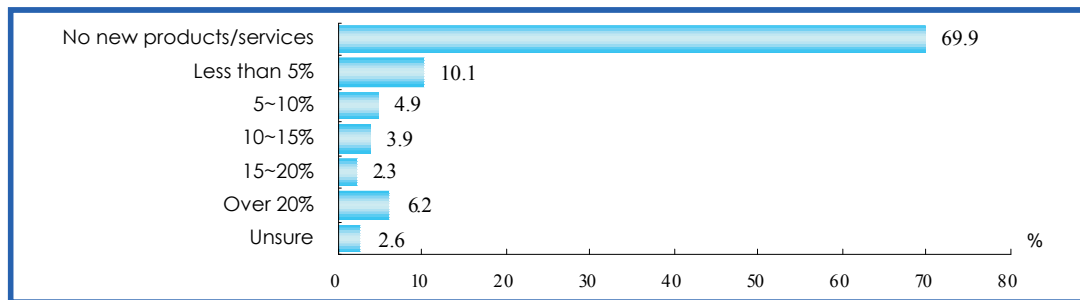
Of those SMEs that reported a decline in annual sales revenue, the largest share (55.9% of the total) reported a fall of greater than 20%; the next largest group comprised those reporting a fall of 5–10% (15.4% of the total). It can thus be seen that over half of the SMEs saw their annual sales revenue fall by a fifth or more (Figure 5-2-2).

Figure 5-2-2 Extent of Sales Contraction Posted by Those Firms That Reported a Fall in Annual Sales in 2009



Note: Total no. of SMEs reporting a fall in sales = 227 firms.
Source: See Table 5-2-1.

As regards the share of total annual sales in 2009 accounted for by new products and/or services, 69.9% of the SMEs surveyed reported that they had not launched any new products or services, and 10.1% reported that new products and/or services accounted for less than 5% of total annual sales in 2009. In other words, for 80% of SMEs new products and/or services accounted for between 0% and 5% of total annual sales in 2009 (Figure 5-2-3).

Figure 5-2-3 New Products (or Services) as a Share of Total Annual Sales in 2009

Note: Total no. of SMEs responding = 306 firms.

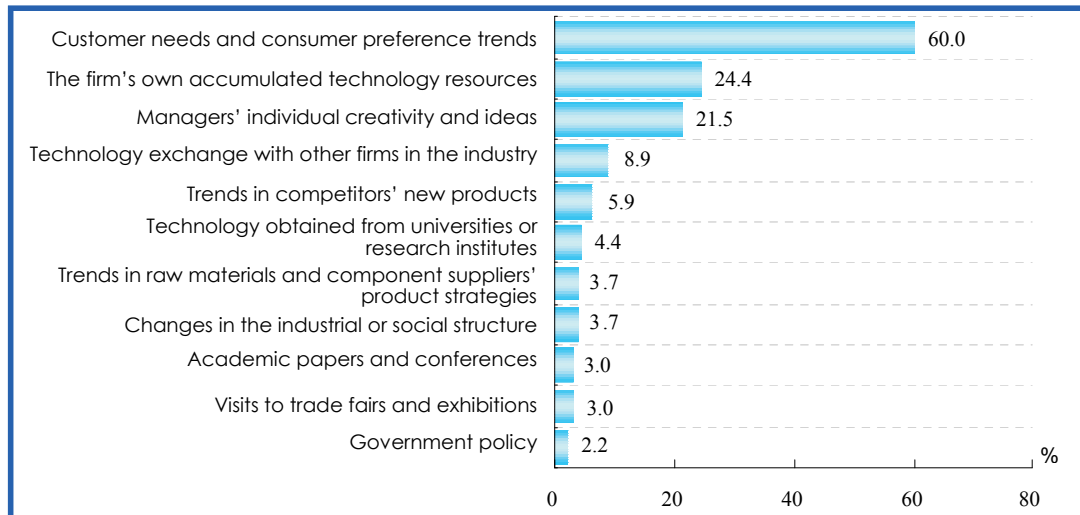
Source: See Table 5-2-1.

2. Innovation and R&D Concepts, Motivation and Characteristics

With respect to involvement in innovation and R&D activity, 55.9% of the SMEs included in the survey reported that they had not undertaken any innovation or R&D activity; only 44.1% of SMEs had been involved in this type of activity.

(1) Sources of Innovation and R&D Concepts

Of those SMEs that had undertaken innovation and R&D activity in 2009, 60% reported that their sources of new product R&D concepts were based on customer needs and trends in consumer preferences. 24.4% reported that their R&D concepts were based on the technology resources that the company had accumulated over time, and 21.5% reported that their R&D concepts were derived from managers' individual creativity and ideas (Figure 5-2-4).

Figure 5-2-4 Sources of R&D Concepts for New Products and Services

Note: 1. Total no. of SMEs responding = 306 firms.

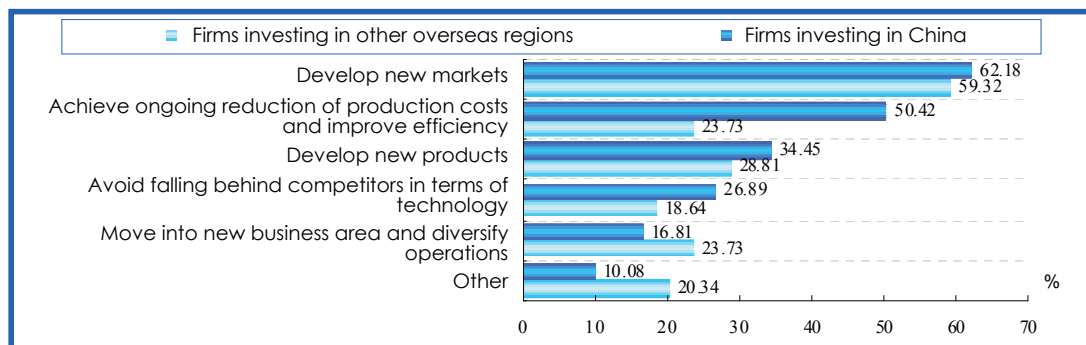
2. Respondents could give more than one answer.

Source: See Table 5-2-1.

(2) Motivation for Innovation and R&D Activity

Examination of the motivation for engaging in innovation and R&D showed that, of those SMEs that had invested in China and other overseas regions, 62.18% and 59.32%, respectively had done so with the aim of developing new markets. Of those firms that had invested in China, the opportunity to reduce production costs and improve efficiency had also been a factor for 50.42%. The opportunity to develop new products had been the main source of motivation for 34.45% of those SMEs investing in China and 28.81% of those investing in other overseas regions (Figure 5-2-5).

Figure 5-2-5 Motivation for Undertaking Innovation and R&D as Part of Major Investment Projects



Note: No. of SMEs investing in China = 119 firms; no. of SMEs investing in other overseas regions = 59 firms.
Source: See Table 5-2-1.

(3) The Aspect of Innovation and R&D Activity That SMEs Value Most

When those SMEs that had undertaken innovation and R&D activity were asked which aspect of the new product and/or service development process they attached most importance to, 53.3% said that it was achieving high quality. The next largest group (16.3% of the total) gave the opportunity to reduce costs as the most important aspect; 11.9% of firms said that the opportunity to improve production efficiency was the most important aspect, and another 11.9% gave the opportunity to raise product value-added as the most important aspect.

To summarize, around 40% of SMEs undertake innovation and R&D activity. Customer needs, the company's own technology resources and managers' creativity are the main sources of R&D concepts. SMEs' main motivation for undertaking innovation and R&D is the desire to develop new markets, to cut costs, and to improve efficiency. For most SMEs that do undertake innovation and R&D, the most important aspect of this activity is the opportunity to improve quality, followed by cost and efficiency; clearly, SMEs have become more aware of the need to be customer-oriented and to focus on quality.

3. Innovation and R&D Activity and Collaboration with External Partners

(1) The Extent of the Surveyed SMEs' Collaboration with External Partners

When an SME decides to undertake innovation and R&D activity, it may do so alone, or in collaboration with an outside partner. The survey results show that around 40% of SMEs collaborate with external partners on innovation and R&D, while 60% do not.

(2) The Surveyed SMEs' Choice of Collaborative Partner

As regards the SMEs' choice of collaborative partner with respect to innovation and R&D activity, the survey results showed that the largest share of SMEs (27.8%) used research foundations and other not-for-profit research institutions as their collaborative partners, while 25.9% used universities and other institutes of higher education. 20.4% of SMEs collaborated with other companies in the same industry, and 18.5% collaborated with the government or other public-sector not-for-profit agencies.

(3) External Collaborative Partners with Respect to Overseas Investment

As regards the innovation and R&D partners of those SMEs that invest overseas, 53.45% of the SMEs that had invested in China and 49.09% of those that had invested in other overseas regions collaborated with customers; 29.31% of those that had invested in China and 21.82% of those that had invested in other overseas regions collaborated with materials suppliers, and 28.45% of those that had invested in China and 34.55% of those that had invested in other overseas regions collaborated with partners falling into the "other" category.

(4) SMEs' Objective in Collaborating with External Partners

As to the reason given by SMEs for choosing to collaborate with external partners on innovation and R&D, 64.8% said that the aim of collaboration with outside partners was to obtain operational resources that their company lacked, while 63% reported that the aim was to obtain or stimulate the development of new product concepts.

To summarize, around 40% of SMEs collaborate with external partners on innovation and R&D, with research foundations, public-sector not-for-profit research institutions and institutes of higher education being the most widely-used types of collaborative partner. Among those SMEs that invest overseas, the preferred type of collaborative partner is materials suppliers. The SMEs' main goal in collaborating with external partners is to obtain access to operational resources that the SME itself lacks, or to stimulate the development of new product concepts. These results indicate that many SMEs are aware of the need to strengthen their own capabilities.

4. Management of Innovation and R&D Activity, and Problems Encountered

What are the organizational factors to which SMEs attach the most importance when undertaking innovation and R&D activity; what strengths and weaknesses do they feel they possess, what is their market positioning, and what problems do they encounter?

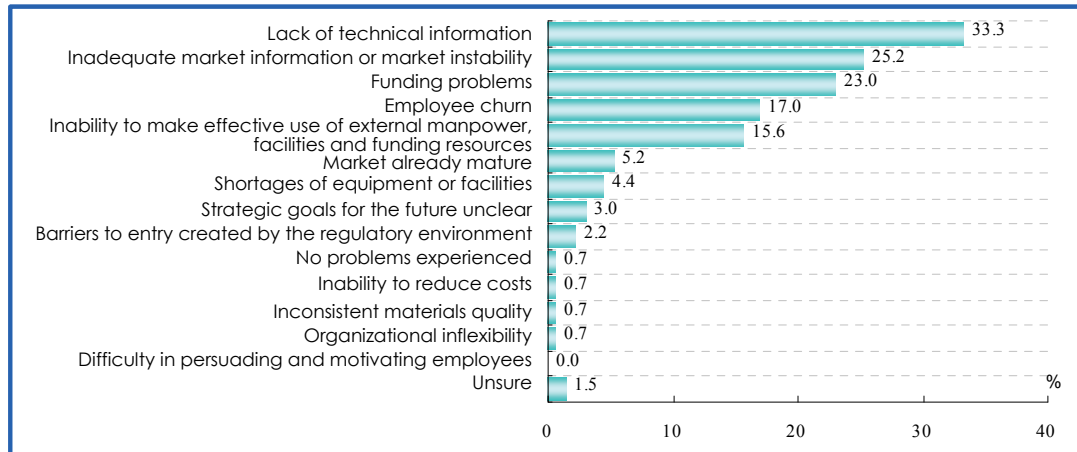
(1) The Organizational Factors to Which SMEs Attach Most Importance in Their Innovation and R&D Activities

What do SMEs that undertake innovation and R&D feel to be the most important organizational factors affecting these activities? The survey results showed that 55.6% of SMEs felt that managers' willingness to take on new challenges and to innovate was the most important factor; the next most commonly listed factor was close coordination and communication between managers and employees (31.1% of SMEs), followed by employees' willingness to make innovative proposals (25.9%), and collaboration with external partners (21.5%).

(2) Problems Experienced When Undertaking Innovation and R&D Activities

With regard to the problems that SMEs experience when engaging in innovation and R&D, 33.3% of the SMEs included in the survey reported shortages of technology and information as being a problem; the next most widely reported problem was inadequate market information or market instability (25.2%), followed by funding problems (23%) (Figure 5-2-6).

Figure 5-2-6 Problems Experienced by SMEs When Undertaking New Product/Service Innovation and R&D

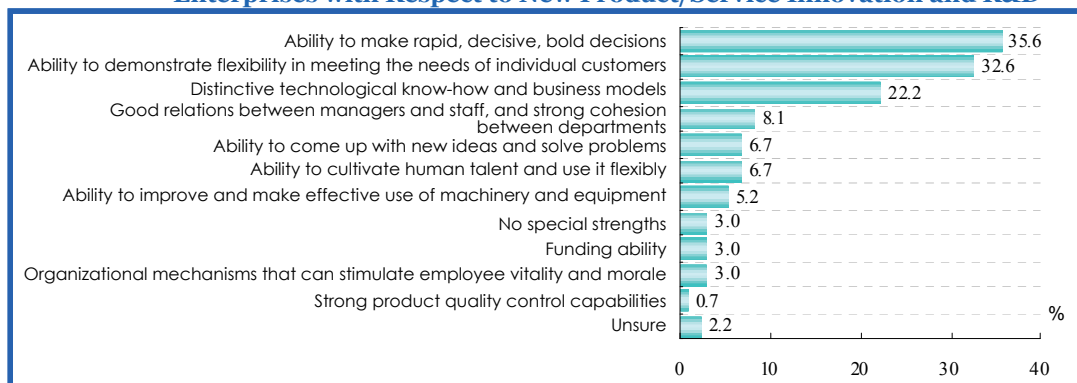


Note: Total no. of SMEs responding = 135 firms.
Source: See Table 5-2-1.

(3) SMEs' Strengths and Weaknesses with Respect to Innovation and R&D

With regard to the particular strengths that SMEs which have undertaken new product/service innovation and R&D feel that SMEs possess in this respect, 35.6% point to the SMEs' ability to make rapid, decisive, bold decisions. 32.6% believe that SMEs are very good at meeting customer needs, and 22.2% feel that SMEs possess distinctive technological know-how and business models (Figure 5-2-7).

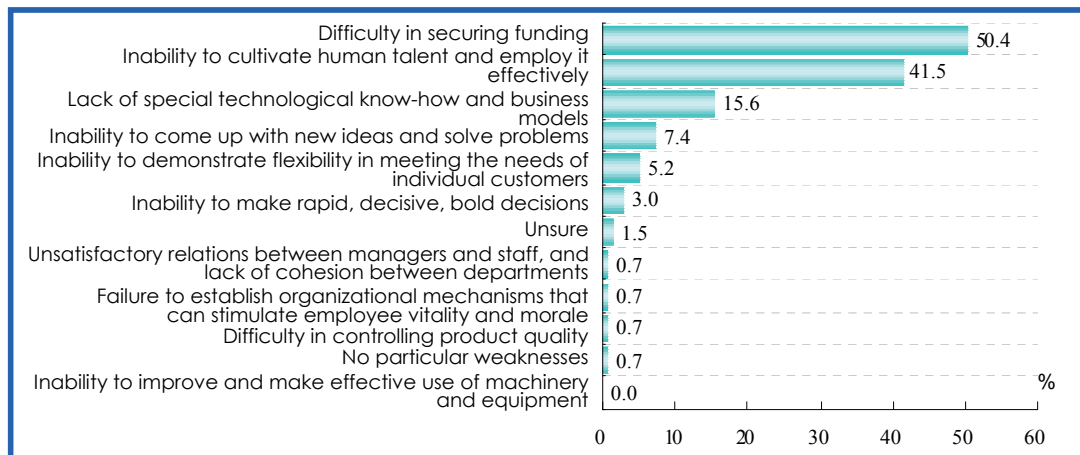
Figure 5-2-7 Areas Where SMEs Feel That They Have an Advantage over Large Enterprises with Respect to New Product/Service Innovation and R&D



Note: 1. Total no. of SMEs responding = 135 firms.
2. Respondents could give more than one answer.
Source: See Table 5-2-1.

As regards the areas where SMEs were felt to be at a disadvantage compared to large enterprises vis-à-vis innovation and R&D, 50.4% of the firms surveyed felt that SMEs had more difficulty securing funding, and 41.5% felt that SMEs lacked the ability to cultivate human talent and employ it effectively; 15.6% suggested that SMEs did not possess special technological know-how or business models (Figure 5-2-8).

Figure 5-2-8 Areas Where SMEs Feel That They are at a Disadvantage Compared to Large Enterprises with Respect to New Product/Service Innovation and R&D



Note: 1. Total no. of SMEs responding = 135 firms.

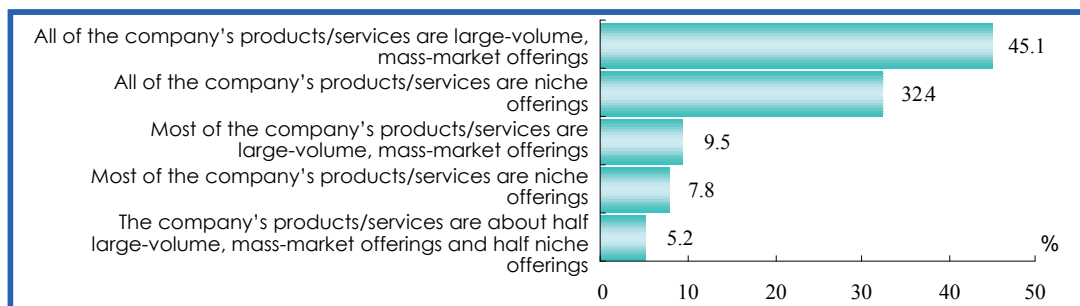
2. Respondents could give more than one answer.

Source: See Table 5-2-1.

(4) Characteristics of SMEs' Main Products

The survey results show that 45.1% of the SMEs surveyed felt that their company's main products fell under the category of large-volume, mass-market products/services, while 32.4% felt that they should be classed as niche products/services (Figure 5-2-9).

Figure 5-2-9 Market Positioning of SMEs' Main Products/Services



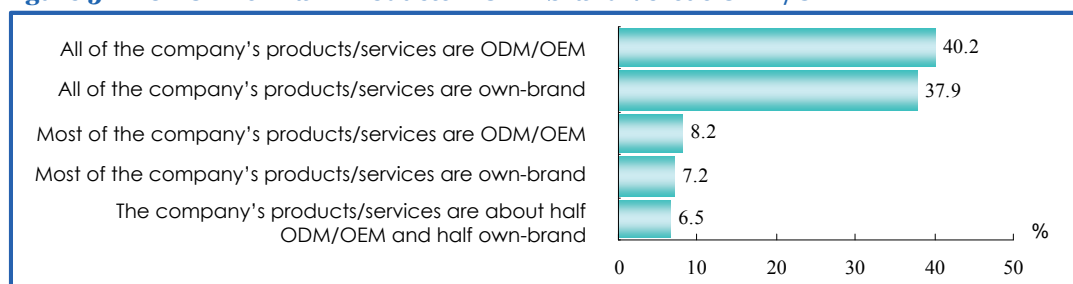
Note: Total no. of SMEs responding = 306 firms.

Source: See Table 5-2-1.

SMEs' products tend to be either all own-brand products or all ODM/OEM products. 40.2% of SMEs reported that their products/services were all ODM/OEM products/services, and 37.9% reported that they were all own-brand (Figure 5-2-10).

To summarize, the aspects of company organization that SMEs emphasize most when undertaking innovation and R&D are willingness to take on challenges and to innovate, and good communication and coordination between the members of the organization. The biggest problems that SMEs face in innovation and R&D are restricted access to technology and information, market changes and funding difficulties. By comparison with large enterprises, SMEs display bolder decision making and greater flexibility, but are weaker than large enterprises with respect to their ability to secure funding and cultivate human talent. Around 45% of SMEs reported that their main products/services were large-volume, mass-market offerings, while 30% focused mainly on niche markets. Around 40% of SMEs were wholly engaged in ODM/OEM, and another 40% were wholly engaged in own-brand production, reflecting a high degree of polarization in this regard.

Figure 5-2-10 SMEs' Main Products – Own-brand Versus ODM/OEM



Note: Total no. of SMEs responding = 306 firms.
Source: See Table 5-2-1.

III SME Market Development

1. SME Customer Relations

This section will examine SME market development, by looking at SMEs' collaboration with their customers, the state of e-business utilization among Taiwan's SMEs, overseas market development, and expansion into new industries.

(1) Factors That SMEs Consider When Planning Collaboration with Customers

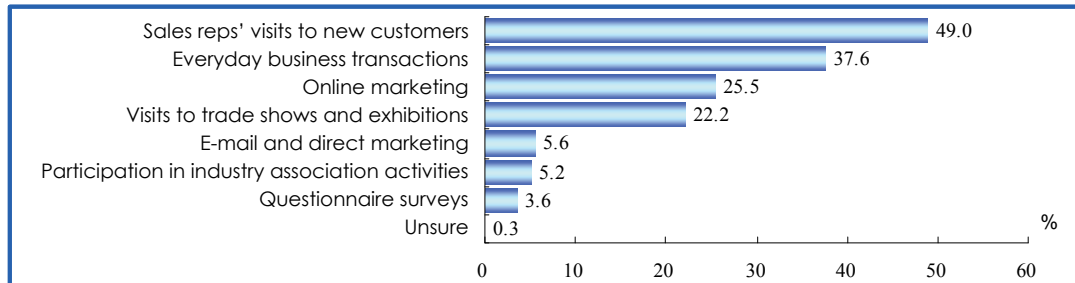
Regarding SME market development, the first question that the SMEs included in the survey were asked concerned the factors to which they pay most attention when undertaking collaboration with customers. 77.7% of respondents reported that building a long-term relationship based on mutual trust was the most important factor; the second most widely given factor was transaction price, but this was given by only 10.8% of respondents.

(2) How SMEs Identify Customer Needs

The ways in which SMEs go about collecting information related to customer needs are shown in Figure 5-3-1. 49% said their main source of information about customer needs was sales reps' visits to new customers; 37.6% relied on the information obtained through everyday business transactions, 25.5% relied on the Internet, and 22.2% obtained information mainly through visits to trade shows and exhibitions.

To summarize, with respect to market development, SMEs still rely heavily on relationships based on mutual trust. To collect information about customer needs, they make extensive use of visits to customers and information obtained through everyday business activities; the percentage of SMEs that use the Internet or attendance at trade fairs for this purpose is relatively low.

Figure 5-3-1 The Methods Through Which SMEs Obtain Information about Customer Needs



Note: 1. Total no. of SMEs responding = 306 firms.

2. Respondents could give more than one answer.

Source: See Table 5-2-1.

2. E-Business Utilization by SMEs

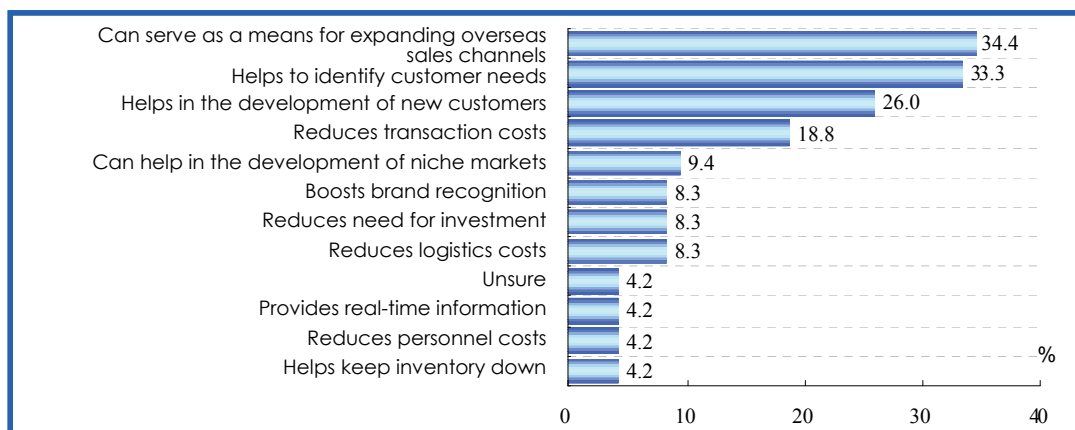
(1) E-Business Adoption

This section examines the use of e-business by SMEs as a tool for market development. The survey's results showed that 68.6% of SMEs were not yet using e-business; only 31.4% had adopted it.

(2) Benefits of e-Business Adoption

When those SMEs that had already adopted e-business were asked what benefits it had brought them, 34.4% said that it was an effective means of expanding overseas sales channels, 33.3% said that it helped them to identify customer needs, and 26% reported that e-business helped them to develop new customers (Figure 5-3-2).

Figure 5-3-2 What SMEs Believed to be the Benefits of e-Business Adoption



Note: 1. Total no. of SMEs responding = 96 firms.

2. Respondents could give more than one answer.

Source: See Table 5-2-1.

To summarize, only around 30% of SMEs have adopted e-business techniques. Those SMEs that have adopted e-business reported that using e-business could help them to expand their overseas sales networks, identify customer needs, and develop new customers. Clearly, the question of how more SMEs can be encouraged to adopt e-business will constitute an important policy issue in the future.

3. SMEs' Overseas Market Development

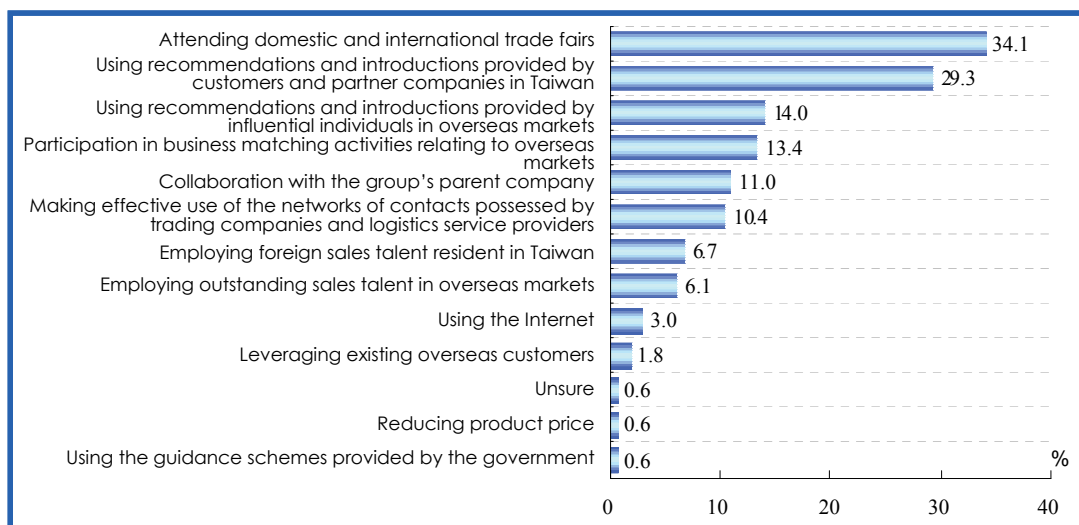
(1) Overseas Market Development Status

Over half (53.6%) of SMEs reported that they were already engaged in developing overseas markets (using a definition of “developing overseas markets” that includes both exporting products to overseas markets and actually investing in those markets).

(2) Methods Used to Secure Export Orders and Develop Overseas Markets

When those SMEs that were engaged in developing overseas markets were asked what they felt to be the most effective methods of developing overseas markets and securing export orders, 34.1% gave participation in domestic and international trade shows as the most effective method, while 29.3% believed making use of recommendations and introductions provided by customers and partner companies in Taiwan was the most effective method (Figure 5-3-3).

Figure 5-3-3 What SMEs Felt to be the Most Effective Methods of Developing Overseas Markets and Securing Export Orders



Note: 1. Total no. of SMEs responding = 164 firms.

2. Respondents could give more than one answer.

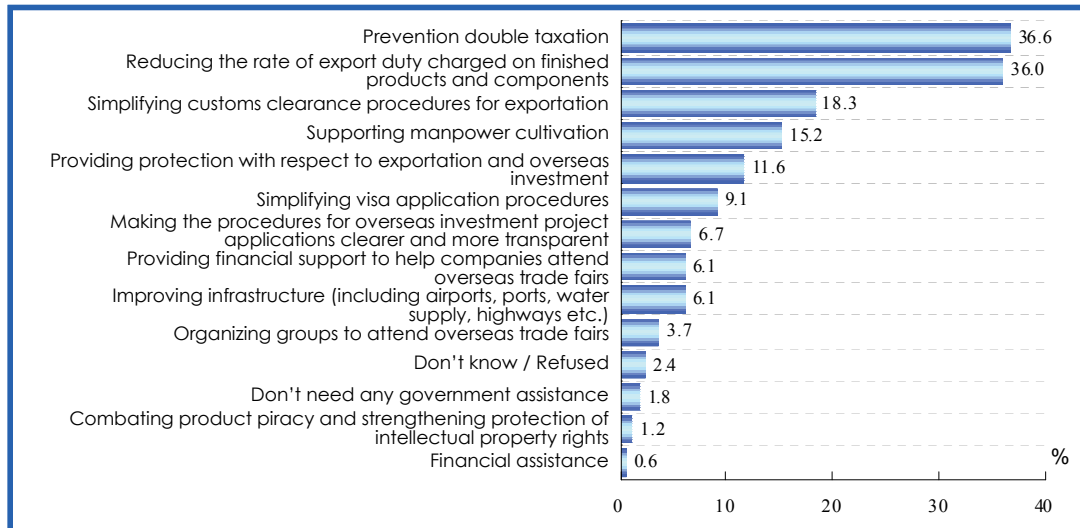
Source: See Table 5-2-1.

(3) Measures That the Government Can Adopt to Help SMEs Develop Overseas Markets

What did those SMEs that are already developing overseas markets feel to be the most effective measures that the government could adopt to support overseas market development by SMEs? 36.6% of SMEs gave avoidance of dual taxation as the single most important measure; 36% felt that the government should reduce the rate of export duty charged on finished products and

components, and 18.3% wished that the government could make the customs clearance procedures that exporters and firms investing overseas need to go through simpler and more convenient (Figure 5-3-4).

Figure 5-3-4 What SMEs Felt to be the Most Effective Measures the Government Could Adopt to Help SMEs Develop Overseas Markets



Note: 1. Total no. of SMEs responding = 164 firms.

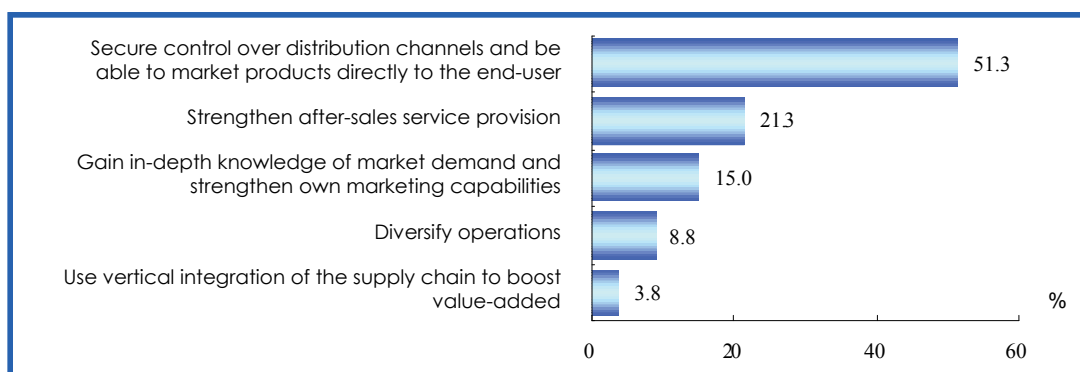
2. Respondents could give more than one answer.

Source: See Table 5-2-1.

(4) Cross-industry Business Model Adoption

When asked whether they had expanded into the service sector, 73.9% of SMEs reported that they had not. Of those that had, 51.3% said that their main reason for doing so was to secure control over distribution channels and be able to market their products directly to the end user. 21.3% said that expanding into the service sector helped them to strengthen after-sales service provision (Figure 5-3-5).

Figure 5-3-5 SMEs' Main Motivation for Expanding into the Service Sector



Note: Total no. of SMEs responding = 80 firms.

Source: See Table 5-2-1.

To summarize, more than half of SMEs are already engaged in developing overseas markets (either by exportation or by investing overseas); these SMEs felt that the most effective methods of developing overseas markets were to attend trade fairs and to make use of recommendations and introductions provided by customers and partner companies. The types of assistance that SMEs wished the government would provide with respect to overseas market developing included the elimination of double taxation, reducing the rate of export duty charged on finished products and components, and simplifying customs clearance procedures. Only around 25% of SMEs had expanded from manufacturing into the service sector; the main reasons given for doing so by those that had were to secure control over distribution channels and to strengthen after-sales service provision.

Part Two

Special Topics on SMEs



CHAPTER 6

Establishing a Healthy Investment Environment for SMEs, to Promote Job Creation

Since the 1990s, the upward revaluation of the NT dollar, rising labor costs, and increased environmental awareness have caused Taiwanese industry to move production offshore, which has had a negative impact on job creation. At the same time, the government has been working actively to promote the upgrading and transformation of industry, so as to boost product value-added. As a result, the general trend in both the high-tech sector and traditional industries has been towards the development of capital-intensive and knowledge-intensive production, further limiting the creation of new jobs.

The bursting of the dot-com bubble in 2000 sparked off a global economic downturn during which unemployment in Taiwan rose steadily. By 2005, the unemployment rate had reached 5.17%, before falling back to just under 4% in 2006. Following the spike in oil prices and global financial crisis of 2008, in 2009 the unemployment rate in Taiwan rose again to a record 5.85%; in one month in 2009, the unemployment rate actually reached 6.13%. Over the period 2001–2009, unemployment averaged 4.57%, whereas from the 1970s through to the 1990s unemployment in Taiwan had generally remained under 2%.

In Taiwan, not only do SMEs play a major role in creating value-added, boosting economic growth, raising the government's tax revenue, evening out disparities in regional development, promoting the entrepreneurial spirit and creating an efficient division of labor, but they also account for 77% of the new jobs that are created in Taiwan each year, thereby making a vital contribution to the maintenance of social and economic stability in Taiwan.

However, over the past three decades there has been a pronounced transformation in enterprises' labor utilization models. Today, both large enterprises and SMEs prefer to invest in machinery to undertake labor-intensive tasks, thereby reducing the firm's labor costs; there is also a trend towards using agency (contract) workers and temporary workers in order to achieve greater labor flexibility. The impact of these trends is readily apparent if one looks at the data for the number of jobs created per NT\$1 million of assets. Data presented in the General Survey on Industry and Business for the years 1981–2006 shows that, whereas in 1981 every NT\$1 million of assets created 0.58 jobs, by 2006 this figure had fallen to 0.07 jobs. In the SME sector, the transformation is even more pronounced; for SMEs, the number of jobs created per NT\$1 million of assets fell from 1.46 in 1981 to 0.24 in 2006.

In the long term, the most fundamental solution to the problem of how to create new jobs and reduce unemployment is to improve the investment environment in the SME sector. The following sections examine the overall investment environment in Taiwan, industrial policy in

Taiwan as it affects SMEs, the funding environment in the SME sector, and the regulatory environment for SMEs, before going on to put forward some suggestions for strengthening the SME investment environment.

I The Investment Environment in Taiwan

The term “investment environment” is used to refer to all of the surrounding circumstances and conditions that affect investment activity, including natural factors, social factors, economic factors, political factors, and legal and regulatory factors, etc.

1. The Natural Environment

With regard to the relationship between nature and the economic environment, Taiwan enjoys a significant competitive advantage. In terms of its geographical location, Taiwan lies at the hub of the Asia-Pacific region, linking together the world’s second largest economy (Japan) to the north with the ten member nations of ASEAN and India to the south, the world’s largest economy (the U.S.) to the east, and the world’s fourth largest economy and main driver of economic growth (China) to the west. Taiwan is naturally suited to serve as a key Asian logistics hub and East Asian transshipment center; with its geographical advantages, Taiwan is well placed to access production resources from all over the world, and to develop markets all over the world.

2. Social and Cultural Environment

Taiwan currently has a population of around 23 million, the majority of which are of Han Chinese ancestry. In 2009, the literacy rate among citizens aged 15 or over was 97.91%. 52.81% of the population had been educated to at least senior high school (or senior vocational school) level, and 35.6% were junior college or university graduates.

Statistics presented in the *White Paper on Small and Medium Enterprises in Taiwan* indicate that, in 2008, over 75% of SME employees in Taiwan were educated to senior high school (or senior vocational school) level or higher, and that among employees of large enterprises the figure was even higher, at over 90%. However, Taiwan suffers from a shortage of low-skilled manual labor, resulting in the widespread use of foreign contract laborers in various branches of industrial production.

3. The Economic Environment

(1) Sound Infrastructure

Taiwan has a large number of industrial districts, export processing zones, science parks, agricultural and biotech parks and environmental technology parks, and is working actively to establish new science parks, industrial districts and free trade zones. Currently, Taiwan has 181 industrial districts, 10 export processing zones, 3 science parks, 4 free trade zones, and a number of special agricultural parks, environmental technology parks, etc. These parks and districts provide a low-cost operating environment for business enterprises. They offer reliable electricity and water supply, and land rental costs are significantly lower than in neighboring Hong Kong (for example); they are thus well able to meet the needs of a wide range of different industries.

Taiwan has four international ports – Keelung Harbor in Northern Taiwan, Taichung Harbor in Central Taiwan, Kaohsiung Harbor in Southern Taiwan, and Hualien Harbor in Eastern Taiwan – making for convenient international sea transport. There are 12 logistics centers providing customs brokerage, transportation and delivery, receipt, warehousing, value-added services, packaging, documentation and asset management services, as well as third-party logistics services.

As far as information and communications technology (ICT) infrastructure is concerned, as of December 31, 2009 there were 4.96 million Internet users in Taiwan, of which 1.64 million were using fiber-optic access; in mid-2009 Taiwan had the highest fiber-optic Internet access penetration rate in Asia, surpassed only by South Korea, Hong Kong and Japan. According to the *ICT/Telecommunications Indicators* report published by the International Telecommunication Union (ITU) in 2009, when a basket of prices including fixed line telephony, mobile phone and wired broadband access charges was compared to average per capita income, Taiwan had the seventh lowest ICT charges in the world (the countries where these services were even cheaper included Singapore, the U.S. and Hong Kong). If relative purchasing power is taken into account, Taiwan had the second lowest fixed-line telephone charges in the world in 2008.

(2) Highly Developed Innovation Networks

In the era of the knowledge economy, innovation ability is vitally important, and this is an area where Taiwan's performance has been quite impressive. In 2008, spending on R&D accounted for 2.77% of Taiwan's GDP, far higher than in many other countries (including Austria, Canada, Ireland, etc.). Taiwan ranked fifth in the world in terms of the number of patent applications made in the U.S. (6,339 patent applications). In 2008, Taiwan had a total of 1,234,749 SMEs; with highly-developed industry clusters, and comprehensive, well-integrated supply chains, they are well able to undertake the commercialization and volume production of innovative new products.

In the *Innovation for Development Report 2009 – 2010* published by the European Business School (EBS) in late November 2009, Taiwan ranked 13th in the Innovation Capacity Index (ICI) out of 131 countries assessed. Of the five main indicators used to compile the ICI, Taiwan ranked top in "Research and Development."

(3) A Widely-praised Investment Environment

Over the years, Taiwan has always performed extremely well in international competitiveness rankings. For example, in the *Global Competitiveness Report* published by the World Economic Forum (WEF) on September 8, 2009, Taiwan ranked 12th out of 133 countries assessed. In May 2010, the USA's Business Environment Risk Intelligence (BERI) published its first Investment Environment Risk Assessment Report, in which Taiwan was ranked fourth in the world for the quality of its investment environment. In its 2010 *Competitiveness Yearbook*, the International Institute for Management Development (which is based in Lausanne, Switzerland) ranked Taiwan 8th in the world for competitiveness, while in *Doing Business 2010*, the World Bank ranked Taiwan 46th out of 183 countries for "ease of doing business".

4. The Political and Regulatory Environment

Taiwan's system of government combines elements of a cabinet system and a presidential system. Since 1987, when Martial Law and the prohibition on the establishment of new political parties were lifted, the government has not restricted either the formation of political parties by citizens or the expression of political views. The Constitution guarantees the people of Taiwan freedom of speech; everyone is allowed to hold their own political beliefs.

From the point of view of foreign investors, the legal and regulatory environment and the financial environment are both very important. The fact that the World Bank report *Doing Business 2010* uses the ease with which foreign enterprises can obtain the permits they need, obtain business registration and hire local workers when setting up operations in a particular country as indicators of the quality of the business environment reflects just how much importance international enterprises attach to these aspects of the legal and regulatory environment (as well as the overall economic environment) when deciding whether to invest in a given country.

II Industrial Policy and the SME Business Environment in Taiwan

Since the 1980s, government policy in Taiwan has directed considerable resources towards the development of hi-tech industries including IT, semiconductors, telecommunications and LCD panel manufacturing, and Taiwan has come to play a key role in the global hi-tech sector's supply chain. However, as Taiwan's hi-tech industries are heavily export-oriented, they are vulnerable to the impact of the global business cycle. Companies were forced to lay off workers or force them to take unpaid leave, and unemployment rose. These developments showed the risks posed by excessively high concentration on a handful of hi-tech industries, and the need for an overhaul of Taiwan's industrial structure.

The government has been working to build Taiwan into a global innovation center, an Asia-Pacific region trade hub and the preferred location for the operational headquarters of Taiwanese-owned businesses operating overseas, so that Taiwan can occupy a unique, innovative niche within the trade networks of Asia and of the global economy as a whole. With this aim in mind, the government has set itself the task of "revitalizing the economy and creating happy lifestyles," and overcoming the various problems that Taiwan faces, including the slow pace of industrial upgrading and transformation, stagnant wages and incomes, and a persistently high unemployment rate. To this end, the government has adopted a number of revolutionary fiscal and economic policies in order to revitalize the economy, and ensure that the fruits of economic growth are shared by all the people of Taiwan. The government is also attracting international corporations to invest in Taiwan and to locate their global operational headquarters here.

The government has announced six major economic development strategies: promoting growth that creates jobs, promoting industrial innovation, getting the whole country involved in energy conservation and carbon reduction, participation in regional economic integration, speeding up the overhauling of national land use, and ensuring that Taiwan's citizens can enjoy

security and peace of mind. The main concrete measures being adopted to implement the “growth with jobs” strategy include stimulating private-sector investment, developing industries oriented towards domestic demand, and formulating a comprehensive employment-creation strategy. The emphasis in the promotion of industrial innovation is on speeding up the restructuring of Taiwanese industry, including the development of the “Six Key Emerging Industries,” promoting the growth of new knowledge-intensive industries, and creating an environment conducive to new business start-up, so as to maintain Taiwan’s core competitiveness. The main focus in the efforts to get all citizens involved in energy conservation and carbon reduction will be on building “low-carbon cities,” establishing a “green” regulatory framework, and other ancillary measures. In its planning to speed up the restructuring of land use in Taiwan, the government will be promoting implementation of the “Love-Taiwan 12 Projects” and of the Strategic Plan for National Land Use Development, in line with the national land use development vision of “ensuring the safety of natural ecosystems, creating healthy, high-quality lifestyles, developing a knowledge-intensive economy and logistics, and reducing energy consumption, cutting carbon and reducing water consumption.” The strategy for ensuring that Taiwan’s inhabitants can enjoy security and peace of mind will be implemented through the provision of reasonably-priced, adequate housing, strengthening the provision of care for disadvantaged groups within society, and responding to the trend towards smaller families, so as to create a safe environment in which to bring up children, eliminate the obstacles that discourage so many people from having children, and put in place the long-term care systems needed by an aging population.

1. The Third Plan for National Development Formulated by the Council for Economic Planning and Development, Executive Yuan

Recognizing the changes that Taiwan is facing in terms of both its internal (domestic) and external (international) environment, in 2009 the Council for Economic Planning and Development (CEPD), Executive Yuan formulated the “Third Plan for National Development,” to be implemented over the four-year period from 2009 to 2012. The Plan is based on the policy vision goal of “building an advanced nation characterized by vigorous innovation, social justice and an equitable division of wealth, and sustainable energy use.” Through the implementation of this Plan, the government will be working to create new value for Taiwan. Proactive measures will be taken to stimulate domestic demand and encourage the creation of new jobs, while speeding up the restructuring of key systems to promote sustainable economic and social development.

Implementation of the Third Plan for National Development will be implemented along six policy axes: spatial reorganization, industrial restructuring, global linkages, innovation manpower, public welfare society, and sustainable environment. It is anticipated that, by focusing on these six axes, Taiwan will be able to build up the infrastructure needed to enhance the competitiveness of its service sector, promote the development of high-value-added manufacturing and precision agriculture, and participate more actively in global economic activity by attracting foreign investment, keeping pace with global trends, and enhancing its economic competitiveness. At the same time, the government will be working to strengthen higher education, ensure the provision of effective technical and vocational education, and ensure

that the rights of students who are members of disadvantaged groups are protected; boosting investment in education will help to raise Taiwan's overall manpower quality, creating an environment that gives people the incentive to have children and to raise and educate them properly, which promotes social harmony, and which facilitates achievement of the long-term goal of reducing carbon dioxide emissions and creating sustainable growth.

2. The Love-Taiwan 12 Projects

The "Love-Taiwan 12 Projects" are intended to bring about an ongoing strengthening of Taiwan's infrastructure, laying the foundations for rapid economic growth and the enhancement of Taiwan's competitiveness in the future. The implementation of the Love-Taiwan 12 Projects will have significant positive benefits in terms of promoting industrial innovation, boosting domestic investment, reinvigorating Taiwan's economy, transforming the quality of life of Taiwan's citizens, mitigating disparities in regional development within Taiwan, etc.

It is estimated that the Love-Taiwan 12 Projects will require total funding of NT\$3.99 trillion, of which the government will provide around NT\$2.79 trillion (approximately 70% of the total), with private-sector investment accounting for the remaining NT\$1.20 trillion (30%). Implementation of the Love-Taiwan 12 Projects plan is expected to bring about a 2.95% increase in real GDP, and create an average of 247,000 new jobs every year.

The Love-Taiwan 12 Projects are due to be implemented over the period 2009–2016. The 12 infrastructure projects to which priority will be given include:

- (1) Transportation: The building of a convenient, fast transportation network, the transformation of Kaohsiung Harbor and the expansion of Taoyuan International Airport to create an "international air city" will significantly increase Taiwan's global logistics capability.
- (2) Industrial Development: The creation of a new hi-tech industry cluster in Central Taiwan, the "Smart Taiwan" plan and the building of "innovation corridors" will help to speed up the accumulation of intellectual capital, and give Taiwan new competitiveness for the future.
- (3) Urban Development: The government will be promoting the renewal of urban areas and industrial districts, as well as the renewal of rural communities, helping to give new economic vitality to districts that have fallen into decline or failed to keep pace with the rest of the country, giving a brand new face to both urban and rural areas.
- (4) Protecting the Environment: In this area, priority will be given to revitalizing coastal areas, re-forestation, river conservancy and flood prevention, and expanding the coverage of mains sewage systems, thereby making a meaningful contribution towards protecting the environment and reducing carbon dioxide emissions.

3. The Executive Yuan's Six Key Emerging Industries Flagship Plan

As in other countries, the course of economic development in Taiwan has progressed from an emphasis on light industry, to a focus on heavy industry, and then to the growth of the service sector. For several decades, in its efforts to achieve ongoing economic development, Taiwan has allocated the lion's share of resources to construction and guidance in the industrial/commercial sector, laying the foundations for the competitive advantage which Taiwan has built up in

manufacturing and technology. This manufacturing advantage has given Taiwan an impressive record of economic growth, and created the world-renowned “Taiwan miracle”; Taiwan today is one of the world’s leading producers (by production value) of many IT and electronics products, a truly outstanding achievement.

However, the trends towards internationalization, globalization and digitalization have tended to blur the boundaries between nations. Money, human talent and resources flow freely between countries, and there has been rapid industrialization in many emerging economies. Taiwan’s industrial development model – with its emphasis on manufacturing and technology development – has been threatened by rising land and labor costs, as well as by the loss of competitiveness resulting from lack of diversification within industry. Profit margins have been steadily eroded, and Taiwan’s manufacturing sector has come under increasingly serious competitive pressure from the emerging economies. In the 1990s, in the knowledge-intensive “new economy,” Taiwan failed to develop the new products and services needed for the country to maintain its competitiveness over the long term; as a result, the country as a whole has been in danger of losing its competitive advantage.

The Executive Yuan decided to build on the foundations that Taiwan has already built up in the development of the “Two Trillion, Twin Star” industries and the information and communications technology (ICT) industry, while responding to the global trends towards greater emphasis on energy conservation and carbon reduction, aging populations, and the emergence of the “creative economy.” 2009 saw the launch of an Executive Yuan initiative to stimulate the development of the “Six Key Emerging Industries”: biotechnology, “green” energy, precision agriculture, tourism, healthcare, and the cultural and creative industry. The government will be allocating more resources to help with diversification, brand development, and gaining access to key technology, while also providing guidance for and working to encourage private-sector investment, so as to expand the scope of industrial activity, boost production value and strengthen value-added creation, so that, while enabling Taiwan to maintain economic growth over the long term, the quality of life of Taiwan’s people can also be improved. The main goal is to bring about a new era of prosperity for Taiwanese industry, and create new opportunities for industry.

4. The “Four Emerging Smart Industries”

Since 2010, the government identified four emerging smart industries: cloud computing, smart electric vehicle, smart green building and industrializing invention patents, with 15 billion to be invested in the next 6 years to promote them. Plans for developing cloud computing industry and smart electric vehicle are discussed as follows:

(1) The Cloud Computing Industry Development Plan

Recognizing that cloud computing will constitute the new mainstream of IT applications over the coming decade, the Ministry of Economic Affairs has formulated the “Cloud Computing Industry Development Plan.” The aim is for Taiwan to establish an autonomous cloud computing technology capability, and to emerge as a world leader in cloud computing that is able to provide cloud computing systems, application software, system integration and services. At the same time,

Taiwan will become a model of successful cloud computing utilization, with widespread utilization of cloud computing by government, business enterprises and ordinary citizens. The government plans to allocate a total of NT\$24 billion in funding to this plan over a period of five years, and to bring the number of people in Taiwan that have experience in using cloud computing to over 10 million. The plan is expected to stimulate NT\$12.7 billion in corporate R&D spending and NT\$100 billion in private-sector investment (including both manufacturing and services), while creating 50,000 new jobs; the target is to achieve cumulative production value of over NT\$1 trillion in the cloud computing sector. Using cloud computing, Taiwan will be able to create “smart,” high-quality lifestyles for its citizens, and progress further along the path towards establishing itself as a hi-tech superpower. The implementation strategies and measures through which the Cloud Computing Industry Development Plan will be put into effect cover the three key aspects of supply, demand and governance.

(2) Smart Electric Vehicle Development Strategy and Action Plan

The Smart Electric Vehicle Industry Development Strategy and Action Plan includes five main strategies: publicizing “model” projects, creating an environment conducive to the development of the smart electric vehicle industry, providing consumers with incentives to purchase electric vehicles, establishing new environmental protection standards, and providing guidance for the industry’s development. The aim of these strategies is to get smart electric vehicles on the road and in widespread use, while also stimulating the upgrading of the smart electric vehicle industry in Taiwan.

Over the next six years, the Ministry of Economic Affairs and other government agencies will be allocating a total of NT\$9.7 billion in funding to promote the development of the smart electric vehicle industry. It is anticipated that, by 2016, Taiwan will have at least one smart electric vehicle manufacturer within the global top ten, and that the Taiwanese smart electric vehicle industry will be posting annual domestic sales of 45,000 vehicles and annual export sales of 15,000 vehicles. The production value of the smart electric vehicle manufacturing industry will reach NT\$120 billion, and the production value of the related service industries will reach NT\$31.2 billion; at least 24,000 jobs will be created.

5. The Service Industry Development Plan

In 2009 the Executive Yuan approved the Service Industry Development Plan, to enable Taiwan’s service industries to develop into high-value-added industries that create more jobs, improve citizens’ quality of life and act as an engine for economic growth. The Plan’s goals are to raise the service sector’s share of Taiwan’s nominal GDP to NT\$11 trillion, create an average of 120,000 new service sector jobs per year, and raise Taiwan’s service sector exports to the point where they account for 1.2% of total global service sector exports. The main strategies that will be employed to achieve this goal include: raising the international competitiveness of the service sector, strengthening service sector R&D and innovation, developing new, diversified services, strengthening service sector manpower cultivation and the recruitment of high-quality manpower from overseas, establishing sound, accurate statistics for the service sector, and developing new types of service industry.

6. Action Plans for the Development of Key Service Industries

In October 2009, the Economic Advisory Task Force of the President's Office selected the 10 key service sector areas the development of which the government will be focusing on in future. They included: international medicine, international logistics, music and digital content, the conference and exhibitions industry, internationalization of Taiwanese gourmet food, urban renewal, WiMAX, Chinese-language e-business services, education, and the financial services industry.

(1) Action Plan for the Development of the Digital Content Industry

The Action Plan for the Development of the Digital Content Industry will be implemented through four key development strategies: software-hardware integration, diversified creativity, international sales promotion, and integration of university and research institute capabilities.

It is anticipated that implementation of this project will help to raise the annual production value of the Taiwanese digital content industry to NT\$780 billion by 2013, while stimulating NT\$100 billion of investment in the industry and NT\$14 billion worth of international collaboration projects within four years, and creating 31,500 new jobs.

(2) Action Plan for the Development of the Popular Music Industry

The main emphasis in the Action Plan for the Development of the Popular Music Industry is on strengthening the provision of assistance to the pop music industry in terms of funding, markets, the legal and regulatory environment, etc., while also planning relevant subsidy and incentive measures to encourage both enterprises and human talent to remain in Taiwan, thereby promoting innovation and the development of the industry as a whole.

The implementation of this plan will help to enhance the creative, production and sales capabilities of Taiwan's popular music industry, stimulating innovation and industrial upgrading, and helping to raise the annual production value of the domestic popular music industry as a whole from NT\$7,485 million in 2010 to NT\$13.45 billion by 2014, for a cumulative total of NT\$50 billion over this period. In addition, the number of people working in the popular music industry is expected to double, from 1,400 in 2008 to 2,800 in 2013.

(3) The "Gourmet Taiwan" Action Plan to Internationalize Taiwanese Cuisine

The aims of the "Gourmet Taiwan" Action Plan to Internationalize Taiwanese Cuisine are to bring the world's best to Taiwan, while also earning an international reputation for Taiwanese food. The emphasis will be on "local internationalization" (focusing on establishing the foundations for ongoing internationalization, and cultivating gold medal winning chefs in Taiwan) and "internationalization localization" (providing support for overseas expansion, promoting the establishment of Taiwanese cuisine districts, and promoting the overseas marketing of Taiwanese food) as the two key promotional strategies for driving the future internationalization of Taiwanese cuisine, thereby helping to create new space for Taiwanese cuisine brand building and furthering the ongoing internationalization of Taiwanese food.

It is anticipated that implementation of this action plan will stimulate the opening of 3,500 new restaurants in Taiwan over the next four years, creating 10,000 jobs, increasing the number

of international Taiwanese cuisine brands to 50, and cultivating internationalized human talent to the tune of 1,000 people; in addition, business matching will be implemented for 500 firms, and NT\$2 billion of private-sector investment will be stimulated.

(4) The Action Plan for the Internationalization of Medical Services in Taiwan

The vision underlying the Action Plan for the Internationalization of Medical Services in Taiwan is to bring in customers from overseas, while Taiwanese hospitals themselves expand into other countries, and build a stronger image for the quality of the service that they provide. Both demand-side and supply-side strategies and guidance plans are being formulated that leverage Taiwan's strengths, including high-quality medical provision, high technology and friendly service. The idea is to create viable business models for the internationalization of the medical services industry, opening up innovation opportunities and the chance for the Taiwanese healthcare sector to follow a "blue sea" strategy; this in turn will help to enhance Taiwan's overall national image and stimulate the growth of related industries. It is anticipated that, within four years, this plan will have stimulated a cumulative total of at least NT\$4.08 billion in private-sector investment, with internationalized medical services being provided to 45,558 people, and the creation of NT\$10.99 billion in production value and 3,860 new jobs.

7. SME Guidance Policy

Taiwan's SMEs have played a vital role in the country's economic development for several decades now. Many of Taiwan's large enterprises evolved out of SMEs. SMEs can thus be said to constitute the bedrock of Taiwan's economy; the survival of the SME sector is one of the key factors that will determine whether Taiwan is able to achieve continued economic growth, and SMEs will undoubtedly continue to serve as a major driver of economic development in the future.

As part of its efforts to guide Taiwan towards a "virtuous circle" with respect to economic development, the Ministry of Economic Affairs provides a range of different guidance measures for SMEs of different types. For example, special awards are presented to SMEs that display particularly impressive performance, the "Eleven Guidance Systems" are used to provide assistance to SMEs that are still at the growth stage, and the Ministry helps micro-enterprises through collective guidance for particular local industries and through the promotion of mutual assistance mechanisms. The Ministry also provides special assistance to innovative SMEs with particularly strong growth potential, so as to support the emergence of the new generation of SMEs.

Overall, the assistance that the government provides for SMEs can be thought of as falling under six main categories: strengthening the availability of funding, enhancing R&D capabilities, helping SMEs to upgrade and transform themselves, promoting the development of new business opportunities and new marketing initiatives, stimulating new business start-up and incubation, and revitalizing local economies. The purpose of these measures is to optimize the business environment and strengthen SMEs' competitiveness, while using four key ancillary measures – adjustment of the legal and regulatory framework, strengthening human resources, making it

easier for SMEs to obtain land, and strengthening service networks – to improve administrative procedures and ensure that SMEs’ diverse needs are met.

III An Examination of the Financing Environment for SMEs

By virtue of their small size, SMEs suffer from an inherent lack of resources. In their dealings with banks, SMEs often find it difficult to secure financing because of weak financial structure, unsound accounting systems, lack of clarity regarding the firm’s future operational plans, or failure to secure adequate information about financing options. One of the key challenges for countries throughout the world in their efforts to support SME development has been the question of how to build a satisfactory SME financing environment.

1. Measures Relating to Investment

Government investment in the SME sector comes from two main sources: the Executive Yuan National Development Fund (hereafter referred to as the “National Development Fund”) and the SME Development Fund.

(1) The Executive Yuan National Development Fund

The National Development Fund has collaborated on the implementation of the Plan for the Strengthening of Investment in the SME Sector providing the NT\$10 billion in investment over a 10-year period.

As of March 31, 2010, seven investment management firms had invested in a combined total of 45 SMEs, with the National Development Fund providing approximately NT\$1,287 million in funding, supported by an additional NT\$1,188 million from the investment management firms; this investment had stimulated private-sector investment totaling around NT\$12,512 million. As regards the remaining NT\$3.6 billion of approved investment, the intention at present is for NT\$3 billion to be invested in key service industries and in early-stage start-ups, with NT\$0.6 billion to be invested in the cultural and creative industries.

(2) SME Development Fund

Currently, the SME Development Fund is providing funding for three SME development corporations: Taiwan Small and Medium Enterprise Development Corporation, Sunsino Development, and Trinity Investment Corporation. As regards funding for business start-up investment trust accounts, the main targets for investment here are: (1) SME start-ups that have been in existence for less than 5 years and have significant development potential; (2) SMEs cultivated by incubator centers; (3) SMEs that have been in existence for less than 5 years and that are engaged in upgrading or transforming themselves through the development of new products, new technology or new facilities, or through the acquisition of brands or distribution channels. However, with the launch in 2007 of the new, NT\$10 billion Plan for the Strengthening of Investment in the SME Sector by the National Development Fund, Executive Yuan, to avoid waste of government resources due to duplication of effort, it was decided that the business

start-up investment trust accounts scheme would be terminated as of the end of 2009, with no further investment to take place after that date.

2. Measures Relating to Financing

Currently, the types of project financing assistance that the government provides for SMEs fall into eight main categories: SME Upgrading and Root Establishment Loans, Equipment Purchase Loans, Business Start-up Loans, R&D Loans, Tourism Development Loans, Overseas Investment Loans, Loans to Encourage Investment in Taiwan by Taiwanese Businesspeople Operating Overseas, and other types of loan. In all, there are 20 individual loan types, with interest rates that vary from 1.61% to 3.485%; the maximum credit guarantee percentage varies from 80% to 95%.

3. The Credit Guarantee Mechanism

The government established the SME Credit Guarantee Fund on May 8, 1974 to provide credit guarantees for SMEs that have significant growth potential but lack collateral for securing loans, to enable them to obtain funding from financial institutions, thereby facilitating the healthy development of the SME sector and promoting the growth of the economy as a whole, as well as contributing to social stability and prosperity. At the same time, the SME Credit Guarantee Fund helps financial institutions by sharing risk with them, which makes financial institutions more willing to lend to SMEs. Funding for the SME Credit Guarantee Fund is provided both by government agencies (at all levels) and financial institutions. As of the end of December 2009, the Fund had received a cumulative total of NT\$88.6 billion in donations.

A more detailed information on measures for facilitating SME financing can be found in Chapter 10 of this volume.

IV The Legal and Regulatory Environment in Which SMEs Operate

1. Labor Laws

Besides government support and access to funding, the availability of an adequate labor supply is another key factor in the maintenance of a sound business and investment environment for SMEs. To ensure that workers enjoy a reasonable working environment, countries all over the world have formulated labor laws to serve as the legal foundation for relevant regulations and codes. In Taiwan, the Labor Standards Law was enacted in 1984; it covers labor contracts, wages, working hours, overtime pay, public holidays, leave, leave taken for special reasons, leave requests, protection of female workers' rights, compensation for industrial accidents and disasters, seniority calculation, grounds for contract termination, severance pay, pensions, etc.

Besides regulating working conditions, Taiwan's labor laws also impose a number of responsibilities on business owners that affect labor costs. These responsibilities relate to labor insurance, occupational injury insurance, employment insurance, pension contributions, funds for the payment of wages in arrears, national health insurance, etc. For all of these types of insurance, employers are required to make contributions. In the case of labor insurance, employment insurance, and national health insurance, employers, workers and government all make

contributions. Employers pay 70% of labor insurance and employment insurance contributions, and 60% of national health insurance contributions; with respect to pensions, employers are required to make a contribution that is at least equal to 6% of the workers' monthly salary. Assuming a worker with a monthly salary of NT\$30,000, at 70% of total contributions the labor insurance and employment insurance contributions that the employer is required to pay amount to a total of around NT\$1,591. Adding to this the national health insurance contribution (at 60% of total national health insurance contributions for each worker), which comes to around NT\$1,598, and an employee pension contribution calculated as 6% of monthly salary, which comes to NT\$1,918, these three items alone represent an additional monthly expenditure of approximately NT\$5,007 per employee, or 16.52% of the employee's regular salary. The annual total of contribution payments amounts to 198.24% of the employee's monthly salary, or in other words the equivalent of an extra two months' wages.

According to the data presented in the Statistical Survey of Trends Relating to Paid Employees, non-wage compensation as a share of paid employees' regular wages in the industrial and service sectors in Taiwan rose from 12.3% in 2005 to 13.4% in 2008. However, overall compensation only rose by 3.25% during this time. Examination of the structure of paid employees' non-wage compensation shows that the largest items are labor insurance and pension contributions. The main reason for this situation is that the basis for calculation of these provisions is regular wage income. When wages rise, labor and health insurance contributions increase with it, and so do the employer's labor costs; employers have thus been reluctant to grant pay rises.

Besides legally-mandated labor costs, employers also have to shoulder the cost of implementing various employment promotion measures. For example, the Physically and Mentally Disabled Protection Law requires enterprises to employ a certain minimum percentage of handicapped persons, or else make a payment to the government. Article 15 of the Gender Equality in Employment Act stipulates that employers are required to give female employees 8 months' maternity leave, and to give 4 weeks' leave to female employees who miscarry while at least 3 months into their pregnancy, 1 week's leave to female employees who miscarry while 2 – 3 months into their pregnancy, and 5 weeks' leave to female employees who miscarry while less than 2 months into their pregnancy. Employers are also required to give 3 days' paternity leave to men whose wives have just given birth. Article 18 of the Gender Equality in Employment Act stipulates that time spent breast-feeding by female employees must be treated as working time.

2. Taxation Law

(1) The Business Income Tax Rate

All for-profit enterprises that possess a business permit – including industrial, commercial, agricultural, forestry, fisheries, pastoral farming, mining, metallurgical businesses etc., whether organized as a sole proprietorship, a partnership, a company or some other form of organization – are required by law to pay business income tax. Taiwan uses a system of bands for business income tax rate calculation purposes. Up until 2009, businesses that had taxable income of less than NT\$50,000 were exempt from business income tax; those with taxable income of between

NT\$50,000 and NT\$100,000 paid business income tax at a rate of 15%, but the total amount payable was capped at half of the amount of taxable income in excess of NT\$50,000. Businesses with taxable income over NT\$100,000 paid business income tax at a rate of 25%.

Starting in 2010, in line with the enactment of the Statute for Industrial Innovation, the maximum level of taxable income that businesses could post and still enjoy exemption from business income tax was raised to NT\$120,000; furthermore, the business income tax rate applying to businesses with taxable income in excess of NT\$120,000 was only 17%. The business income tax rate in Taiwan is thus lower than that applying in China (25%) or South Korea (22%), and roughly the same as the rate in Singapore (17%) or Hong Kong (16.5%). Besides contributing to the attainment of the goal of streamlined government, it is anticipated that the new business income tax system, with its lower tax burden, will create a more internationally competitive taxation environment, thereby helping to stimulate industrial development and the growth of the economy as a whole, and creating new jobs.

(2) The Minimum Taxation System

With the aim of building a fairer and more equitable taxation environment, the Income Basic Tax Act, which came into effect on January 1, 2006, established a “minimum tax system,” to ensure that enterprises that had been exploiting tax breaks to minimize their tax burden, or even avoid paying tax at all, were required to pay at least a specified minimum level of tax. Where taxable income as calculated according to the Income Tax Law, and after deductions provided for by other laws and regulations, is less than the minimum tax level, the enterprise must pay the difference, with no investment-related deductions permitted.

(3) The Integrated Tax System

On January 1, 1998, a new, integrated tax system came into effect in Taiwan, whereby a company’s shareholders could take the business income tax paid by their enterprise as a deduction from their personal income tax payment, thereby avoiding double taxation of shareholders. For sole proprietorships and partnerships, profits from the enterprise would be directly added to the proprietor’s or partners’ taxable income for personal income tax purposes; no business income tax would be levied. To prevent shareholders from taking advantage of disparities between the personal income tax and business income tax rate by having retained earnings kept by the company instead of distributing them to shareholders, a 10% business income tax rate was imposed on retained earnings.

(4) Setting off Earnings against Losses

To enhance the competitiveness of Taiwanese business enterprises and enable them to maintain sustainable operations, while at the same time implementing a realistic and accurate assessment of their ability to pay tax, Paragraph 2, Article 39 of the Income Tax Law stipulates that enterprises that submit their income tax declaration in the form of the blue income tax declaration form, or a declaration audited by an accountant, will be allowed to set off losses against net operating earnings for a period of 10 years. That is to say, losses that an enterprise has made in the past can be used as a business income tax deduction after the firm has started making a profit, thereby reducing the overall tax burden of the enterprise.

3. The Statute for Industrial Innovation

In order to meet the needs of Taiwan's future industrial development, promote industrial innovation, improve the industrial environment and enhance the competitiveness of Taiwanese industry, on May 12, 2010 the President promulgated the Statute for Industrial Innovation, which will constitute the most important legal foundation for Taiwan's industrial policy in the future. The Statute includes specific provisions relating to corporate investment in innovation activity, the transmission and utilization of intangible assets, the development of human resources for industry, funding support, industrial investment, the creation of the environment needed to support the sustainable development of industry, land use, etc. The Statute will also strengthen the utilization of subsidies, guidance, low-interest loans, etc. so as to encourage business enterprises to undertake innovation and R&D activity on an ongoing basis.

(1) Basic Strategy

As regards the basic strategy that the Statute for Industrial Innovation embodies, besides authorizing individual municipal, county and city governments to formulate development strategies for local industries according to their own needs, central government agencies may also assist municipal, county and city governments through the provision of subsidies or other incentives to help stimulate local industrial development; furthermore, the Statute provides for the use of industrial adjustment measures, including the provision of guidance and subsidies, to help industries that are in difficulty or in danger of finding themselves in difficulty, as well as traditional industries and SMEs that have been affected by natural disasters or by major changes in the international trading environment or the wider global business environment. During the first year after the Statute comes into effect, the regulatory authorities are required to undertake an across-the-board industry survey, assessment and analysis of the impact that the economic situation (both in Taiwan and overseas) is having on the development of Taiwanese industry, and must formulate plans to help industries that are in difficulty or in danger of finding themselves in difficulty, as well as traditional industries and SMEs. In the future, during the period in which the Statute is in force, the government will continue to monitor key industries that have been in receipt of guidance or subsidies. The legal and regulatory environment created by the Statute for Industrial Innovation will thus constitute a gradual improvement compared to the situation in the past.

(2) Subsidies and Guidance for Innovation Activity

Those articles of the Statute for Industrial Innovation relating to the provision of subsidies and guidance for innovation activity will have the greatest impact on SMEs. The articles in question stipulate that the regulatory authorities at the central government level may make use of subsidies and guidance to promote innovation and R&D in industry, may provide guidance to help industries improve their technology and upgrade themselves, may encourage enterprises to establish innovation and R&D centers, may help with the establishment of innovation and R&D institutes, may promote collaboration between industry, universities and research institutes, may encourage enterprises to participate in manpower cultivation within the university sector so as to strengthen the manpower resources available to industry, may help local industries to innovate,

and may undertake other activities related to the promotion of industrial innovation and R&D. In addition, to promote SME innovation, improve SMEs' manpower structure and create new jobs for Taiwan's citizens, the regulatory authorities at the central government level may also provide subsidies to help those SMEs that take on additional workers. This means that it will be easier for SMEs in most service industries to obtain advance funding support for innovation and R&D activity and R&D manpower cultivation.

(3) Transmission and Utilization of Intangible Assets

Today, in the era of the knowledge economy, the protection of intellectual property rights is a vital precondition for strengthening industrial innovation. In particular, for SMEs (which generally have only very limited resources), effective intellectual property rights protection can ensure that SMEs' efforts do not go to waste because of intellectual property piracy. The Statute for Industrial Innovation stipulates that regulatory authorities at the central government level may provide guidance to help business enterprises establish intellectual property rights protection and management systems. In addition, recognizing the difficulty that SMEs have had in the past in gaining access to information, central government regulatory authorities may collect and manage innovation relating to innovation and R&D results, and establish information services systems, so as to promote the dissemination and utilization of innovation and R&D results.

Currently, intangible assets relating to service innovation do not enjoy the same kind of status as tangible assets; SMEs cannot use the value derived from their creativity for security, and find it difficult to commercialize such assets. The Statute for Industrial Innovation therefore authorizes the central government regulatory authorities to establish standards for the appraisal of intangible assets, set up intangible asset assessment databases, undertake the cultivation of appraisal specialists, and establish "model" examples of intangible asset appraisal, as well as providing a legal basis for other activities to help promote the appraisal of intangible assets.

Finally, given the fact that branded marketing is one of the most important differentiating factors in the service sector, and that a company's brand may sometimes be worth more than its tangible assets, the Statute also authorizes central government regulatory authorities to provide incentives, subsidies and guidance to help enterprises attend international exhibitions and undertake sales development and brand development activities intended to help the firm develop an international brand and enhance its international image.

(4) Promoting Investment in Industry, and Creating an Environment Conducive to Sustainable, Long-term Industrial Development

To encourage Taiwanese businesspeople operating overseas (including in China) to invest in Taiwan, the Statute for Industrial Innovation clearly stipulates that the regulatory authorities at the central government level may provide assistance with securing land for industrial use. With the trend towards stricter environmental regulation, SMEs are being forced to absorb extra costs (with respect to production processes) that are, relatively speaking, higher than those borne by large enterprises. The Statute therefore allows the central government regulatory authorities to provide subsidies and guidance to help enterprises cope with the demands of international environmental and health and safety directives, promote greenhouse gas reduction and the

development and adoption of pollution prevention technology, help enterprises to improve their energy use efficiency, encourage the adoption of renewable energy sources and energy- and water-saving technology, and promote the manufacture of non-toxic, low-polluting products that reduce the burden on the environment.

(5) Establishment and Management of Industrial Parks

Recognizing the need to help traditional local industries and SMEs survive, and to promote the upgrading and transformation of the industries concerned, so as to protect both local employment opportunities and the environment, the section of the Statute for Industrial Innovation relating to industrial park establishment authorizes central government regulatory authorities to collaborate with the Ministry of the Interior on the planning of small, “local” or “village” industrial parks, and to provide support, guidance and subsidies to assist in their development.

(6) Provision of Guidance for Factory Expansion

When seeking to acquire land for industrial use, business enterprises often find themselves handicapped by legal and regulatory constraints. With this problem in mind, the Statute for Industrial Innovation stipulates that business enterprises that need to acquire neighboring non-urban land for factory expansion or the installation of pollution prevention facilities may apply to the regulatory authorities at the municipal, county or city level to issue an industrial land use certificate and implement the necessary rezoning.

V Strategies for Strengthening the SME Investment Environment

In the past, Taiwan was able to achieve rapid economic growth through reliance on cheap labor and an OEM/ODM production model that made extensive use of export processing zones. This development model required large amounts of labor, and kept unemployment in Taiwan down to the impressively low level of 2% or so. However, as land and labor costs in Taiwan began to rise and environmental awareness grew, business enterprises found themselves faced with the choice of working to upgrade and transform their operations in Taiwan, or investing overseas in emerging economies such as China and Southeast Asia. At the same time, the trend towards regional economic integration driven by globalization stimulated the reallocation of production factors. Under the law of comparative advantage, Taiwan would either have to attract more investment or face becoming economically marginalized.

In 2002, Taiwan joined the World Trade Organization (WTO), so as to be able to benefit from WTO protection and ensure that Taiwan could operate on a level playing field in its economic and trading activities, while also gaining the opportunity to protect Taiwan’s economic interests and enhance Taiwan’s international status through participation in the formulation of international economic and trading regulations. However, WTO accession also meant that Taiwan had to start fulfilling a variety of commitments that had been made in order to secure entry to the WTO. Enterprises in the agricultural sector and in the automotive manufacturing, telecommunications, banking and insurance industries found themselves having to deal with

fierce competition from leading international corporations. WTO accession had a severe impact on job creation in those labor-intensive industries that were more oriented towards Taiwan's domestic market. The government adopted a variety of measures to help both SMEs and enterprises in traditional industries to cope with this period of structural adjustment.

However, the difficulty in reaching a consensus within the WTO has led to the growing popularity of bilateral and regional economic collaboration mechanisms. Although Taiwan is a member of the WTO, Taiwan's special diplomatic status has made it difficult for Taiwan to participate in bilateral and regional trade groupings. As a result, Taiwan has failed to enjoy the benefits of market opening, tariff reductions and exemptions, trade and investment facilitation, etc. With countries throughout East Asia taking part in the process of regional economic integration, leading to significant reductions in (and in some cases elimination of) tariff barriers, this deepening of economic integration presents significant challenges for Taiwan. One solution to the problem is the ECFA agreement that has been negotiated between Taiwan and China, which will help to make it possible for Taiwan to compete on a level playing field, and give Taiwanese products an advantage in the Chinese market. It is anticipated that ECFA will encourage both Taiwanese and foreign companies to establish production facilities in Taiwan, and to undertake other forms of investment in the country, thereby creating new jobs, boosting the competitiveness of Taiwan-made products, and helping Taiwanese industries to survive.

However, there is no getting away from the fact that, once the ECFA agreement comes into effect, while some industries will benefit from being included in the "early harvest" list, other weaker industries will find themselves facing fierce competition from low-priced Chinese goods. The government will be using a variety of assistance measures to encourage Taiwan's weaker industries to upgrade and transform themselves, turning them into innovation-oriented industries that can successfully grasp new market opportunities and build new sources of competitive advantage; at the same time, the overall industrial environment in Taiwan will be transformed. A particularly important question related to these new opportunities is how an environment can be built that is conducive to investment in the SME sector, so that Taiwan's SMEs can once again begin to create significant numbers of new jobs.

1. The Problems Facing SMEs

An examination of the investment environment in Taiwan, industrial policy as it relates to SMEs, availability of financing and the legal and regulatory environment reveals that SMEs continue to face a number of problems, which are outlined below:

(1) The Government's Industrial Policy Needs Strengthening to Provide More Support for SMEs

Nearly 80% of Taiwan's SMEs are in the service sector, with the wholesaling and retailing industry alone accounting for just under 53% of the total. The number of jobs created in the service sector for every NT\$1 million of assets already exceeds the corresponding figure for manufacturing; not only are SMEs the main source of job creation in Taiwan, within the SME sector SMEs in the service industries are increasingly able to create more jobs than manufacturing firms. However, those aspects of the government's industrial policy relating to

innovation, R&D and high technology have only limited applicability to SMEs in general, and particularly to SMEs in the service sector.

Furthermore, an examination of the measures that have been introduced so far to help SMEs shows that the level of support with respect to the key resources that SMEs need is still quite limited. Clearly, the government has paid relatively little attention to SMEs when formulating its industrial policy, hence the fact that existing measures have achieved only limited results in terms of improving the investment environment in the SME sector. Industrial policy as a whole needs to give more weight to SMEs' needs, and to strengthen the level of support that is provided for SMEs.

(2) Financial Institutions' Existing Loan Mechanisms Cannot Satisfy SMEs' Financing Needs

The government has for many years now used a variety of financing and credit guarantee systems to help SMEs secure access to financing. However, because of the limited resources available to the government, in most cases the implementation of these measures (in terms of the actual provision of loans) has been entrusted to the commercial banks, or to venture capital firms. The key factor affecting the SMEs' ability to secure financing thus remains the banks' willingness to lend. However, the lack of transparency in many SMEs' finances creates an information asymmetry problem when banks are deciding whether to extend credit. Given the difficulty in evaluating the real level of risk, to protect themselves banks normally have to require collateral before granting loans. For firms that are unable to provide collateral, therefore, the availability of credit guarantees is only a partial solution. A further point is that, currently, bank loans are basically the only form of financing available to SMEs in Taiwan; SMEs that are unable to secure a bank loan have no other funding options available to them. This is why SMEs' funding needs are still not being met.

(3) Conforming to Regulatory Requirements Imposes a Heavy Burden on SMEs

In the case of compulsory requirements, SMEs may need to spend large amounts of money to avoid becoming liable to fines and other penalties; in the case of guidance and subsidy measures, SMEs need to spend time and effort searching through a variety of different websites and going through different application procedures in order to be able to benefit from them and make use of the government resources in question. All of this places an increased burden on Taiwan's SMEs.

Examination of the *Statute for Industrial Innovation*, which is being positioned as the cornerstone of SME development, and of the related labor laws, shows that, although the *Statute* seeks to create an innovation-friendly business environment, some of the sub-statutes are unclearly worded, and it remains to be seen how easy SMEs will find it to comply with them all. A second point is that steadily rising labor costs with downward rigidity have already affected the competitiveness of Taiwan's SMEs. When building the investment environment for SMEs, therefore, the legal and regulatory aspects should take into account the need to strike a balance between protecting workers' rights and ensuring continued economic development. Thirdly, although the business tax rate in Taiwan has already been reduced to 17%, which is relatively low by the standards of neighboring countries, it should be borne in mind that SMEs' lack of

relevant human talent often prevents them from handling their taxes in-house; simplification of the tax system would probably bring more real benefits than reducing the business tax rate. A further point is that, while the levying of business income tax at the 10% rate on retained earnings to discourage companies from failing to distribute earnings can help to prevent tax evasion, SMEs (which have difficulty in securing financing from outside services) may need to fund investment from own capital; the levying of tax on retained earnings thus has a negative impact on capital formation in the SME sector. Finally, the system that allows enterprises to offset profits against losses for tax purposes (which was designed to encourage firms to report their income honestly) is currently only applicable to firms that have their tax declaration audited or use the blue tax declaration form; this restriction has excluded the vast majority of SMEs, which deprives SMEs of an incentive to establish sound financial and accounting systems.

2. Strategies for Strengthening the SME Investment Environment

On the basis of the analysis presented above, we put forward the following suggestions for strengthening the SME investment environment in Taiwan, so as to enhance the SMEs' ability to create jobs.

(1) Formulation of New Industrial Development Policies That Target SMEs, and Particularly SMEs in the Service Sector

While the changes taking place in the domestic and international environment are making it increasingly difficult for business enterprises to create new employment opportunities, SMEs continue to provide the largest share of jobs in Taiwan. In particular, SMEs in the service industries are coming to play a particularly important role in job creation. Improving the SME investment environment is thus a vital requirement for boosting investment in SMEs and thus creating more jobs. The government's industrial policy needs to be tailored to meet the needs of SMEs, and especially SMEs in the service sector, so that their basic needs can be met.

(2) Establishing Systems for Auditing the Results Achieved in the Implementation of SME-related Policies

The Taiwanese government already provides subsidies, guidance and other forms of support to help SMEs access the funding, human talent and technology they need, to compensate for those areas where industrial policy has failed to take the needs of SMEs into account. We would suggest that the government should establish an effective performance appraisal system with respect to policy implementation, oriented towards SME needs, and taking "customer satisfaction" as the basis for appraisal. In this way, the government will receive constant feedback from SMEs regarding their needs, facilitating the achievement of the original policy goals of providing meaningful help for SMEs.

(3) Establishment of a More Diversified Range of Financing Channels

The difficulty that Taiwan's SMEs experience in securing financing is partly due to the fact that they are almost wholly dependent on indirect financing via domestic banks, with no other significant funding channels available to them; this is the main reason why the problem of SME financing remains unsolved. In the future, Taiwan should consider following the example of the

advanced nations by encouraging SMEs to make use of direct financing via the capital markets, by issuing bonds, shares or financial derivatives to raise the funding they need, thereby reducing SMEs' dependence on indirect financing.

(4) Promoting the Establishment of an Intangible Asset Appraisal System

The competitiveness of SMEs is often derived from intangible assets such as innovation and creativity. However, banks are generally unwilling to accept intangible assets as security, insisting on collateral that takes the form of tangible assets; this is one of the reasons why SMEs have consistently found it difficult to secure bank loans. The Statute for Industrial Innovation includes provisions relating to the transmission and utilization of intangible assets. If promotion of these measures can be stepped up, and supported by the establishment of comprehensive systems, so that banks have guidelines to follow with regard to accepting intangible assets as security for loans, then this will facilitate the securing of start-up capital by SMEs and help them to commercialize new ideas; this would be the most concrete, meaningful assistance that the Statute for Industrial Innovation could provide for SMEs.

(5) Compilation of Accurate Financial Statements

One reason for the problems that SMEs have traditionally experienced in securing financing has been that SMEs' financial statements are often inaccurate or misleading. The only way to solve this problem and make it easier for SMEs to secure bank loans is to encourage SMEs to compile accurate financial statements. The SMEA has already launched an "SME Financial Talent Certification System," which it is hoped will help to raise the caliber of SMEs' financial and accounting personnel. The government could offer a "tax amnesty," or raise the upper limit on the deduction for expenses and the amount of losses that can be set off against profits for users of the blue tax declaration forms, which would encourage firms to establish accurate, precise record-keeping systems, thereby helping to raise the overall transparency of SMEs' finances.

(6) Strengthening the Mechanism for Taking the Needs of SMEs into Account When Formulating or Revising Laws and Regulations

Provision for a mechanism to help SMEs adjust to regulatory changes was added to the SME Development Statute in 2000, with an article stipulating that "when a government agency at any level formulates or revises laws or regulations relating to SMEs, it should take into account the scale of operations and special characteristics of SMEs, so as to facilitate compliance with the law or regulation in question by SMEs." However, government agencies at all levels have so far failed to implement this requirement properly. Their failure to properly assess the impact that legal or regulatory changes might have on SMEs has been the cause of some major disputes; in other cases, the need to comply with new or revised laws and regulations has made it difficult for SMEs to stay in business. The question of how to make the system for taking SMEs' needs into consideration when planning legal and regulatory changes more effective, so that the system can respond promptly and appropriately to SMEs' requirements, constitutes one of the most important aspects of the process of building a sound, comprehensive SME investment environment.

CHAPTER 7

Helping SMEs to Cope with Resource Shortages and Create Jobs

As noted in Chapter 1 of Part 1 of this White Paper, over the next 10 – 20 years the world can be expected to experience serious shortages of many different types of resources. The problems will include a level of demand for crude oil that outstrips supply, excessively high concentrations of greenhouse gases in the atmosphere (an “atmosphere shortage”), food shortages, and water shortages. Energy and water are important production factors for many manufacturing industries, while food is a basic raw material for both the food manufacturing industry and the hotel and restaurant industry. Shortages of these resources will inevitably affect both production and consumption; the effect on SMEs and their workers may be particularly pronounced.

At the same time, resource shortages can be expected to stimulate the growth of alternative resource industries, and may act as a driver of technology innovation, thereby creating new business opportunities and new jobs. This chapter will therefore examine the impact that global resource shortages and food shortages may have on Taiwan’s SMEs, including their impact on SME job creation, and will also explore the strategies that can be adopted in response, and other key issues.

I The Potential Impact of Resource Shortages on Employment in the SME Sector

1. Energy Shortages

Petroleum and minerals constitute key raw materials for industrial production. Over the long term, it can be anticipated that demand for petroleum will continue to grow rapidly. Currently, average petroleum consumption per capita in China and other emerging economies is still relatively low; in 2006, the per capita consumption in China stood at 2 barrels of crude oil per person per year, compared to 25 barrels in the U.S. Income elasticity of demand in developing nations is usually higher than 1, and the emerging economies, which already have very large populations, have the potential for continued high population growth. During the period 2003–2006, the growth in China’s petroleum consumption accounted for 33% of overall global petroleum consumption growth. Once the global economy starts to grow strongly again, rising incomes can be expected to stimulate even faster growth in demand for energy.

The potential for significant growth in oil production over the next few years is limited. Most of the world’s larger oilfields have already passed their period of peak output, and few of the oil-producing nations have been investing significantly to increase production. It seems likely that the rate of increase in oil production will continue to fail to keep pace with rising demand,

acting as a brake on economic growth. It is significant that, in the first half of 2010, the spot price of West Texas Intermediate (WTI) crude oil rose back up to a level of over US\$80 per barrel.

2. The Need to Cut Carbon

The burning of fossil fuels and the destruction of large areas of forest has released enormous quantities of greenhouse gases into the atmosphere. Rising global temperatures represent a serious threat to water resources, ecosystems, food production, and human health; they can also be expected to spark international conflicts over resource allocation.

The approaches for dealing with climate change include mitigation and adaptation. Mitigation mainly involves reducing the emission of greenhouse gases. Although the COP15 conference on climate change that was held in Copenhagen in December 2009 failed to reach a consensus on emission reduction targets, it can be anticipated that the conference will have some degree of impact on the targets that individual countries set. The main contents of the Copenhagen Accord include the goal of keeping the rise in global temperatures within 2 degrees centigrade, and getting all countries to take action to combat climate change, with the provision of timely, ongoing financial support to help those weaker nations that are particularly vulnerable to the impact of climate change. In line with the United Nations Framework Convention on Climate Change (UNFCCC), efforts will be made to convert the Copenhagen Accord into a legally binding treaty within the next two years.

Taiwan's level of energy use has always been very intensive, and as a result the country's CO₂ emissions have remained consistently high. If the growth in the intensity of energy use continues to follow the trend of the past ten years, then it is likely to prove very difficult to reduce CO₂ emissions, and to break the linkage between economic growth and increased emissions.

On June 5, 2008, Taiwan's Executive Yuan approved the Sustainable Energy Policy Guidelines, which set new goals for carbon reduction: (1) Energy intensity: Over the period 2008–2015, energy efficiency will be increased by at least 2% per annum, so that by 2015 Taiwan's energy intensity will be at least 20% below the 2005 level (9.65 KOE / NT\$1,000), and by 2025 it will be at least 50% lower. (2) CO₂ emissions: Taiwan will be aiming to bring its CO₂ emissions back down to the 2008 level by 2020, to the 2000 level (214 million tons) by 2025, and to a level 50% below that of 2000 by 2050. In the future, Taiwan will be faced with an environment in which restrictions on the use of hydrocarbon-based energy are more stringent, and in which the pressure to cut carbon emission continues to grow.

If Taiwan is serious about achieving its carbon reduction goals, then the industrial sector, the transportation sector, the residential sector and the commercial sector will all be affected, as will Taiwan's international competitiveness and labor utilization status. In the industrial and commercial sectors, some SMEs will find it hard to adapt to the new, low-carbon economy, and will be forced to reduce the number of people they employ. However, other SMEs may be able to develop new business opportunities and create new jobs.

3. Shortage of Water Resources

Taiwan's distribution of water resources is characterized by pronounced seasonal variation and by regional disparities. Agriculture has consistently accounted for around 75% of total water use, household needs for around 16%, and industry for 9%. While agriculture takes the lion's share of water, the agricultural sector depends relatively little on reservoirs and underground water; the water used in agriculture comes mainly from rivers and streams, and the supply is thus highly variable. In a drought, it is farmers that are the worst affected. The household sector relies heavily on reservoirs for its water; they provide over 70% of all water used by this sector. While industry accounts for the smallest share of total water usage, the level of water quality needed varies considerably from industry to industry. Traditional industries often use underground water from aquifers, whereas hi-tech industries need a stable supply of high-quality water to keep production going.

In the short term, global warming may lead to an increase in the availability of water resources in some regions, but in the long term it will bring about a reduction in the availability of water in most parts of the world. Climate change is likely to lead to a fall in the number of days per year in which rain falls in Taiwan, and to a heavier concentration of rain, so that individual rainstorms become bigger. Given Taiwan's topography and problems with soil erosion, the emergence of this type of precipitation pattern could make the storage of water resources an increasingly difficult task.

Water is a resource that does not lend itself easily to large-scale trans-national trade; Taiwan will not be able to overcome its water shortages by purchasing water from other countries. In the past, the price of water in Taiwan has been set too low, and has been adjusted too infrequently; when water shortages occurred, the response was to implement water rationing, i.e., to use quantitative controls. Quantitative controls of this kind have no effect on production accounting, but they can lead to a loss of revenue, and to machinery and workers being left idle. Production-related opportunity cost is bound to affect enterprise operations. If, in the future, the price of water in Taiwan is increased, this will have a direct impact on production costs and labor utilization.

4. Food Shortages

The period 2007–2008 saw a global food crisis. Between early 2007 and June 2008, the global food price index compiled by the Food and Agriculture Organization (FAO) rose by over 50%. Flour, rice, milk and maize all rose dramatically in price; countries that had traditionally been net exporters of food, such as Thailand and Vietnam, imposed bans on the exportation of foodstuffs. This rise in the price of food was caused by both short-term and long-term factors. Short-term factors included the weather, e.g., the drought in Australia, which had continued unabated for several years. However, long-term factors played a more important role in causing the food crisis; these factors included supply-side and demand-side factors. On the demand side, there is the rise in the global population, and the rapid increase in income levels in the emerging economies, accompanied by changing eating habits. The rise in meat consumption in these countries has led to increased demand for animal feed, which has had a negative impact on grain production for human consumption. On the supply side, there are four main issues to consider: (1) Since the

1980s, investment in agricultural technology has declined, and productivity growth in food production has remained stagnant. (2) The rise in the price of oil has led to a dramatic increase in the cost of fertilizers and transportation. (3) Climate change has caused more frequent, longer droughts. (4) The provision of government subsidies for the cultivation of crops to be used in biomass energy production has squeezed grain production for human consumption; large areas of arable land have been switched over to the cultivation of biomass energy crops.

The global economic crisis of 2008–2009 brought food prices back down to a lower level. However, looking ahead to the next 10 years, the danger of food shortages is not going to go away. The main reasons why this is so include the continuing rise in the world's population, the continuing growth of the emerging economies, and the ongoing competition between biomass fuel crops and food crops for arable land. Rising food prices affect materials costs in the food products manufacturing industry and the restaurant industry; they also place upward pressure on wages. The potential impact on SMEs and on employment in the SME sector is significant.

II The Potential Impact of High Energy Prices and Carbon Reduction on SMEs and on Employment in the SME Sector

Chapter 8 of the 2009 *White Paper on SMEs in Taiwan*, entitled “Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy,” presented the results of a wide-ranging survey of the impact of various types of energy-conservation measure on SMEs. The survey results showed that SMEs felt that, of the various types of policy that could be implemented to reduce energy consumption, adjustments to the price of oil and electricity, and the imposition of energy taxes, would have the biggest impact on SME operating costs.

Looking ahead to the future, even when the global recovery gets back on a firm footing, oil prices can be expected to remain high. In addition, it can be anticipated that the levying of energy tax will be one of the policy tools used to promote energy conservation and carbon reduction. This chapter therefore includes a survey of the impact of oil and electricity price rises on SME operating costs and manpower utilization, and the strategies that SMEs may adopt in response. The survey results are put together with those presented in the 2009 *White Paper*, in an attempt to gain a clearer picture of the potential impact of energy shortages on Taiwan's SMEs.

Due to time and cost constraints, the survey was implemented through telephone interviews. The questionnaire used included a number of questions where respondents were allowed to give more than one answer; the survey was implemented in a semi-open manner with prompting.

1. The Impact of Energy Shortages – Survey Design

The population for the survey was taken from the 2010 *Directory of Enterprises Located in Industrial Districts* (published by Taipei County Exhibition Hall), the *Directory of Manufacturing Firms in the Taiwan and Fukien Regions* (published by the Ministry of Economic Affairs), and the *Taiwan Business Directory* (published by China Credit Information Service Ltd.). The agricultural sector accounted for 0.40% of the enterprises in the population, the

industrial sector (including both manufacturing and non-manufacturing industries) for 28.19%, and the service sector for 71.41%.

Table 7-2-1 Distribution of the Sample by Industry (1)

Units: enterprises; % (of the total sample size)

Industry	Effective Sample Size (Firms)	By Number of Employees (%)			
		Under 5 Employees		5 – 29 Employees	
All industries	300	25	8.3	149	49.7
Agriculture, forestry, fisheries and animal husbandry	15	2	13.3	7	46.7
Manufacturing	95	5	5.3	27	28.4
Mining and quarrying	8	0	0.0	5	62.5
Electric power and gas	7	0	0.0	3	42.9
Water supply and pollution prevention	3	0	0.0	2	66.7
Construction	17	0	0.0	12	70.6
Wholesaling and retailing	79	12	15.2	52	65.8
Transportation and warehousing	8	1	12.5	4	50.0
Hotel and restaurant	3	0	0.0	2	66.7
Information, communications and broadcasting	15	2	13.3	9	60.0
Finance and insurance	5	0	0.0	4	80.0
Real estate	1	0	0.0	0	0.0
Professional, scientific and technical services	25	1	4.0	15	60.0
Supporting services	17	2	11.8	7	41.2
Educational services	0	0	0.0	0	0.0
Medical, healthcare and social welfare services	2	0	0.0	0	0.0
Arts, entertainment and leisure services	0	0	0.0	0	0.0

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

Table 7-2-1 Distribution of the Sample by Industry (2)

Units: enterprises; % (of the total sample size)

Industry	By Number of Employees (%)					
	30 – 49 Employees		50 – 99 Employees		100 – 200 Employees	
All industries	79	26.3	33	11.0	14	4.7
Agriculture, forestry, fisheries and animal husbandry	6	40.0	0	0.0	0	0.0
Manufacturing	23	24.2	26	27.4	14	14.7
Mining and quarrying	3	37.5	0	0.0	0	0.0
Electric power and gas	3	42.9	1	14.3	0	0.0
Water supply and pollution prevention	1	33.3	0	0.0	0	0.0
Construction	4	23.5	1	5.9	0	0.0
Wholesaling and retailing	14	17.7	1	1.3	0	0.0
Transportation and warehousing	3	37.5	0	0.0	0	0.0
Hotel and restaurant	1	33.3	0	0.0	0	0.0
Information, communications and broadcasting	3	20.0	1	6.7	0	0.0
Finance and insurance	1	20.0	0	0.0	0	0.0
Real estate	1	100.0	0	0.0	0	0.0
Professional, scientific and technical services	7	28.0	2	8.0	0	0.0
Supporting services	8	47.1	0	0.0	0	0.0
Educational services	0	0.0	0	0.0	0	0.0
Medical, healthcare and social welfare services	1	50.0	1	50.0	0	0.0
Arts, entertainment and leisure services	0	0.0	0	0.0	0	0.0
Other service industries	0	0.0	0	0.0	0	0.0

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

Stratified random sampling was used, with two strata (sub-populations). The intensity of energy use and carbon dioxide emissions vary from industry to industry, so the impact of low-carbon policies will also vary depending on the industry. In the first stratum, therefore, the population was broken down into four categories: the agricultural sector, manufacturing sector, industrial sector (non-manufacturing), and service sector. The second stratum broke the population down by geographical location, with four regions: Northern Taiwan, Central Taiwan,

Southern Taiwan and Eastern Taiwan (the agricultural sector and non-manufacturing industrial sector were not broken down in this way). The survey was implemented over the period April 1 – 30, 2010. A total of 15 valid observations were obtained for the agricultural sector, 95 for the manufacturing sector, 35 for the non-manufacturing industrial sector, and 165 for the service sector. In all, the sample comprised 300 SMEs, of which 58% were enterprises with fewer than 30 employees, and 37.3% were enterprises with 30 – 99 employees (Table 7-2-1). Manufacturing firms accounted for 43.33% of the sample, which was a larger percentage than manufacturing firms' share of the population (28.19%), while service sector enterprises accounted for 51.67% of the sample but 71.41% of the population.

Of the service sector firms included in the sample, 40.65% were located in Northern Taiwan, 22.58% in Central Taiwan, 27.10% in Southern Taiwan, and 9.68% in Southern Taiwan (Table 7-2-2). Of the manufacturing firms, 32.63% were in Northern Taiwan, 33.68% were in Central Taiwan, 33.68% were in Southern Taiwan, and 15.79% were in Eastern Taiwan (Table 7-2-3). Firms in the agricultural sector and the non-manufacturing industrial sector were not broken down by geographical region.

Table 7-2-2 Geographical Breakdown of the Service Sector Firms Included in the Sample

Unit: enterprises; % (of the total sample size)

Region	Effective Sample Size (Firms)	By Number of Employees (%)				
		Under 5 Employees	5 – 29 Employees	30 – 49 Employees	50 – 99 Employees	100 – 200 Employees
All regions	155	11.6	60.0	25.2	3.2	0.0
Northern Taiwan	63	17.5	60.3	19.0	3.2	0.0
Central Taiwan	35	5.7	54.3	37.1	2.9	0.0
Southern Taiwan	42	7.1	64.3	23.8	4.8	0.0
Eastern Taiwan	15	13.3	60.0	26.7	0.0	0.0

Note: "Northern Taiwan" includes Taipei, Taoyuan, Hsinchu, and Miaoli; "Central Taiwan" includes Taichung, Nantou, Changhua, and Yunlin; "Southern Taiwan" includes Chiayi, Tainan, Kaohsiung and Pingtung; "Eastern Taiwan" includes Ilan, Hualien and Taitung.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

Table 7-2-3 Geographical Breakdown of the Manufacturing Sector Firms Included in the Sample

Units: enterprises; % (of the total sample size)

Region	Effective Sample Size (Firms)	By Number of Employees (%)				
		Under 5 Employees	5 – 29 Employees	30 – 49 Employees	50 – 99 Employees	100 – 200 Employees
All Regions	95	5.3	28.4	24.2	27.4	14.7
Northern Taiwan	31	6.5	19.4	32.3	32.3	9.9
Central Taiwan	32	3.1	37.5	18.8	21.9	18.8
Southern Taiwan	32	6.3	28.1	21.9	28.1	15.6
Eastern Taiwan	15	13.3	60.0	26.7	0.0	14.7

Note: "Northern Taiwan" includes Taipei, Taoyuan, Hsinchu, and Miaoli; "Central Taiwan" includes Taichung, Nantou, Changhua, and Yunlin; "Southern Taiwan" includes Chiayi, Tainan, Kaohsiung and Pingtung; "Eastern Taiwan" includes Ilan, Hualien and Taitung.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

The results obtained in the survey are presented in detail below, and are compared with the survey results published in the 2009 *White Paper* to facilitate further discussion.

2. The Survey Results Relating to the Impact of Energy Shortages

(1) Energy Costs as a Share of Operating Costs

Energy costs can be divided into four broad categories: (1) Electricity costs; (2) Transportation fuel costs (e.g., vehicle fuel); (3) Production fuel costs (e.g., coal used in furnaces); (4) Production materials (e.g., the coke used in steel production). The share of total operating costs that energy costs account for can affect enterprises' price elasticity with respect to energy demand; in times of high oil prices, it can impact the firms' profitability and competitiveness.

Most energy-intensive industries fall within the industrial sector; average energy consumption per unit of production value in the service sector is relatively low. 82.7% of the respondents in the survey reported that, in 2009, electricity costs accounted for less than 5% of their total operating costs; only 4% of firms reporting having electricity costs that amounted to over 10% of total operating costs (Table 7-2-4).

Table 7-2-4 Electricity Costs as a Share of Total Operating Costs in 2009

Unit: % (of the total sample size)

	Effective Sample Size (Firms)	Over 15%	10 – 15%	5 – 10%	Under 5%	Electricity Costs are Included in General Administrative Expenses, and So Cannot Be Determined
All sectors	300	1.7	2.3	12.7	82.7	0.0
Agricultural sector	15	13.3	0.0	33.3	53.3	0.0
Manufacturing sector	95	1.1	6.3	8.4	84.2	0.0
Industrial sector (non-manufacturing)	35	0.0	0.0	17.1	82.9	1.3
Service sector	155	1.3	0.6	12.3	84.5	0.7

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

77% of firms reported that transportation fuel and production fuel costs accounted for less than 5% of their total operating costs, or that they spent no money on transportation fuel and production fuel whatsoever. The reason why transportation and production fuel costs account for a relatively high share of total operating costs in the non-manufacturing industrial sector is that this sector includes industries with particularly high fuel consumption, e.g., transportation and warehousing (Table 7-2-5).

Table 7-2-5 Transportation and Production Fuel Costs as a Share of Total Operating Costs in 2009

Unit: % (of the total sample size)

	Effective Sample Size (Firms)	Over 15%	10 – 15%	5 – 10%	Under 5%	Don't Use Fuel for Transportation or Production
All sectors	300	6.7	4.3	12.0	60.0	17.0
Agricultural sector	15	40.0	6.7	13.3	33.3	6.7
Manufacturing sector	95	3.2	3.2	12.6	71.6	9.5
Industrial sector (non-manufacturing)	35	0.0	8.6	20.0	57.1	14.3
Service sector	155	7.1	3.9	9.7	56.1	23.2

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

9% of respondent firms reported that they used petroleum, coal or gas as a production material; 91% did not (Table 7-2-6).

Table 7-2-6 Use of Petroleum, Coal or Gas as a Production Material as a Share of Total Operating Costs in 2009

Unit: % (of the total sample size)

	Effective Sample Size (Firms)	Over 15%	10 – 15%	5 – 10%	Under 5%	Don't Use Petroleum, Coal or Gas as a Production Material
All sectors	300	2.0	0.3	1.7	5.0	91.0
Agricultural sector	15	0.0	0.0	0.0	6.7	93.3
Manufacturing sector	95	1.1	0.0	2.1	7.4	89.5
Industrial sector (non-manufacturing)	35	14.3	0.0	2.9	2.9	80.0
Service sector	155	0.0	0.6	1.3	3.9	94.2

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

It can be seen from the results presented above that, for most SMEs, regardless of which sector they are in, electricity costs and transportation and production fuel costs account for the bulk of total energy costs; usage of petroleum, coal and gas as production materials is relatively limited. For over 80% of firms, energy costs accounted for less than 10% of total operating costs in 2009.

(2) The Impact of Rising Oil and Electricity Prices

Oil prices began to fluctuate again in June 2008, and electricity prices were raised in July 2008 and again in October 2008, with an average increase of 12.6% on each occasion. To accompany the price hikes, Taiwan Power introduced an electricity-saving discount scheme. To find out how the rise in oil and electricity prices over the past two years has affected SMEs, for this year's *White Paper* a survey was conducted in which SMEs were asked to specify the year in which they had had the highest electricity, fuel and "energy materials" expenditure, out of the three years 2007, 2008 and 2009, and what they felt the reason for this was.

A very large number of firms reported that their expenditure on electricity, fuel and energy materials had been highest in 2009. This was particularly true for firms in the agricultural sector, the non-manufacturing industrial sector, and the service sector; for enterprises in the manufacturing sector, the disparities in expenditure between 2007, 2008 and 2009 were less pronounced. Overall, 41.3% of firms reported seeing their highest electricity expenditure in 2009, 43% had their highest transportation and production fuel expenditure in 2009, and 33.3% had their highest expenditure on petroleum, coal and gas for use as production materials in 2009 (it should be noted that 18.5 – 26% of firms did not know or "could not remember" what the differences in expenditure had been between the three years). Enterprises explained the particularly high expenditure in 2009 as being due to high energy consumption, high energy prices, or both.

However, it seems likely that this impression of expenditure on energy having been highest in 2009 was erroneous. In the first half of 2009, both the Taiwanese economy and the global economy as a whole were still mired in a downturn; growth did not start to pick up again until the second half of the year, and even then recovery was very slow. The total volume of electric power sold by the Taiwan Power Company in 2009 (17,924 GWh) was lower than the corresponding figures for 2007 (18,707 GWh) and 2008 (18,693 GWh), making it seem

questionable whether “increased energy consumption” could have been a reason for increased expenditure on energy in 2009.

In reality, it would seem that 2008 was the year (out of the three years 2007, 2008 and 2009) in which SMEs’ expenditure on electricity, fuel and energy materials was highest. The key factor here is the skyrocketing prices of oil and gas in the first half of 2008 before the economic crisis began in earnest. Through discussions with SMEs, our study found that in 2008, when oil prices were high, the upstream yarn-manufacturing segment of the textile industry saw its expenditure on electricity rise by 30%, while fuel costs rose by 20 – 40%. In the mid-stream dyeing segment, fuel costs can account for more than 30% of total operating costs, with electricity accounting for another 10%; in the artificial fiber industry, energy costs account for around 20% of operating costs. In the iron and steel industry, energy costs account for 15 – 20% of total operating costs, while in the paper-making industry the share is around 10 – 15%.

Just how big was the real impact of rising oil and electricity prices on SME operating costs? The “Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy” chapter of the 2009 *White Paper* included a survey of the impact of higher oil and electricity prices on SMEs’ operating costs in 2008. According to the survey results, over 70% of enterprises felt that their operating costs had not increased significantly. Enterprises in the non-manufacturing industrial sector were more likely to report that fluctuating oil prices had caused their operating costs to rise (a particularly large number of these firms were in the transportation and warehousing industry, where petroleum use levels are high, making firms in this industry more sensitive to rising oil prices). Within the manufacturing sector, firms were more likely to report that operating costs had risen due to rising electricity prices; the extent to which operating costs rose because of this factor was greater in the textile industry, the artificial fiber industry, and the iron and steel industry.

(3) How Would SMEs Respond to an Energy Shortage?

Assuming that electricity and oil prices rise again in the future, how will SMEs respond? The survey results (Table 7-2-7) were as follows:

In terms of cost control, SMEs would “switch over to using energy-saving equipment” (39%), “switch over to using cheaper, alternative sources of energy” (19.3%), “switch over to using transportation equipment with lower fuel consumption” (16%), “reduce air conditioning usage” (8%), “overhaul production equipment and modify production processes to improve energy conservation” (7.3%), and “reduce non-energy expenditure” (28.7%).

As regards ways to boost revenue, a significant percentage of SMEs said that they would “raise product prices, so as to pass on the increased energy costs to customers” (23.7%); relatively few planned to “develop energy-conservation service business” (8.7%) or “develop energy-saving technology or alternative energy business” (7%). 18.7% of SMEs said that they would not make any adjustments, and would simply absorb the increased energy costs.

Overall, the main type of response strategy favored by SMEs at present is to “control costs”; relatively few firms planned to make no adjustments, and simply absorb the increased energy costs. The survey results suggest that SMEs are not good at exploiting increased costs as an

opportunity to develop new business areas, i.e., areas in energy-saving, low-carbon technology development and alternative energy that offer significant potential for developing new business opportunities. The government has been working actively to promote the “Green Energy Industry Dawn Program.” However, very few of the respondent SMEs felt that they were in a position to take advantage of the opportunities to develop energy-saving service businesses or energy-saving technology and alternative energy businesses. Of those firms that did see opportunities in these areas, the largest shares were focused on the energy-saving lighting equipment business. As to why some SMEs said that they would not make any adjustments, and would simply absorb the rising energy costs, this may be because these firms are in industries where energy accounts for only a relatively small share of operating costs, so that they feel they can cope with the increased energy prices. Alternatively, they may simply have no idea what to do about the rising energy prices, or feel that they are incapable of making any meaningful response.

The vast majority of SMEs (92%) felt that a rise in electricity or oil prices would have a negative impact on their operations. Clearly, many SMEs do not know what they should do in response to rising energy prices; faced with the challenges posed by energy shortages, SMEs have not yet taken the necessary steps to prepare themselves.

Table 7-2-7 How SMEs Would Respond to Rising Electricity and Oil Prices

Unit: % (of the total sample size)

	All Sectors	Agricultural Sector	Manufacturing Sector	Industrial Sector (Non-manufacturing)	Service Sector
Effective sample size (no. of firms)	300	15	95	35	155
Switch over to using energy-saving equipment	39.0	40.0	33.7	34.3	43.2
Switch over to using transportation equipment with lower fuel consumption	16.0	13.3	15.8	5.7	18.7
Overhaul production equipment and modify production processes to improve energy conservation	7.3	0.0	15.8	2.9	3.9
Switch over to using cheaper, alternative sources of energy	19.3	13.3	20.0	34.3	16.1
Reduce non-energy expenditure	28.7	53.3	26.3	20.0	29.7
Raise product prices, so as to pass on the increased energy costs to customers	23.7	6.7	31.6	28.6	19.4
Develop energy-saving technology or alternative energy business	7.0	13.3	8.4	11.4	4.5
Develop energy-conservation service business	8.7	6.7	9.5	14.3	7.1
Other	0.0	0.0	0.0	0.0	0.0
Make no adjustments, and just absorb the increased energy costs	18.7	20.0	18.9	8.6	20.6
Go out of business (including moving operations overseas)	1.7	13.3	3.2	0.0	0.0
Reduce air conditioning usage	8.0	0.0	9.5	11.4	7.1
Outsource operations to reduce costs	0.3	0.0	0.0	0.0	0.6

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

(4) The Potential Impact of Energy Shortages on SMEs' Manpower Utilization

The survey results indicated that 28.7% of SMEs planned to respond to the challenge posed by energy shortages by focusing on reducing non-energy expenditure. Does this mean that energy shortages will have a significant indirect impact on SMEs' manpower expenditure, the number of people they employ, and salary levels?

According to the survey results, 81% of SMEs were not currently planning to adjust their personnel expenditure in response to energy shortages. However, 12.3% of firms were planning to reduce their head-count, and 5.3% were planning to cut salaries. The textile industry is particularly sensitive to fluctuations in energy costs. The dramatic changes in energy prices in 2008 led to a similarly dramatic variation in cost levels in the textile sector; many firms in the mid-stream dyeing segment and the upstream yarn manufacturing business found that either they had no orders coming in, or they could not take on new orders without losing money. Enterprises responded by laying off workers (both Taiwanese workers and foreign contract laborers) and by leaving vacancies unfilled. A prolonged period of energy shortages in the future would affect even more businesses, and further layoffs would probably be inevitable.

Table 7-2-8 The Impact of Rising Oil and Electricity Prices on SME Manpower Utilization

Unit: % (of the total sample size)

Sector	Effective Sample Size (Firms)	Reduce Employment	Cut Salaries	Make No Adjustments	Increase Salaries	Increase Employment
All sectors	300	12.3	5.3	81.7	1.0	1.0
Agricultural sector	15	20.0	0.0	80.0	0.0	0.0
Manufacturing sector	95	13.7	7.4	78.9	0.0	2.1
Industrial sector (non-manufacturing)	35	17.1	14.3	62.9	2.9	2.9
Service sector	155	9.7	2.6	87.7	1.3	0.0

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

III The Potential Impact of Water Shortages on SMEs and on Employment in the SME Sector

The population and sample size for that part of the survey dealing with water shortages were the same as for the part dealing with energy shortages (Tables 7-2-1, 7-2-2, and 7-2-3). The main emphasis in this section of the survey was on getting a clearer picture of: (1) How large a share of total operating costs the SMEs' expenditure on water accounts for; (2) The potential impact of water shortages on SMEs; (3) The potential impact of water shortages on employment in the SME sector.

1. Expenditure on Water as a Share of Total Operating Costs

Water charges in Taiwan are very low. The price of water has not been raised since 1994, and currently averages NT\$11 per cubic meter of water; annual expenditure on water accounts for only 0.23% of per capita GDP. The survey results showed that the vast majority of SMEs spend very little on water. In 2009, water bills accounted for less than 5% of total operating costs for 86% of SMEs, with service sector firms using the least water (Table 7-3-1). Enterprises in the agricultural sector would be expected to use more water, but the survey results indicate that average expenditure on water is not significantly higher in the agricultural sector than in other sectors (Table 7-3-1), possibly reflecting widespread use of (free) underground water by agricultural producers.

Table 7-3-1 Expenditure on Water as a Share of Total Operating Costs in 2009

Unit: % (of the total sample size)

Sector	Effective Sample Size (Firms)	Over 15%	10 – 15%	5 – 10%	Under 5%	No Expenditure on Water	Water Costs are Included in General Administrative Expenses, and So Cannot Be Determined
All sectors	300	0.0	0.0	3.7	86.0	6.7	3.7
Agricultural sector	15	0.0	0.0	6.7	80.0	13.3	0.0
Manufacturing sector	95	0.0	0.0	3.2	84.2	6.3	6.3
Industrial sector (non-manufacturing)	35	0.0	0.0	5.7	71.4	22.9	0.0
Service sector	155	0.0	0.0	3.2	91.0	2.6	3.2

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

2. How Would SMEs Respond to a Rise in Water Prices or the Imposition of Large-scale Restrictions on Water Use?

In the event that the price of water rose, or that large-scale restrictions were imposed on water use, how would SMEs respond? 41% of SMEs said that they would not take any action in response, and would simply absorb the increased costs. 37.3% of firms reported that they would install water-saving facilities, 29.7% said that they would cut their non-water expenditure, and some said that they would try to pass on the increased costs by raising the prices of their products. Firms in the agricultural sector were particularly enthusiastic about the idea of adopting water-saving facilities (60% of agricultural sector SMEs) or reducing non-water expenditure (46.7%); the percentage of SMEs planning to pass on increased costs by raising their own prices was higher in the manufacturing sector and in the non-manufacturing industrial sector than in other sectors (Table 7-3-2).

Table 7-3-2 How SMEs Would Respond to Increased Water Prices

Unit: % (of the total sample size)

	All Sectors	Agricultural Sector	Manufacturing Sector	Industrial Sector (Non-manufacturing)	Service Sector
Effective sample size (firms)	300	15	95	35	155
Switch over to using water-saving facilities	37.3	60.0	36.8	25.7	38.1
Upgrade production equipment or switch over to water-saving production processes	4.0	0.0	6.3	5.7	2.6
Switch over to cheaper, alternative sources	10.7	13.3	8.4	17.1	10.3
Reduce non-water expenditure	29.7	46.7	14.7	34.3	36.1
Raise own prices to pass on the increased costs	10.0	6.7	15.8	14.3	5.8
Develop new business areas based on water-saving technology	2.3	0.0	4.2	5.7	0.6
Develop new services relating to water conservation	5.0	0.0	6.3	5.7	4.5
Other	0.0	0.0	0.0	0.0	0.0
Take no action, and absorb the increased costs	41.0	40.0	43.2	42.9	39.4
Go out of business (including moving operations overseas)	0.0	0.0	0.0	0.0	0.0

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

The survey results presented above appear to indicate that, currently, SMEs in Taiwan do not feel particularly threatened by the increasing shortage of water resources. Respondents were also asked whether they felt that the government should respond to a future water shortage by raising the price of water or by restricting supply (water rationing), and why.

51.7% of SMEs preferred the idea of raising water prices (this option was particularly popular with firms in the agricultural sector), while 30.3% preferred the idea of restricting supply; 16.3% of SMEs were opposed to both raising prices and restricting supply (an especially high share of manufacturing firms was opposed to both options) (Table 7-3-3).

Table 7-3-3 Preference for Dealing with a Water Shortage by Raising Prices or Restricting Supply

Unit: % (of the total sample size)

Sector	Effective Sample Size (Firms)	Favor Raising the Price of Water	Favor Restricting the Supply of Water	Object to Both Options	Don't Know
All sectors	300	51.7	30.3	16.3	1.7
Agricultural sector	15	60.0	26.7	13.3	0.0
Manufacturing sector	95	54.7	22.1	22.1	1.1
Industrial sector (non-manufacturing)	35	51.4	34.3	11.4	2.9
Service Sector	155	49.0	34.8	14.2	1.9

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

The main reason given by those respondents who felt that prices should be increased rather than restricting supply was that restricting or rationing the water supply caused too much inconvenience, and would make it difficult for enterprises to maintain normal operation; this view was particularly common in the agricultural and manufacturing sectors (Table 7-3-4). The implication of this attitude is that restricting the water supply would cause excessive disruption to firms' operations, leading to loss of revenue, and that they are willing to accept some degree of increase in the price of water to avoid this.

Table 7-3-4 Reasons Given for Favoring the Idea of Increasing the Price of Water

Unit: % (of the total sample size)

Sector	Effective Sample Size (Firms)	Our Company Uses Only a Limited Amount of Water; an Increase in the Price of Water Would Not Have Any Significant Impact on the Company's Operations	Restricting the Supply of Water Would Cause Too Much Inconvenience; It Would Make It Difficult for Our Company to Operate Normally	Raising the Price is an Effective Way of Controlling the Volume of Water Used	Restricting the Supply of Water or Rationing It Would Only Lead People to Store More Water in Advance; It Would Not Lead to a Significant Fall in Consumption	Other Reasons
All sectors	300	28.4	58.1	29.0	0.6	0.0
Agricultural sector	15	22.2	77.8	0.0	0.0	0.0
Manufacturing sector	95	25.0	67.3	21.2	0.0	0.0
Industrial sector (non-manufacturing)	35	33.3	50.0	33.3	0.0	0.0
Service sector	155	30.3	51.3	36.8	1.3	0.0

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

Reasons given by SMEs by preferring the idea of restricting the water supply to raising the price of water included the belief that this would lead to a more efficient allocation of water resources, in which everyone had some access to water, the fact that the respondent's company used relatively little water, so company operations would not be affected by water rationing, and a feeling that restricting supply through water rationing was the only way to achieve effective control over water consumption (Table 7-3-5). The message that SMEs were sending with these responses can be summarized as follows: (1) Some enterprises use relatively little water, so restricting or rationing water supply would not affect their operations; any reduction in output

and revenue would be limited, whereas a hike in the price of water would lead to significant increased costs; (2) Some firms feel that restricting the water supply is the most direct way of controlling water consumption, and of preventing big water users from wasting water.

Table 7-3-5 Reasons Given for Favoring the Idea of Restricting the Supply of Water

Unit: % (of the total sample size)

Sector	Effective Sample Size (Firms)	Raising the Price of Water Would Increase Our Operating Costs; We Would Prefer Water Rationing	Restricting the Supply of Water is the Only Way to Ensure Efficient Allocation of Water Resources and Make Sure That Everyone Has Access to Some Water	Our Company Uses Relatively Little Water; Water Rationing Would Not Affect Our Operations	Restricting the Water Supply is the Only Way to Control Water Consumption and Prevent Big Water Users from Wasting Too Much Water	If Water Rationing was Implemented, We Could Always Store Water in Advance, So the Impact Would Not Be That Great	Other Reasons
All sectors	91	13.2	38.5	31.9	27.5	6.6	0.0
Agricultural sector	4	0.0	0.0	50.0	50.0	0.0	0.0
Manufacturing sector	21	23.8	33.3	33.3	23.8	4.8	0.0
Industrial sector (non-manufacturing)	12	16.7	75.0	25.0	8.3	0.0	0.0
Service sector	54	9.3	35.2	31.5	31.5	9.3	0.0

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

The main reasons given by SMEs for being opposed to both a rise in the price of water and the restriction of the water supply were that it would cause inconvenience for the company, or that a hike in the price of water would lead to increased costs for the company (Table 7-3-6). The survey's results gave no idea as to how these firms felt the problem of water shortages could be overcome; it may be that they are anticipating some kind of breakthrough in the supply of water.

Table 7-3-6 Reasons Given for Opposing Both an Increase in the Price of Water and Restriction of the Water Supply

Unit: % (of the total sample size)

Sector	Effective Sample Size (Firms)	Restricting the Water Supply Would Cause Inconvenience for Our Company	A Hike in the Price of Water Would Lead to Increased Costs for Our Company	We Don't Use Much Water, But Both Solutions Would Cause Inconvenience for Our Company	The Government Should Focus on Dredging River Channels and Reservoirs to Boost Water Storage Capacity, Instead of Raising Prices or Restricting Supply	Other Reasons
All sectors	49	81.6	75.5	20.4	2.0	0.0
Agricultural sector	2	100.0	100.0	0.0	0.0	0.0
Manufacturing sector	21	76.2	61.9	28.6	0.0	0.0
Industrial sector (non-manufacturing)	4	75.0	75.0	0.0	25.0	0.0
Service sector	22	86.4	86.4	18.2	0.0	0.0

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

3. The Potential Impact of Water Shortages on SMEs' Manpower Utilization

29.7% of SMEs said that, faced with the challenge of water shortages, they would focus on reducing non-water expenditure. Will this have a negative impact on personnel expenditure, employment and wages in the SME sector?

The survey results showed that, if the price of water rises, 92.3% of SMEs do not intend to adjust their personnel expenditure in response. Only 5.3% of firms would reduce the number of

people they employ, and only 2.3% would cut wages in response (Table 7-3-7). As noted above, water charges in Taiwan are extremely low, so for the vast majority of SMEs expenditure on water accounts for only a very small share of total operating costs; they therefore do not feel that water shortages constitute much of a threat, and as such they do not believe that water usage could have much effect on their manpower utilization.

Table 7-3-7 Impact of a Rise in Water Prices on SMEs' Manpower Utilization

Unit: % (of the total sample size)

Sector	Effective Sample Size (Firms)	Reduce Manpower Utilization	Reduce Wages	Make No Adjustments to Personnel Expenditure	Increase Wages	Increase Manpower Utilization
All sectors	300	5.30	2.30	92.30	0.0	0.30
Agricultural sector	15	6.70	0.00	93.30	0.0	0.00
Manufacturing sector	95	7.40	3.20	90.50	0.0	0.00
Industrial sector (non-manufacturing)	35	5.70	5.70	88.60	0.0	0.00
Service sector	155	3.90	1.30	94.20	0.0	0.60

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

IV The Potential Impact of Food Shortages on SMEs and on Employment in the SME Sector

1. The Impact of Food Shortages – Survey Design

The population for the survey was taken from the *2010 Directory of Enterprises Located in Industrial Districts*, the *Directory of Manufacturing Firms in the Taiwan and Fukien Regions*, and the *Taiwan Business Directory*. Stratified sampling was used; the population was broken down into four categories: agricultural sector, food-related wholesaling and retailing, restaurant industry, and food and beverage products manufacturing industry. Each of the categories was also divided into sub-categories. The survey was implemented over the period April 1–30, 2010. The effective sample size was 120 SMEs, of which 15 were in the agricultural sector, 45 were in the food-related wholesaling and retailing industry, 30 were in the restaurant industry, and 30 were in the food and beverage products manufacturing industry. 85.0% of these SMEs had fewer than 30 employees; 9.17% had between 30 and 99 employees (Table 7-4-1).

The questionnaire survey focused on three key areas: (1) The percentage of the total operating costs of SMEs in food-related industries that is accounted for by food materials. (2) The potential impact of food shortages on SME operations. (3) The potential impact of food shortages on SME manpower utilization.

2. The Survey Results Relating to the Impact of Food Shortages

(1) Food Materials Costs as a Percentage of Total Operating Costs

85.8% of the SMEs included in the survey reported that, in 2009, food materials costs accounted for over 30% of their total operating costs. Clearly, foodstuff costs have a major impact on the overall operating costs of most SMEs in the food-related industries (Table 7-4-2).

Table 7-4-1 The Structure of the Food Shortage Survey Sample (1)

Sector		No. of Employees (Unit: firms)					
		Under 5 Employees	5 – 29 Employees	30 – 49 Employees	50 – 99 Employees	100 – 200 Employees	All Firms
Agricultural sector	01: Arable and pastoral farming	1	5	1	0	0	7
	03: Fisheries	6	2	0	0	0	8
Wholesaling and retailing	453: Agricultural materials and activities wholesaling	16	7	1	0	0	24
	454: Food, beverage and tobacco products wholesaling	1	6	0	0	0	7
	4711: General retailing, mainly food and beverage products	4	8	0	0	0	12
	472: Food, beverage and tobacco products retailing	2	0	0	0	0	2
Restaurant industry	56: Restaurant industry	14	16	0	0	0	30
Food and beverage products manufacturing	08: Food products manufacturing	1	6	3	4	6	20
	09: Beverage products manufacturing	0	7	1	1	1	10

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

Table 7-4-1 The Structure of the Food Shortage Survey Sample (2)

Sector		No. of Employees (Unit: % of all firms in the sample)					
		Under 5 Employees	5 – 29 Employees	30 – 49 Employees	50 – 99 Employees	100–200 Employees	All Firms
Agricultural sector	01: Arable and pastoral farming	14.3	71.4	14.3	0.0	0.0	100.0
	03: Fisheries	75.0	25.0	0.0	0.0	0.0	100.0
Wholesaling and retailing	453: Agricultural materials and activities wholesaling	66.7	29.2	4.2	0.0	0.0	100.0
	454: Food, beverage and tobacco products wholesaling	14.3	85.7	0.0	0.0	0.0	100.0
	4711: General retailing, mainly food and beverage products	33.3	66.7	0.0	0.0	0.0	100.0
	472: Food, beverage and tobacco products retailing	100.0	0.0	0.0	0.0	0.0	100.0
Restaurant industry	56: Restaurant industry	46.7	53.3	0.0	0.0	0.0	100.0
Food and beverage products manufacturing	08: Food products manufacturing	5.0	30.0	15.0	20.0	30.0	100.0
	09: Beverage products manufacturing	0.0	70.0	10.0	10.0	10.0	100.0

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

Table 7-4-2 Food Materials Costs as a Percentage of Total Operating Costs

Sector		Effective Sample Size (Firms)	Unit: % (of the total sample size)			
			Over 30%	20% - 30%	10% - 20%	Under 10%
All sectors		120	85.8	6.7	5.8	1.7
Agricultural sector	01: Arable and pastoral farming	7	100.0	0.0	0.0	0.0
	03: Fisheries	8	62.5	25.0	12.5	0.0
Wholesaling and retailing	453: Agricultural materials and activities wholesaling	24	79.2	12.5	4.2	4.2
	454: Food, beverage and tobacco products wholesaling	7	100.0	0.0	0.0	0.0
	4711: General retailing, mainly food and beverage products	12	100.0	0.0	0.0	0.0
	472: Food, beverage and tobacco products retailing	2	50.0	50.0	0.0	0.0
Restaurant industry	56: Restaurant industry	30	96.7	0.0	0.0	3.3
Food and beverage products manufacturing	08: Food products manufacturing	20	90.0	5.0	5.0	0.0
	09: Beverage products manufacturing	10	50.0	10.0	40.0	0.0

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

(2) The Impact of Rising Food Prices

Over the period 2007–2008, the world experienced a food crisis. From early 2007 to June 2008, the Food and Agriculture Organization (FAO) food price index rose by over 50%.

Overall, the largest share of SMEs (52.5%) reported that 2009 was the year in which they posted the highest expenditure on food materials; in the restaurant industry and the agricultural materials and activities wholesaling sector, the share was even higher, at 70% and 62.5%, respectively. 14.2% of firms gave a “Don’t know” or “Don’t remember” response. The main reasons given for a particular year seeing the highest expenditure on food materials were that the enterprise in question had purchased a particularly large quantity of food materials in that year, or that the price paid for food materials in that year had been particularly high, or both. Food materials categories in which SMEs reported prices being particularly high included: rice, flour, livestock, poultry, eggs, dairy products, cooking oil, seasonings, etc.

However, it would appear that, overall, SMEs may have been in error in giving 2009 as the year in which they spent the most on food materials. As noted above, in the first half of 2009 both the Taiwanese economy and the global economy as a whole were mired in a recession, and the recovery in the second half of the year was relatively weak. The average value of the food products segment of the consumer price index in Taiwan in 2009 (104.47 points) was lower than the average for 2008 (105.39 points), and the average value of the food manufacturing industry wholesale food materials price index (102.17 points) was also lower than the corresponding value for 2008 (111.95 points). It therefore seems somewhat implausible that experiencing higher food materials expenditure in 2009 than in the other two years was due to higher food prices in 2009. The reason for respondents giving this response may be similar to the situation with regard to energy; food prices fell dramatically in the second half of 2008, but then gradually started to rise again in 2009. Some firms may have a clearer recollection of the price rises in 2009 than of the fall in prices that preceded it, and so feel that they spent more on food materials in 2009 than in previous years.

Table 7-4-3 The Year in Which SMEs Felt They Had the Highest Expenditure on Food Materials

Unit: % (of the total sample size)

Sector		Effective Sample Size (Firms)	2007	2008	2009	Don't Know
All sectors		120	43.3	17.5	22.5	16.7
Agricultural sector	01: Arable and pastoral farming	7	28.6	14.3	14.3	42.9
	03: Fisheries	8	25.0	25.0	0.0	50.0
Wholesaling and retailing	453: Agricultural materials and activities wholesaling	24	29.2	20.8	45.8	4.2
	454: Food, beverage and tobacco products wholesaling	7	28.6	28.6	14.3	28.6
	4711: General retailing, mainly food and beverage products	12	66.7	0.0	25.0	8.3
	472: Food, beverage and tobacco products retailing	2	50.0	0.0	0.0	50.0
Restaurant industry	56: Restaurant industry	30	60.0	13.3	10.0	16.7
Food and beverage products manufacturing	08: Food products manufacturing	20	35.0	30.0	20.0	15.0
	09: Beverage products manufacturing	10	50.0	10.0	40.0	0.0

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy.

When asked to specify the year in which they posted the highest revenue from food materials or product sales, the largest share (43.3%) of SMEs gave 2007 as the answer. The percentage was even higher in the restaurant industry and in the general retailing industry, at 60% and 66.7%, respectively. 16.7% of firms gave “Don’t know” as their answer (Table 7-4-3). As to the reasons given for having particularly high revenue from food sales in that year, the main reasons given were high sales volume (88.3%) and high sales prices (11.7%). Products where prices were particularly high included: rice, flour, livestock, dairy products, cooking oil and seasonings.

(3) How Have SMEs Responded to the Rise in Food Prices in Recent Years?

How have Taiwan’s SMEs coped with rising food prices? The largest share of firms (46.5%) said that they had responded by raising the sales prices of their products so as to transfer the increased materials costs on to their customers; this strategy was particularly common in the wholesaling and retailing sector and in the food and beverage products manufacturing industry. 16.9% of SMEs reported that they had switched over to using substitute materials the price of which had not risen as much; this strategy was especially widespread in the food and beverage product manufacturing industry. Three other response strategies – reducing expenditure on non-food materials (18.3% of firms), reducing manpower costs by cutting salaries or laying off workers (14.1%), and taking no special action and just absorbing the increased materials costs (29.6%) were particularly common among SMEs in the restaurant industry (Table 7-4-4).

If food prices start to rise again in the future, what action do SMEs intend to take in response?

50.8% of SMEs in the food-related industries said that they would raise their own prices so as to pass on the increased food materials costs to their customers; this response was particularly common in the wholesaling and retailing industry and the food and beverage products manufacturing industry (Table 7-4-5). As far as cost control strategies were concerned, 20.8% of firms planned to switch over to using substitute food materials the price of which had risen by less; the percentage of firms favoring this response strategy was particularly high in the food and beverage products manufacturing industry. 24.2% of firms (and a significantly higher share in the restaurant industry) planned to reduce expenditure on non-food materials. 23.3% of SMEs planned to take no action whatsoever, and simply absorb any increased food materials costs; firms in the restaurant industry were especially likely to choose this option. One point worth noting is that 16.7% of SMEs intended to develop new, high-value-added food products to boost revenue in response to rising costs; the percentage of firms choosing this strategy was particularly high in the restaurant industry and the food and beverage products manufacturing industry (Table 7-4-5).

(4) The Potential Impact of Food Shortages on SMEs’ Manpower Utilization

14.1% of SMEs said that they had resorted to reducing personnel expenditure (by cutting wages or laying off workers) to control costs in response to the food price rises of the past few years. If food prices start to rise substantially again in the future, what percentage of SMEs would adjust their manpower utilization in response?

The survey results indicate that, if food prices do start to rise again, 73.3% of SMEs do not intend to adjust their personnel expenditure in response; however, 22.5% of firms would reduce their manpower utilization, and 7.5% would cut wages.

Table 7-4-4 Response Strategies Adopted by SMEs in the Year in Which They Experienced the Highest Rise in Food Prices (1)

Unit: % (of the total sample size)

Sector		Effective Sample Size (Firms)	Raise Own Product Prices to Pass on the Increased Materials Costs to Customers	Switch over to Using Substitute Materials the Price of Which Has Not Risen so Much	Decrease the Food Materials Content of Processed Foods	Upgrade Production Facilities or Modify Production Processes
All sectors		71	46.5	16.9	4.2	0.0
Agricultural sector	01: Arable and pastoral farming	0	0.0	0.0	0.0	0.0
	03: Fisheries	6	33.3	33.3	0.0	0.0
Wholesaling and retailing	453: Agricultural materials and activities wholesaling	8	75.0	0.0	0.0	0.0
	454: Food, beverage and tobacco products wholesaling	4	100.0	0.0	0.0	0.0
	4711: General retailing, mainly food and beverage products	6	83.3	16.7	0.0	0.0
	472: Food, beverage and tobacco products retailing	0	0.0	0.0	0.0	0.0
Restaurant industry	56: Restaurant industry	28	14.3	10.7	3.6	0.0
Food and beverage products manufacturing	08: Food products manufacturing	14	64.3	28.6	7.1	0.0
	09: Beverage products manufacturing	5	60.0	40.0	20.0	0.0

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

Table 7-4-4 Response Strategies Adopted by SMEs in the Year in Which They Experienced the Highest Rise in Food Prices (2)

Unit: % (of the total sample size)

Sector		Reduce Expenditure on Non-food Materials	Reduce Manpower Costs (by Cutting Wages or Laying off Workers)	Develop High-value-added Products and/or Services	Other	Make No Changes and Just Absorb the Increased Materials Costs
All sectors		18.3	14.1	4.2	0.0	29.6
Agricultural sector	01: Arable and pastoral farming	0.0	0.0	0.0	0.0	0.0
	03: Fisheries	0.0	0.0	0.0	0.0	33.3
Wholesaling and retailing	453: Agricultural materials and activities wholesaling	25.0	0.0	0.0	0.0	12.5
	454: Food, beverage and tobacco products wholesaling	0.0	25.1	0.0	0.0	0.0
	4711: General retailing, mainly food and beverage products	16.7	0.0	33.3	0.0	16.7
	472: Food, beverage and tobacco products retailing	0.0	0.0	0.0	0.0	0.0
Restaurant industry	56: Restaurant industry	32.1	32.1	3.6	0.0	46.4
Food and beverage products manufacturing	08: Food products manufacturing	7.1	0.0	0.0	0.0	14.3
	09: Beverage products manufacturing	0.0	0.0	0.0	0.0	40.0

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

Table 7-4-5 Response Strategies that SMEs Plan to Adopt If Food Prices Start to Rise Again in the Future (1)

Unit: % (of the total sample size)

		Effective Sample Size (Firms)	Raise Own Product Prices to Pass on the Increased Materials Costs to Customers	Switch over to Using Substitute Materials the Price of Which Has Not Risen So Much	Decrease the Food Materials Content of Processed Foods	Upgrade Production Facilities or Modify Production Processes	Reduce Expenditure on Non-food Materials
All sectors		120	50.8	20.8	4.2	5.8	24.2
Agricultural sector	01: Arable and pastoral farming	7	14.3	0.0	0.0	0.0	0.0
	03: Fisheries	8	25.0	25.0	0.0	0.0	0.0
Wholesaling and retailing	453: Agricultural materials and activities wholesaling	24	41.7	4.2	0.0	0.0	25.0
	454: Food, beverage and tobacco products wholesaling	7	71.4	28.6	8.3	0.0	0.0
	4711: General retailing, mainly food and beverage products	12	91.7	33.3	0.0	8.3	50.0
	472: Food, beverage and tobacco products retailing	2	100.0	0.0	0.0	0.0	0.0
Restaurant industry	56: Restaurant industry	30	36.7	20.0	3.3	3.3	40.0
Food and beverage products manufacturing	08: Food products manufacturing	20	55.0	30.0	15.0	15.0	20.0
	09: Beverage products manufacturing	10	80.0	40.0	0.0	20.0	10.0

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

Table 7-4-5 Response Strategies that SMEs Plan to Adopt If Food Prices Start to Rise Again in the Future (2)

Unit: % (of the total sample size)

		Develop High-value-added Products and/or Services	Other Response Measures	Make No Changes and Just Absorb the Increased Materials Costs	Go Out of Business (Including Moving Production Overseas)	Other Adjustment Items	
Sector						Reduce the Amount of Food Given to Fish	Identify New Business Locations to Access More Potential Customers
All sectors		16.7	0.0	23.3	7.5	0.8	0.8
Agricultural sector	01: Arable and pastoral farming	0.0	0.0	71.4	14.3	0.0	0.0
	03: Fisheries	0.0	0.0	37.5	12.5	0.0	0.0
Wholesaling and retailing	453: Agricultural materials and activities wholesaling	8.3	0.0	33.3	8.3	4.2	0.0
	454: Food, beverage and tobacco products wholesaling	0.0	0.0	0.0	0.0	0.0	0.0
	4711: General retailing, mainly food and beverage products	50.0	0.0	0.0	8.3	0.0	0.0
	472: Food, beverage and tobacco products retailing	0.0	0.0	0.0	0.0	0.0	0.0
Restaurant industry	56: Restaurant industry	23.3	0.0	30.0	6.7	0.0	3.3
Food and beverage products manufacturing	08: Food products manufacturing	15.0	0.0	15.0	5.0	0.0	0.0
	09: Beverage products manufacturing	20.0	0.0	0.0	10.0	0.0	0.0

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

Table 7-4-6 Impact of a Rise in Food Prices on SMEs' Manpower Utilization

Unit: % (of the total sample size)

Sector		Effective Sample Size (Firms)	Reduce Manpower Utilization	Reduce Wages	Make No Adjustments to Personnel Expenditure	Increase Wages	Increase Manpower Utilization
All sectors		120	22.5	7.5	73.3	0.8	1.7
Agricultural sector	01: Arable and pastoral farming	7	14.3	0.0	85.7	0.0	0.0
	03: Fisheries	8	12.5	12.5	87.5	0.0	0.0
Wholesaling and retailing	453: Agricultural materials and activities wholesaling	24	8.3	8.3	87.5	0.0	0.0
	454: Food, beverage and tobacco products wholesaling	7	42.9	14.3	57.1	0.0	0.0
	4711: General retailing, mainly food and beverage products	12	41.7	16.7	50.0	0.0	0.0
	472: Food, beverage and tobacco products retailing	2	0.0	0.0	100.0	0.0	0.0
Restaurant industry	56: Restaurant industry	30	26.7	3.3	70.0	0.0	3.3
Food and beverage products manufacturing	08: Food products manufacturing	20	20.0	5.0	70.0	5.0	5.0
	09: Beverage products manufacturing	10	30.0	10.0	70.0	0.0	0.0

Note: Respondents could give more than one answer, so the totals for all answers may exceed the sample size.

Source: Wu, Hui-Lin and Ch'en, Pi et al. (2009), *Helping SMEs to Cope with the Challenges Posed by a Low-carbon Economy*.

V A Discussion of SME Response Strategies

The survey results showed that there are five main strategies that SMEs plan to adopt in the event of energy shortages, water shortages or food shortages:

- Strengthening cost control
- Reducing manpower utilization and cutting wages
- Raising the firm's own prices to pass on the increased costs to customers
- Treating resource shortages as an opportunity to develop new business areas and create new revenue streams
- A significant percentage of SMEs plan to take no action in response to resource shortages, and simply absorb the increased costs

SMEs' own planned response measures, as outlined above, are far from being fully satisfactory; for one thing, they include plans to reduce manpower utilization. How could the government help SMEs to adjust to this new business environment, and make efficient, effective changes, while at the same time ensuring that resource shortages do not lead to job losses? A number of suggestions are put forward in the following section.

With regard to the global trend towards energy conservation and carbon reduction, the possibility of further food crises, and Taiwan's inadequate water resources, Taiwan's SMEs are today facing the challenge of having to transform themselves in response to these problems. SMEs can no longer afford to focus only on squeezing costs, and they cannot rely on the

government to hold down the prices of energy, water and food. The path that SMEs need to follow is the path of upgrading, transformation, brand development, integration of their activities into large-scale supply chains, ensuring smoother linkage between manufacturing and services, and developing more overseas markets.

As far as energy is concerned, SMEs need to upgrade the energy conservation technology used in their products, increase the energy efficiency of their operational processes, and try to develop new business areas based on energy conservation and carbon reduction. In the case of water, SMEs can no longer rely on having access to an inexpensive supply of water, and so they need to focus on strengthening their water conservation capabilities. With regard to food, those firms in food-related industries must try to develop (and make effective use of) new agricultural technology and/or food product technology so as to raise productivity.

The main task for the government in this process of promoting transformation is to encourage the widespread adoption of energy-saving, low-carbon products, promote water conservation, and help to boost food productivity. There are three concrete ways that the government can go about this task:

(1) Allowing the Gradual, Stage-by-stage Adjustment of Energy Prices and Water Charges So That They Reflect both Internal and External Costs

Global energy prices can be expected to remain high for the foreseeable future; countries all over the world will be forced to introduce carbon taxes or impose overall controls on carbon dioxide emissions. One reason why SMEs have so far done little to implement changes in response to energy shortages is the lack of economic incentives to save energy and cut carbon emissions. There are two key factors here. Firstly, fuel costs in Taiwan are still very low. Secondly, the capital equipment that is required in order to implement energy conservation and carbon reduction is too expensive, or else its energy-saving performance is not good enough; the savings that SMEs would make on fuel are not enough to offset the cost of purchasing and installing the energy conservation equipment and facilities.

The reason why fuel costs are too low is that the price of fuel in Taiwan does not fully reflect both the internal and external costs of energy consumption. The inability of energy conservation equipment to provide satisfactory energy savings is due to the fact that energy conservation technology is not yet fully mature. Developing cheap, effective energy-saving equipment will depend on technological advances; however, these advances, and the commercialization and widespread adoption of new technology, will not happen unless there are sufficient financial incentives.

The government needs to ensure that the cost of energy reflects both internal and external costs, to ensure that more enterprises come to believe that developing new energy-saving technology or alternative energy businesses, or developing energy conservation services, offer the potential for real profits.

The survey undertaken for this year's *White Paper* found that only 7% of SMEs were planning to try to develop energy-saving technology or alternative energy businesses, and only 8.7% were planning to develop new services related to energy conservation. However, if the

price of energy reflected both internal and external costs, then the operation of the supply chain would ensure the creation of new business for SMEs, and the creation of new jobs.

Ensuring that energy consumption reflects both external and internal costs can be achieved either by levying a carbon tax (or energy tax), or by imposing restrictions on carbon dioxide emissions. Ideally, these changes should be implemented gradually, year by year, so that energy prices rise by a relatively small amount each time, thereby giving business enterprises more time to adjust.

The situation with regard to water resources is much the same. Currently, water charges in Taiwan are very low, and some companies extract large quantities of underground water from aquifers without having to pay anything. As a result, only 2.3% of SMEs feel the need to develop new businesses based on water-saving technology. Due to the fact that restricting the supply of water or implementing water rationing can result in excessively high operational loss, most SME respondents said that they would rather the government increased the price of water than that it restrict supply. The government should allow the water companies to gradually raise the fees that they charge for water use, so as to encourage water conservation. At the same time, the government should impose “pipe fees” on the use of underground water, since large-scale usage of underground water resources can have a serious negative impact on the environment. Once water charges have been raised, the water companies will have both the ability and the responsibility to reduce the percentage of water pipes that suffer from leakage, which is currently very high.

(2) Providing Support for R&D Activity in the Fields of Energy Technology, Agricultural Technology and Food Technology

As noted above, overcoming energy shortages depends on technological advances. The same is true of food shortages and rising food prices; new agricultural technology and food technology can help to mitigate these problems and enable companies in food-related industries to develop new markets. The social costs of technology development and R&D are the same regardless of whether one company is involved or a hundred. With this in mind, we offer the following suggestions:

1. The government could provide more subsidies to support R&D in the fields of energy technology, agricultural technology and food product technology. Ideally, public-sector investment in R&D in these areas should amount to roughly the same percentage of GDP as it does in Japan.
2. Some of the funding for R&D subsidies could be derived from carbon tax (or energy tax) revenue. In today’s era of complex division of labor in industry and highly complex supply chains, it does not necessarily matter whether R&D subsidies go directly to SMEs; even if the subsidies go to non-profit organizations or large, for-profit enterprises, their R&D results could still stimulate the creation of new business opportunities for SMEs and help to create new jobs in the SME sector.

(3) Ancillary Measures

For some SMEs, energy, water and food materials account for a large share of overall production costs. SMEs may find themselves in a situation where energy, water and food prices have already risen, but new business opportunities have not yet emerged, so that firms' operating costs increase but revenue growth does not keep pace. It is therefore suggested that the following ancillary measures could be adopted:

1. Reduce the burden on SMEs and low-income households: If a carbon tax or energy tax is introduced, personal income tax rates should be adjusted so that the highest marginal tax rate is close to the business income tax rate.
2. When raising water charges, it should be insisted that the water companies achieve a significant reduction in the percentage of water supply pipes that suffer from leaks, thereby increasing the future water supply potential.
3. Make available more information regarding energy efficiency: There are many enterprises that could achieve significant improvements in their energy conservation even without upgrading their technology or spending large amounts of money. One reason why SMEs have failed to make an effort in this regard is that they lack knowledge regarding energy conservation and do not know what adjustments they should be making. Energy-related information is a "public good"; the government could use some of the revenue from energy taxes to establish practical, convenient, easy-to-use databases of information related to energy conservation and water conservation, which could be made available to SMEs and to the general public free of charge.
4. Provide SMEs with guidance related to energy conservation and water conservation: General energy conservation and water conservation databases may be of only limited use to SMEs that use special production processes. The government could provide the funding to enable specialist energy conservation and water conservation service providers to offer SMEs diagnostic services and recommendations related to energy and water conservation, thereby helping SMEs to identify effective, inexpensive ways of saving energy and saving water.

CHAPTER 8

The Impact of the ECFA Agreement on Taiwan's SMEs, and How the Government is Helping SMEs to Cope

Small and medium enterprises (SMEs) have always played an important role in Taiwan's economic development. Besides making a huge contribution to Taiwan's GDP, they also create large numbers of jobs; they are the foundation on which Taiwan's stable economic growth has been based. However, the global financial crisis that began in 2008 led to a significant deterioration in SMEs' export performance which, coupled with weak demand in the domestic market, put many SMEs in severe difficulties. Although the thaw in "cross-strait" relations between Taiwan and China in the past two years – which has seen the introduction of direct transportation links between the two sides, an easing of the restrictions on visits to Taiwan by Chinese tourists, a relaxation of controls on Chinese investment in Taiwan, and the signing of the Economic Cooperation Framework Agreement (ECFA) between Taiwan and China – has created significant new business opportunities, at the same time the opening up of Taiwan's domestic market to Chinese imports has had a severe negative impact on many SMEs and on ordinary working people. This chapter will begin by discussing the impact of ECFA on Taiwan's SMEs and the business opportunities that it is creating, before going on to outline the guidance measures being introduced by the government to help SMEs cope with the impact of ECFA; the final section of this chapter presents a number of policy recommendations for the government's reference.

I The Impact of ECFA on Taiwan's SMEs, and the Business Opportunities That It is Creating

The main significance of the Economic Cooperation Framework Agreement (ECFA) lies in the fact that, if Taiwanese companies are to succeed in building competitive advantage in the China market, signing this agreement is a vital step towards ensuring that the interests of Taiwanese companies are protected while at the same time making cross-strait trade and the provision of services between Taiwan and China more convenient.

ECFA basically constitutes a "transitional agreement" on the way towards a fully-fledged free trade agreement (FTA). FTAs can be implemented in one of two ways: an all-at-once approach, or a gradualist approach. The gradualist approach involves drawing up a "roadmap," in which certain objectives are set to be achieved within a period of perhaps 5–10 years, while longer-term goals are worked out later by negotiation between the two parties. Examples of this approach include the "ASEAN + 1" and "ASEAN + 3" agreements. The main advantage is that breaking down FTA planning into short-term, medium-term and long-term plans can help to ease

the negative impact of the FTA on some industries, while facilitating ongoing appraisal of the costs and benefits of market opening. In the case of ECFA, China has already reduced its tariffs for trade with the ASEAN member nations (and some other countries), but not with respect to Taiwan. Products where this situation represents an urgent danger can be placed on an “early harvest” list to receive special treatment, thereby helping to protect the competitiveness of Taiwanese products in the China market. ECFA is thus an agreement for economic collaboration between Taiwan and China, but also one which lays down only the general framework and goals for this collaboration; detailed content will need to be negotiated later, leaving room for a significant degree of flexibility.

The basic principles to which the Taiwanese government has adhered while negotiating ECFA include: (1) Making effective use of the early harvest list and adjustment period to ensure that short-, medium- and long-term goals are all given sufficient weight. (2) Adopting a dual-track approach in which market opening is permitted for some items, while other items continue to receive protection, thereby giving the government more flexibility. (3) Establishing risk control mechanisms, including mechanisms to strengthen the monitoring of Chinese imports, the establishment of a cross-strait trade relief system, and the creation of mechanisms for reporting unsafe products.

This section analyses the impact of ECFA on the economy as a whole, on the manufacturing sector and on the service sector, and examines the early harvest list.

1. The Impact of ECFA on the Economy as a Whole

According to an analysis performed by the Chung-Hua Institution for Economic Research in 2009, the signing of ECFA will contribute 1.65% – 1.72% to real GDP growth in Taiwan, and should lead to an increase in the number of persons in employment of between 257,000 and 263,000; overall, ECFA will be beneficial to Taiwanese society (Table 8-1-1). As far as individual industries are concerned, ECFA will have a positive impact on production in the machinery industry, the chemical industry, the rubber and plastics industry, the textile industry, the iron and steel industry, and the petroleum products industry. However, it cannot be denied that ECFA will have a negative impact on the electromechanical and electronic products industries, the transportation vehicle industry, the timber products industry, etc.

Currently, around 40% of Taiwan’s exports go to China. For the petrochemical, textile, iron and steel and car components industries the percentage is in the range of 40% to 50%; on average, these industries face import duties of 5% to 10% when exporting to China. Once the “ASEAN + 1” and “ASEAN + 3” FTAs come into effect, companies in the ASEAN member nations, Japan and South Korea will be able to export their products to China on a tariff-free basis, leading to a significant deterioration in the competitiveness of the Taiwanese industries listed above. This is why Taiwan needs to sign ECFA, and why it needs to include these industries in the early harvest list.

Table 8-1-1 The Impact of the Signing of the ECFA Agreement between Taiwan and China on the Taiwanese Economy as a Whole (Dynamic Analysis)

Item	Scenario 1:	Scenario 2:
	Liberalization of Those Agricultural and Industrial Product Segments That Have Already Been Opened Up, While Retaining Controls on Other Agricultural and Industrial Product Segments	Implementing Across-the-board Liberalization in the Industrial Sector, While Retaining Controls (and Refraining from Tariff Reductions) in the Agricultural Sector
Contribution to GDP growth (%)	1.65	1.72
Total exports (%)	4.87	4.99
Total imports (%)	6.95	7.07
Terms of trade (%)	1.42	1.41
Benefit to society (US\$ millions)	7,710.90	7,771.00
Volume of trade (US\$ millions)	1,757.90	1,779.40
Total production value (US\$ millions)	28,004.73	28,884.20

Note: Scenarios 1 and 2 both assume that import duty on all Chinese products is reduced to zero.
Source: Chung-Hua Institution for Economic Research.

The signing of ECFA will help to strengthen Taiwan's position in the China market. For example, Taiwanese manufacturers will be able to build economies of scale, develop strong brands, expand their global presence, and raise their competitiveness. In addition, since Taiwan will have guaranteed access to the China market, it has the potential to develop into a stepping stone for foreign companies seeking to expand into China; this should help to encourage not only foreign corporations, but also Taiwanese businesspeople that have been operating overseas, to invest in Taiwan. Another point is that Taiwan's service industries are more competitive than their counterparts in China; the signing of ECFA will help enterprises in the service sector to get a foot in the door in the China market, creating the potential for future growth.

2. The Impact of ECFA on the Manufacturing Sector

Taiwan currently levies import duty on electromechanical and electrical products at a rate of just 0.36%, so the opening up of this segment of the market will have only a limited negative impact on Taiwanese industry. The impact of ECFA on Taiwan's LED industry, IC design industry, networking industry, mobile phone handset and components industry, semiconductor industry and notebook PC and components industry will be minimal, because for most of these products downstream production takes place in China, so there are hardly any tariff issues to worry about; if Taiwan reduces its tariffs, manufacturers will still be able to ship their goods from China. In the case of the LCD panel industry, because semi-finished products are shipped to China for final assembly, the reduction in China's import duty resulting from the signing of ECFA would actually benefit Taiwanese panel makers; the solar energy industry would also see a reduction in the effective cost of some materials.

As regards the impact on Taiwan's "traditional" industries, for the automotive components industry, the machinery manufacturing industry, the textile industry and some segments of the petrochemical industry, being able to export to China with the same import duty rates as those applying to other countries will help these industries to develop the China market. Broadly speaking, ECFA will be beneficial to export-oriented industries, but will have a negative impact on SMEs in industries that are more oriented towards Taiwan's domestic market, such as food processing, automotive manufacturing, cement, home appliances, ceramics, and paper-making.

3. The Impact of ECFA on the Service Sector

The service sector already accounts for nearly 70% of Taiwan's GDP, and will be the main engine of economic growth for Taiwan in the future. However, Taiwan's domestic market is too small; Taiwan needs a larger home market if its service sector enterprises are to be able to build economies of scale, develop strong brands, and become a real driving force for growth that can create significant numbers of new jobs. If Taiwan's service sector enterprises can make effective use of the opportunities that the China market presents to build economies of scale, develop strong brands, and expand their global presence (which will involve assigning Taiwanese personnel to overseas business locations), then this will help Taiwan's young people both to find employment and to develop a global outlook.

As to whether investment in China by Taiwan's service industries will lead to the hollowing out of the industrial structure in Taiwan, investment by enterprises in the business services industries is unlikely to have this effect; on the contrary, it can be expected to lead to an across-the-board enhancement of the competitiveness of Taiwanese industry, while creating more "internationalized" jobs. Once ECFA has come into effect, many service sector enterprises will be investing in franchise and chain store development in China, creating "virtual clusters." These clusters will maintain close ties with the company headquarters, and will rely on the head office for managerial and technical support; the Taiwan-based headquarters of these companies will not shrink in size. The internationalization of Taiwan's service sector therefore need not imply the hollowing out of Taiwanese industry; rather, the extra investment that it encourages will help to boost the competitiveness of Taiwanese industry as a whole.

Nevertheless, given the disparity in size between the Chinese and Taiwanese economies, when implementing mutual market opening, attention will still need to be paid to the impact on Taiwanese industry and on employment in Taiwan. As ECFA is based on the principle of fairness and mutual benefit, Chinese companies will be able to export to and invest in Taiwan on the same terms as those applying to Taiwanese companies exporting to and investing in China. Given the fact that Chinese companies are often much larger and better funded than their Taiwanese counterparts, unrestricted market opening could have a significant negative impact on Taiwan; this is an issue that the government cannot afford to ignore. The authorities will also need to think carefully about how they can use venture capital, special funds, controls and industrial development planning to ensure that Chinese investment in Taiwan takes the form of genuine foreign direct investment (FDI) rather than speculation.

As regards potential business opportunities in this sector, the leveraging of Taiwan's production technology expertise to provide turnkey plant services to China will help both to "servitize" Taiwanese manufacturing and extend the capabilities of Taiwan's manufacturing industry; at the same time, it will also contribute to an improvement in the quality of life of China's citizens. In addition, technological collaboration in traditional industries between Taiwan and China that integrates Taiwan's technology with China's manufacturing capability and markets will help Taiwanese companies to develop strong brands and expand into global markets.

4. Some Observations on the Early Harvest List

Judging from the Early Harvest List details that have been announced so far, there are 539 Taiwanese products included on the List, with an annual export value of approximately US\$13.8 billion; these products account for 16.1% of Taiwan's total exports to China. There are 267 Chinese products included on the List, with an annual export value of US\$2.86 billion (Table 8-1-2).

Table 8-1-2 The ECFA Early Harvest List of Products on Which China Will Be Cutting Import Duty with Respect to Imports from Taiwan

Product Categories	Contents
Agricultural and fisheries products (18 items)	Other live fish; other refrigerated fresh fish; other frozen fish; soft-shelled turtle eggs; cut orchids; golden needle mushrooms; bananas; oranges; lemons; Hami melons; pitaya fruit; tea, etc.
Petrochemical products (88 items)	Basic materials; special chemicals; plastic materials; plastic products
Machinery products (107 items)	Machine tools; industrial machinery; other machinery; machinery components
Textile products (136 items)	Mid-stream and upstream textile materials (cotton yarn, cotton fabric, mixed cotton and artificial fiber fabric, woven cotton and synthetic fiber fabric, recycled fiber fabric, etc.); downstream textiles (special textile products, knitted articles, fasteners, cleaning cloth, other woven articles and non-woven fabric, etc.); textile products (bags, boxes and cartons, shirts and hooded sweaters, swimwear, hosiery, underwear, towels, etc.); footwear
Transportation vehicles (50 items)	Cars (automotive components including transmissions, wheels, bumpers, etc.); bicycles (complete bicycles and bicycle components)
Other products (140 items)	Iron and steel (hot-rolled coils, non-alloy steel cold-rolled coils, steel wire, stainless steel, etc.); cement (cement clinker, white cement, etc.); molds and dies (metal drawing molds, metal molds, injection molds, vulcanizers, etc.); metal products (aluminum and aluminum products, copper and copper foil products, etc.); rubber (car, bicycle and motorcycle tires); small home appliances (fans, storage-type water heaters, vacuum cleaners, food mixers, electric irons, electric rice cookers, ovens, etc.); hand tools (pliers, wrenches, hammers, screwdrivers, etc.), etc.

Source: Industrial Development Bureau, Ministry of Economic Affairs, Draft List of Items to be Included in the Early Harvest List (Trade in Goods).

Besides the manufacturing sector Early Harvest List, there are also many service industries where Taiwanese enterprises will be able to invest in China through wholly-owned subsidiaries (Table 8-1-3). There are 17 traditional industries and product items where Taiwan is not opening up its market to Chinese products (including the garment and bedding industries and some agricultural product items), which should help to reduce the negative impact on Taiwan's weaker industries. The concentration on traditional industries and the service sector in the Early Harvest List will increase the competitiveness of Taiwan's traditional industries in the China market, while also encouraging business enterprises to develop the China market through trade rather than by investing there, which will help to keep business and jobs in Taiwan; it should also help Taiwan's service industries to develop the China market, and make these industries more competitive there. At the same time, the content of the Early Harvest List will also encourage foreign companies to invest in Taiwan as a stepping stone towards developing the China market. On the other hand, the opening up of the Taiwan market to China with respect to 267 product items may also have some degree of negative impact on Taiwan; some SMEs may find it difficult to survive, and job creation in the SME sector will be affected. This is an issue that the government cannot afford to ignore.

Table 8-1-3 The Early Harvest List – Service Sector

Items Where China is Opening Its Market to Taiwan	Items Where Taiwan is Opening Its Market to China
1. Accounting and auditing services industry: The period of validity of provisional auditing business permits will be extended from six months to one year.	1. R&D services industry: Chinese R&D services firms will be allowed to establish business locations in Taiwan in the form of wholly-owned subsidiaries, joint ventures, partnerships, or the establishment of branches, etc.
2. Computer services industry: Taiwanese computer services firms will be allowed to establish wholly-owned subsidiaries in China.	2. Conference services industry: Chinese conference services firms will be allowed to establish business locations in Taiwan in the form of wholly-owned subsidiaries, joint ventures, partnerships, or the establishment of branches, etc.
3. Natural sciences and engineering R&D: Taiwanese firms undertaking this type of R&D will be allowed to establish wholly-owned subsidiaries, joint ventures and collaborative ventures in China.	3. Exhibition services industry: Chinese exhibition services firms will be allowed to organize exhibitions in Taiwan in collaboration with Taiwanese exhibition services firms.
4. Conference services industry: Taiwanese conference services firms will be allowed to establish wholly-owned subsidiaries in China.	4. Customized product design services industry (excluding interior design): Chinese customized product design services firms will be allowed to establish business locations in Taiwan in the form of wholly-owned subsidiaries, joint ventures, partnerships, or the establishment of branches, etc.
5. Specialist design services industry: Taiwanese specialist design services firms will be allowed to establish wholly-owned subsidiaries, joint ventures and collaborative ventures in China.	5. Chinese movies and movies made in Taiwan-China collaborative projects: Up to 10 movies of these types will be allowed to be screened in Taiwan each year.
6. Elimination of the import quotas on Taiwanese movies: All Taiwanese movies that are approved by the Chinese censors will be permitted to be screened in China.	6. Brokerage services industry: Chinese brokerage services firms will be allowed to establish business locations in Taiwan in the form of wholly-owned subsidiaries, joint ventures, partnerships, or the establishment of branches, etc.
7. Hospital services industry: Taiwanese hospital operators will be allowed to establish joint-venture and collaborative hospitals in China, and to establish wholly-owned hospital subsidiaries in Shanghai and Jiangsu.	7. Sports and leisure services industry: Chinese sports and leisure services firms will be allowed to establish business locations in Taiwan in the form of wholly-owned subsidiaries, joint ventures, partnerships, or the establishment of branches, etc.
8. Aircraft maintenance and repair industry: Taiwanese aircraft maintenance and repair firms will be allowed to establish wholly-owned subsidiaries and joint ventures in China.	8. Air transport services industry computerized booking system providers: Chinese computerized booking system providers will be allowed to establish business locations in Taiwan in the form of wholly-owned subsidiaries, joint ventures, partnerships, or the establishment of branches, etc.

Source: Ministry of Economic Affairs, Goods and Services Early Harvest List Planning for ECFA (presentation).

II Overview of Government Guidance Resources

This section presents an overview of the guidance resources and measures being utilized by the government (mainly the Ministry of Economic Affairs) to help SMEs in Taiwan cope with the impact of the opening up of Taiwan's markets to imports from China.

1. Local Cultural Industry Guidance Plans

The Small and Medium Enterprise Administration (SMEA), Ministry of Economic Affairs has been working actively to implement the Plan for Helping Local Cultural Industries to Create Value, which aims to provide guidance to help enterprises in "local cultural industries" (traditional industries), enterprises in remote areas, enterprises in aboriginal communities and micro-enterprises to differentiate themselves, using the Local Industry Development Fund to

support the “One Town One Product” (OTOP) comprehensive guidance strategy for local development. The OTOP model is based on Japan’s “Road Station” concept; the idea is to develop multi-function information, leisure, display and sales centers in Taiwan’s rural areas, which can be used to implement aggressive marketing of local products, thereby attracting tourists from mainland China to visit these areas, where they can experience the beauty of Formosa. Local cultural industries that have already received in-depth guidance include the Yingko ceramics industry in Taipei County, the Yuchih tea industry in Nantou County, the Ehrlin wine-making industry in Changhua County, and the Taiwan jade industry in Hualien County. The Plan for Helping Local Cultural Industries to Create Value can help to stimulate the development of tourism in local communities, while also creating mechanisms to enable enterprises in local industries to support one another, thereby creating more jobs.

2. Provision of Guidance to Weaker Industries and SMEs

The Ministry of Economic Affairs has formulated and begun implementation of the Plan for Supporting Industrial Adjustment in Response to Trade Liberalization, which incorporates three major strategies (for the up-, mid- and downstream segments): revitalization guidance, structural adjustment, and injury relief. The Plan will be implemented over a period of 10 years, and will involve total expenditure of around NT\$95 billion. The main content of each of these three strategies is as follows:

- (1) The Ministry will be proactively providing “revitalization guidance” for Taiwan’s weaker industries; the guidance measures will include helping enterprises in these industries to upgrade and transform themselves, providing SMEs with credit guarantees to help them obtain financing, supporting the development of SME clusters, and helping weaker industries to develop export markets.
- (2) With respect to those industries that will be directly affected by Chinese imports, the Ministry will be providing “structural adjustment” support; the guidance measures will include helping enterprises in these industries to upgrade and transform themselves, providing low-interest loans to help enterprises upgrade factory buildings and other facilities, encouraging mergers, and assisting with the maintenance of employment stability, etc.
- (3) Enterprises that suffer ill-effects after market opening is implemented will be able to benefit from “injury relief.” This will include helping firms to move into new business areas and develop new products, and helping workers to find new employment in other industries, etc.

The objective of the support and assistance measures outlined above is to help SMEs and industry clusters in industries oriented towards the domestic market and other industries that are vulnerable to the negative impact of market opening to upgrade and transform themselves. The government will be working to arrange special treatment for these industries under ECFA whereby the implementation of tariff reductions applying to these industries is delayed; in this way, enterprises in the industries concerned will be helped to strengthen themselves, develop their own brands, enhance their competitiveness, and develop new business opportunities.

3. Putting in Place the Ancillary Measures Needed to Help SMEs That Will Be Affected by ECFA

The SMEA has already formulated a Plan for the Provision of Guidance to SMEs that Will be Affected by ECFA, focusing on the provision of guidance to SMEs in traditional industries, industries that are oriented towards the domestic market, industries characterized by a high degree of inter-industry linkage, and industries that create (or have the potential to create) significant numbers of jobs. Besides using the existing 11 SME guidance systems to provide ongoing guidance for affected SMEs, the SMEA will also be carrying out regular monitoring and appraisal of the impact of trade liberalization on Taiwan's SMEs, to facilitate the formulation of comprehensive ancillary measures that can help SMEs to move beyond their current business models, and reduce the negative impact of ECFA (for more details, see Part Three of this *White Paper*).

4. Proactive Publicization of the Resources Available from the Government

The SMEA holds regular presentations throughout Taiwan to publicize the various guidance resources available from the government, and the Administration proactively distributes resource handbooks and e-papers, to spread awareness of the guidance resources that SMEs can make use of. In early 2010, in recognizing the need to provide active support for SMEs in response to the impact of trade liberalization (while at the same time ensuring that the government's policy objectives were met), the Ministry of Economic Affairs joined forces with the SME Associations and SME Service Centers of individual counties and cities, and with the local service networks of industry associations and chambers of commerce, to organize "Industry Guidance Training" presentations at the local level, providing an opportunity to explain ECFA to SMEs and outline the guidance measures being provided under the Plan for Supporting Industrial Adjustment in Response to Trade Liberalization. Consulting service will also be available to SMEs that are oriented primarily towards the domestic market, are relatively uncompetitive, or are particularly vulnerable to the impact of trade liberalization. The government will also consider applications for direct guidance, and will be promoting the exchange of views with regard to enterprise needs so as to help SMEs that need to transform themselves or upgrade their technology to make effective use of the resources available from the government.

5. The Plan for the Provision of Support for Job Creation in Response to the Impact of Trade Liberalization

In order to mitigate the negative impact of ECFA on business enterprises and their workers, the Council of Labor Affairs has formulated the Plan for the Provision of Support for Job Creation in Response to the Impact of Trade Liberalization. The Plan will be implemented over a period of 10 years starting in 2010, involving total expenditure of around NT\$36.5 billion, to help protect workers' jobs and help them to find new jobs in the event of becoming unemployed.

Implementation of the Plan can be divided into two main parts:

(1) Protecting Jobs

The following three measures will be provided:

1. Providing wage subsidies for employees still in work.
2. Providing subsidies for the re-designing of jobs.
3. Measures to enhance the skills of employees still in work: Providing subsidies for the holding of training activities by business enterprises, and for workers to participate in external training activities.

(2) Helping Workers to Find New Employment

The following five measures will be provided:

1. Re-employment assistance: Incentive payments for taking on new workers, workplace experience opportunities, short-term placement, layoff notification mechanisms, and job search consulting services.
2. Assistance in developing the skills needed to find new jobs: A wide range of vocational training services, helping people who have completed vocational training to find work, wage subsidies to meet basic needs, and assistance in securing vocational skills certification.
3. Helping people to start their own business: Cultivation of business start-up and operational management skills, and provision of start-up consulting and suitability analysis, hands-on learning opportunities, and start-up loans and interest subsidies.
4. Helping people to change job: Subsidies to help pay transportation costs while looking for work, subsidies for moving house and renting accommodation, and employment subsidies.
5. Unemployment benefit: Payments to help the unemployed cover their living costs.

The main focus of the Plan is on using inter-ministerial collaboration to protect jobs, help the unemployed find new jobs, support the redesigning of jobs, subsidize in-service training and vocational training for the unemployed, provide guidance for unemployed workers wishing to start their own business, etc.

III Policy Recommendations

In order to mitigate the impact of the market opening that will accompany ECFA on Taiwan's SMEs and on low- and medium-income households, while at the same time maximizing the positive effects of ECFA, besides the policy measures that have already been introduced, we recommend that the government also consider adopting the following measures:

1. Speeding Up the Lifting of Restrictions on Independent Travel to Taiwan by Chinese Tourists

Judging from Hong Kong's experience, relaxing restrictions on visits by individual Chinese tourists (traveling independently, not as part of a tour group) can be very beneficial to small- and medium-sized retailers, restaurants, hotels, and transportation service providers. Allowing independent travel by Chinese tourists will enable ordinary people in Taiwan to experience the economic benefits of market opening, and should reduce their hostility to ECFA. Executive Yuan

Premier Wu Den-Yih has already announced a timetable for the lifting of restrictions on independent travel by Chinese tourists; it is anticipated that this will significantly enhance the positive impact of ECFA.

2. Provision of Guidance in Advance, and Demand-oriented Strategy Implementation

ECFA will bring major benefits to export-oriented business enterprises, but it will also have a significant negative impact on SMEs that are more focused on Taiwan's domestic market. To prevent a situation where SMEs experience the negative impact of ECFA but not the benefits, the government should make it a priority to adopt a new mindset and new promotional strategies. Some suggestions are put forward below:

(1) Adopting a Wide-ranging Strategy with Clear Goals and an Effective Division of Labor

Looking ahead to the future, the Executive Yuan should make helping SMEs cope with the impact of ECFA a key priority; it should establish clear objectives, decide on the issues where negotiation will be needed with China, and implement an effective division of labor between different ministries and agencies (covering decision-making, strategic planning, collection of information and analysis of research). The allocation of resources to this task by individual ministries and departments should be made one of the criteria in ministerial performance appraisal, to encourage government agencies to make an all-out effort to implement the government's policies in this area.

(2) Emphasizing Demand-oriented Guidance and Subsidies

Currently, the government's guidance and subsidy measures are still very much "supply-side" measures based on the government's own outlook. An alternative approach would be to have the SMEA compile a budget for small-value subsidies. Firms belonging to weaker industries would then be given an opportunity to outline their needs – through conferences, presentations, and seminars involving both business owners and workers – after which the government would evaluate the feasibility of the ideas presented and decide which areas warranted the provision of extra budgetary support. In this way, both SMEs and their employees will feel that the government really is concerned about them; their hostility towards the government's policies will be reduced, as will their sense of insecurity regarding the future.

3. Implementing the Policy to Help SMEs, Low- and Medium-income Households and Young People, to Win the Support for the Government's China Policy

The Taiwanese economy has gradually started to recover from the effects of the global financial crisis. However, so far it is still a largely jobless recovery. Furthermore, in the wake of the crisis the trend for Taiwan to develop into an "M-shaped society" has become even more pronounced. There are particularly high levels of unemployment among the middle-aged and recent college graduates, creating an urgent need for the provision of subsidies and re-employment guidance for the middle-aged, and for measures to help young people find work or start their own business. An

important point to bear in mind is that a high percentage of Taiwan's SMEs are largely oriented towards the domestic market, and are thus particularly vulnerable to changes brought about by government policy; the government therefore has a responsibility to help SMEs through subsidies and guidance. When formulating its policies, the government needs to think in terms of the big picture; there is a definite need for policies that will help low- and medium-income households, SMEs, and young people, which in turn will make these groups more likely to support the government's policy of liberalizing trade with China.

4. Expanding the Benefits of Direct Cross-strait Transportation, Communications and Trade Links between Taiwan and China to Stimulate the Development of the Logistics Industry

Currently, the regulations governing direct cross-strait transportation, communications and trade links between Taiwan and China still place restrictions on transshipment to a third country. In the future, efforts should be made to facilitate transshipment within the ECFA framework, so as help revitalize the ports of Keelung, Taipei and Kaohsiung, and stimulate the development of Taiwan's logistics industry. In this way, it will be possible to help small- and medium-sized logistics service providers while also gaining maximum benefits from direct transportation, communications and trade links with China.

5. Helping SMEs to Secure Orders and New Business Opportunities, thereby Invigorating the Domestic Market

SMEs play a very important role in Taiwan's economy; the government will need to think carefully about how it can help SMEs to secure orders and develop new business opportunities once ECFA has come into effect. For example, the government could stipulate that a specific percentage of Chinese investment in Taiwan must target SMEs, thereby creating new business opportunities for the SME sector.

6. The Government Should Undertake Careful Analysis of the Effects of Its Cross-strait Market Opening Policies

The liberalization of trade with China should be accompanied by a strengthening of research (by expert research teams) on the practical benefits that liberalization brings, to provide a reference for the future revision of government policy in this area. At the same time, the government should seek to analyze the impact that ECFA has on SMEs and how SMEs respond to it, and should organize town-hall meetings to win the public's support and trust.

7. Upgrading, Transformation and Internationalization of the Service Sector are Vital for the Creation of New Jobs

Taiwan's service sector businesses tend to be small in size, and they have had difficulty in upgrading and transforming themselves. As a result, most of the jobs created in the service sector involve unskilled or low-skilled work. In the future, the government (and more particularly the SMEA) will need to step up its provision of support for the upgrading, transformation and internationalization of SMEs in the service industries; only then will Taiwan's service sector enterprises be able to expand their scale of operations, and offer the higher salaries needed to

attract talented, highly-educated people. If Taiwan can succeed in internationalizing its service sector, leading to the establishment of business locations all over the world, then Taiwanese service sector enterprises will have more opportunity to assign middle-ranking and senior personnel to work overseas. Supporting the development of the service sector will thus help to create new, higher-paying jobs.

Part Three

Government SME Policies and Prospects



CHAPTER 9

Assistance in Upgrading, Transforming and Providing Guidance in Enhancing Business Management

With constantly changing scenarios in international competition and cooperation in recent years, small and medium enterprises (SMEs) face operational bottlenecks and pressure to transform themselves. Under these circumstances they especially need to enhance their ability to innovate and conduct research and development to cope with the numerous challenges faced. Compared with large corporations, which have access to abundant capital and human resources, SMEs are at a disadvantage and therefore the government has provided a number of support measures to encourage SMEs to actively engage in innovation, transformation and upgrading so that the country's competitiveness in international markets can be enhanced.

This chapter is divided into five sections and discussion will be focused on the various government measures that have been taken in the period from 2009 to 2010 to help SMEs upgrade and transform and the corresponding accomplishments. These include: e-services guidance, enhancement of quality and management capability, upgrading of technologies, improvement in research and development capacity, as well as guidance in business operation management.

I Guidance on e-Services

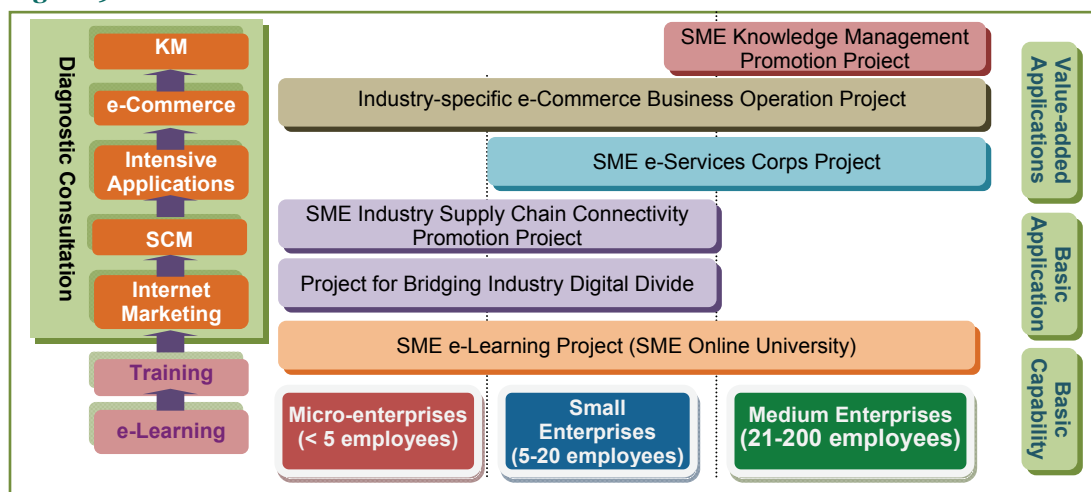
The Small and Medium Enterprise Administration (SMEA) of the Ministry of Economic Affairs (MOEA) has provided SMEs with a series of guidance programs on e-services based on their requirements and electronic workflow. The major projects for e-services guidance are: Project for Bridging Industry Digital Divide, Industry-specific e-Commerce Business Operation Project, SME e-Services Corps Project, SME e-Learning Project (SME Online University), SME Knowledge Management Promotion Project. The e-Services guidance architecture is as shown in Figure 9-1-1.

Accomplishments of the e-Services guidance programs for 2002 to 2009 are as follows:

- (1) Construction of 32 trade association portals and providing impetus to e-Commerce operation processes for more than 3,341 SMEs.
- (2) Promotion of e-Commerce processes for 46 industries, providing 3,767 SMEs with diagnostic consultation and intensive guidance.
- (3) Helping 110,350 micro- and small enterprises to set up broadband Internet access and e-Commerce, providing guidance to 152 industries to form clusters with e-services, driving

market opportunities of NT\$3.62 billion for the IT services industry, and creating online business totaling NT\$7.5 billion for SMEs.

Figure 9-1-1 The SME e-Services Guidance Framework



Source: SME Administration, MOEA, 2010.

1. Promoting Digital Applications, Bridging Industry Digital Divide, and Gaining Access to Online Business Opportunities

The promotion of the “Bridging Industry Digital Divide Project” focuses on the digital development of rural industries. The main targets of this program are micro-enterprises with less than 20 employees. Local community-based training activities are provided through service teams in order to increase the ability of micro-enterprises in rural communities to conduct digital business, creating marketing effects “for common folk by common folk” and further extending online opportunities and continuing business development.

Achievements for 2009 include: providing assistance in e-Commerce applications to 20,000 enterprises and the formation of 42 e-clusters, and driving NT\$600 million in business opportunities for the IT services industry. The expected performance objectives for each year from 2008 to 2011 are shown in Table 9-1-1 below.

Table 9-1-1. Expected Performance Objectives of the Project for Bridging Industry Digital Divide by Year

Performance indicators	Year	2008	2009	2010	2011	Total
No. of e-Commerce applications ('000)		20.35	20	2	2	44
POI electronic maps database ('000)		20.35	20	0	0	40
Female enterprise e-Commerce applications ('000)		7.50	7	0	0	14
Industry e-clusters		41	42	20	18	120
Business opportunities for IT services industry (NT\$ million)		610	600	50	50	130

Note: Figures for 2008 represent actual results.
Source: SME Administration, MOEA, 2010.

2. Promoting the Industry-specific e-Commerce Business Operation Project

The “Industry-specific e-Commerce Business Operation Project” implemented by the SMEA aims to promote strategies to help SMEs enhance their digital marketing capability, providing guidance to enterprises or clusters in e-Commerce marketing companies and assisting export-oriented businesses and clusters to build Internet sales channels and to expand their presence in overseas markets. The main focuses of the work include:

- (1) Assisting SMEs to employ international e-Commerce models to gain direct access to international markets.
- (2) Assisting export-oriented SMEs to sell products with unique Taiwan characteristics to expand their visibility in international markets via the guidance of international marketing consultants and with enhanced Internet marketing capability.
- (3) Providing guidance to industry clusters with unique characteristics and export potential, bringing together similar or cross-sector SMEs with a common set of online marketing strategies and ICT tools, creating cluster values and enhancing export opportunities and capabilities of cluster members.
- (4) Promoting international Internet marketing consultant seed training; providing training for a number of international online marketing consultants as seed trainers via professional international marketing training, international e-Commerce promotion models and seminars, in order to help SMEs with export potential to enhance their international Internet marketing capabilities and operations and to bring quality products to all corners of the world.

In order to provide SMEs with access to international marketing channels, the four major e-Commerce platforms, e-Bay, Alibaba, Rakuten Market and Taiwan’s own Media Federal have made available their B2B and B2C e-commerce services for domestic SMEs.

The four major international e-Commerce platforms that collaborated in 2010 each provided an analysis of market benefits. Among B2C platforms, Rakuten has 60 million members worldwide, with the most popular products being food products; e-Bay has access to 233 million members and is a platform suitable for trade in cars and motorcycles, bicycle parts, computers and electronic components, clothing and accessories, sports items, collectibles and toys; Alibaba has 8 million members worldwide and is a platform suitable for trade in electronics, automobile accessories, hand tools, machinery and other items. In addition to Asia, Europe and North America, Africa is also a major market. As for Taiwan’s own Media Federal, which has endeavored to help Asian suppliers gain access to western markets, its largest customer base is in North America, accounting for 28% of its total customers.

3. Enhancing e-Services Delivery Capability of SMEs via e-Services Corps Project

Since 2002, the SMEA has been actively promoting the “SME e-Services Corps Project”, which brings together experts and scholars from industry and academia and IT services vendors to form guidance teams and provide suitable electronic process implementation solutions to SMEs based

on their requirements and using cluster guidance approaches such as supply chain connectivity and cross-sector collaboration. The project also helps SMEs to improve their business processes and to improve their ability to deliver electronic services.

As of 2009, intensive guidance on electronic process implementation has been provided to a total of 3,767 SMEs in 46 industries, helping them with diagnostic consultation.

4. Promoting SME in Industry Supply Chain Connectivity and Enhancing Industry Competitiveness

The “SME Industry Supply Chain Connectivity Promotion Project” developed by the SMEA focuses on providing assistance to supply chain system central vendors (manufacturing or service industries) and their collaborative entities and suppliers (mainly SMEs) or customers to build electronic connectivity and integrate the system’s operations, thus enhancing the operational efficiency and robustness of the supply chain, and raising the overall competitiveness of the industry. The key tasks of the project include: (1) providing diagnostics through system electronic modes; (2) enabling the integration of the supply chain system; and (3) the promotion of electronic connectivity.

From 2005 to 2007, the implementation of the SME industry supply chain connectivity project focused on the automobile parts industry. Guidance was provided to 16 auto parts supply chain systems over 3 years. Connectivity for a total of 754 SMEs producing auto parts and their customers was established. From 2008 to 2009, the focus of guidance was mainly on traditional industries such as machine tools, machinery parts and components, and metal processing. Guidance for a total of 11 completed systems and 6 individual model factories was completed, and 328 small suppliers were placed online, thus achieving the clustering benefits of an electronic supply chain.

5. Assisting SMEs to Implement Knowledge Management and to Improve Enterprise Competitiveness

In order to help SMEs respond to the advent of the knowledge economy and gain access to new opportunities through innovative approaches, the SMEA began the “SME Knowledge Management Promotion Project” in 2003 to bring together resources from industry, government and academia, as well as to accumulate and preserve core knowledge of enterprises, to shorten the learning time for employees, and to improve their problem-solving abilities.

The following services and promotion tasks have been carried out based on the diagnostics, planning and implementation stages of knowledge management (KM):

- (1) KM diagnostic and assessment services: KM professional consultants are recruited and sent to each individual enterprise based on the specific needs of the enterprise to produce reports on KM readiness assessment and planning recommendations.
- (2) KM group-based project guidance: Operationally sound SMEs with good corporate image are selected to be included in a KM platform with the process of the building, sharing and preserving of core knowledge as well as the enhancement of competitiveness via management and IT consultants.

- (3) Promotion of KM application awareness and ability: Conducting KM application workshops; maintenance and operation plan services website (<http://smekm.moeasmea.gov.tw/>), providing enterprises with actual KM cases for reference; and distribution of promotional newsletters.

6. Promoting Value Chain Information Applications of Manufacturing Industry

The Industrial Development Bureau provides guidance via the “Manufacturing Industry Value Chain Information Technology Project” on innovative business operation models, improving business processes and utilizing information network technology, implementing the construction of new operational models and driving the development of smaller enterprises with inadequate IT infrastructure, and helping them to gain competitiveness in the industry.

The IT applications that are implemented must be combined with the applicant’s business strategies and be consistent with the system members’ requirements so as to add value to their business activities. The implementation of the project should last one year and the applicant must provide no less than 50% of matching funds; the government will provide up to NT\$5 million in subsidies (limited to costs incurred locally). Refer to the project website for additional information: <http://proj2.moeaidb.gov.tw/ecos/>.

7. Guidance for Traditional Manufacturing Industries in Implementing Value-added ICT Applications

In view of the high degree of digital divide in traditional manufacturing industries compared with the information and electronics industries, the Industrial Development Bureau has implemented the “Traditional Industries ICT Value-added Application Guidance Project.” At the same time, the project also assists individual enterprises in the development of new products and services that bring in ICT-related elements in order to add value and to encourage IT services vendors to develop ICT applications and solutions or service platforms, thus accelerating the adoption of value-added ICT applications in the traditional manufacturing industries. Refer to the project website for additional information: <http://proj2.moeaidb.gov.tw/ecos/>.

8. Enhancing the Quality of Business Services and Promoting Healthy Business Development and Global Deployment

In order to enhance the quality of services provided by the wholesale and retail enterprises as well as their self-improvement capabilities, the Department of Commerce, MOEA, has implemented the “Business services quality enhancement 4-year program (2008-2011)” so as to promote the sound development of the overall business environment. The main focuses of the project include:

- (1) Environment development readiness; (2) Headquarters operations readiness; (3) Human resources readiness; (4) Brand platform readiness; (5) Service quality readiness.

9. Promoting Logistics Niche and Supply Chain Management Services

In order to develop international supply chain management services, enhance electronic value-added integration services and help industries to build an efficient global business chain, the Department of Commerce, MOEA, has been pushing for the logistics industry in Taiwan to expand its global service base and cross-border service locations via the formation of strategic alliances, so that vendors in the logistics industry may develop into large-scale, global, and integrated logistics service providers with a view to providing supply chain management services. At the same time, the Department also encourages the logistics industry to develop niche markets that require a high degree of specialization and high added values. The Department of Commerce has implemented the “Logistics Niche Market and Supply Chain Services Promotion Project,” which includes the following items: (1) the logistics alliances or supply chain management services demonstration project (including logistics alliance and supply chain management services) and (2) the logistics niche and e-services demonstration project. For more information, refer to the project website: <http://gcis.nat.gov.tw/elogistics/>.

10. Implementing Intelligent Display Shelf Sales Service System and Increasing Industry Brand Competitiveness

To help domestic logistics vendors implement Radio Frequency Identification (RFID) intelligent display systems, the Department of Commerce has constructed a platform to demonstrate the system’s business operational or interactive functions, promoting an “Intelligent display shelf sales services project.” Various modes of participation are possible and brand vendors are encouraged to choose models appropriate for them. Financial assistance can also be provided for the implementation and maintenance of the system in order to drive RFID applications and the development of the technology services industry as well as to raise the competitiveness of the brand industry.

11. Promoting RFID Technology and Value-added Applications

The implementation of the “RFID value-added applications flagship demonstration projects” by the Department of Commerce aims to promote the application of RFID technology in Taiwan. Its objectives also include the integration of RFID and applications such as micro-payment, bringing high quality and convenience to our daily lives, as well as achieving the goal of a cross-regional intelligent living environment or even a complete ASP platform to provide applications and services to integrate with nearby campuses, businesses, medical institutions, research parks and other agencies and organizations, thus promoting RFID applications as well as the development of regional service models. The project is divided into ASP demonstration applications and cross-living sphere service deployment. For proposals and implementation subsidies, refer to the project website at: <http://www.u-rfid.com.tw>.

II Improved Guidance on Quality and Management

The accession of Taiwan to the WTO propelled the country into an era of fierce competition on a global scale. In addition to competing with advanced countries over quality, Taiwan also faces challenges from Southeast Asian economies on price. SMEs must change their business

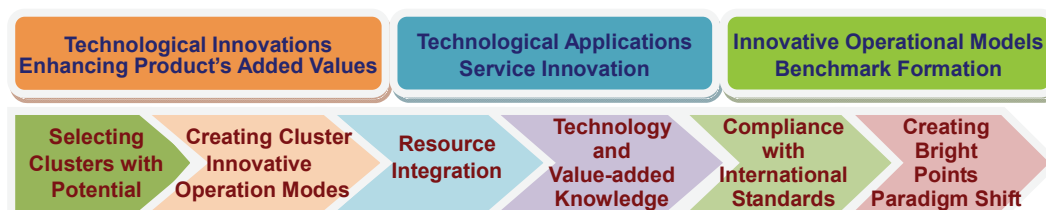
philosophy and improve on product quality and create an image of quality products (brands) in order to be able to move away from low-value production activities and upgrade and transform themselves to reclaim their core competitive capabilities by engaging in high-value activities such as R&D, design and brand marketing. The main focuses of the project's work for 2009 to 2010 were as follows:

1. Guidance on Building SME Clusters with Innovation and Integration

In order to encourage domestic SMEs to take advantage of industry clusters and innovative value-added services to achieve economies of scope, as well as to coordinate with the Executive Yuan's initiative on promoting the six key emerging industries, the SMEA began the 4-year, medium-range project "SME Cluster Innovation and Integration Services" (2008-2011) in 2008.

The priorities of the project include: (1) fostering cluster cooperative networking and development of priority industry clusters; (2) providing guidance on technology-intensive clusters and integrated guidance and services on technology, commercialization, and building a business; (3) providing guidance to service-oriented industries on cluster application technology to improve value-added services; and (4) providing guidance to manufacturing industry clusters on transformation to develop new business models. (Figure 9-2-1)

Figure 9-2-1 Model and Strategy for the Promotion of Cluster Innovation and Integration



Source: SME Administration, MOEA, 2010.

Project implementation results for 2008-2009: (1) promoted the development of 29 innovative SME clusters; (2) completed 65 technological development/commercialization services and guidance cases, and fostered an investment of NT\$370 million in R&D; (3) assisted 1,051 SMEs in using the outsourcing services of the knowledge-intensive service industry; (4) fostered 12 cases of business resource integration with a total invested amount of NT\$442 million; and (5) facilitated business opportunities totaling NT\$5.71 billion for the technology and knowledge-intensive service industry, micro-enterprises, innovative SMEs and IT service providers.

With resources allocated by the SMEA, SMEs have started to deliver spectacular results on the development of product, services or business model innovation through the strength and effects of clusters. With the "optical grade polymer cluster" self-aware scale product prototype and the Silverlight Lane technology trail electronic navigation services provided at the "Beitou hot spring recreation and health cluster," which were nominated and became finalists in the iF Design Award in Hannover (International Forum Design) and the European Living Labs Global

Showcase Award, it has been demonstrated that the cluster development of Taiwan's SMEs has been recognized by the international community. Meanwhile, the "Steel bolt component development services cluster" was awarded the "torque bolts for building construction" patent in 2009, bringing NT\$250 million in new international orders. In 2010, orders are expected to grow to NT\$500 million.

2. Upgrading SME Quality Management and Creating a New Quality Image

In order to assist SMEs in carrying out the requirements of quality management systems, training high-quality management talents, and creating a new quality image for Taiwan's SMEs, the SMEA has continued to promote the "SME Quality Management Upgrade Project," including both industrial guidance and personnel training. The industrial guidance portion includes: enterprise short-term diagnosis, top-quality enterprise guidance, general guidance and industry cluster guidance. Personnel training includes: organizing quality management awareness and application promotion seminars; international certification series, business management quality series, key industry management practices, tourism and leisure services series and other online courses; tailor-made corporate internal training programs to meet the manpower development needs of SMEs.

3. Assisting High-value Industries to Improve Quality and Enhance Competitiveness

In order to help the SMEs of the country's high-value industries (e.g., machine tools and machinery components, textile industry) to improve their manufacturing processes, deepen their quality commitment and enhance their capacity for R&D and innovation, as well as to assist 2nd- and 3rd-tier SMEs to connect with 1st-tier system manufacturers and to strengthen their connectivity with system customers to provide a foundation for entry into the global supply chain procurement cycle, the SMEA has advanced the "High-value Industries Quality and Capability Enhancement Plan."

4. New Image for SMEs via the Promotion of Qualia

A vision of SMEA has been the creation of a high-end qualia image for SMEs as well as to raise their overall qualia image and create synergy to promote industrial cooperation. Hence the "SME Qualia Promotion Project," is aiming at shaping corporate attractiveness and characteristics, enhancing enterprise value, and creating an economy with its own style and features. The priorities of the project are as follows:

- (1) Providing diagnostic consultation services to SME on qualia and making specific recommendations on qualia and creativity.
- (2) Providing qualia enterprise guidance in helping SMEs to transition from manufacturing products to the deepening of technology and product craftsmanship.
- (3) Providing key demonstration and collaborative guidance of qualia in promoting qualia-related cross-sector alliances and enhancing benefits of industrial cooperation.
- (4) Conducting a series of courses on qualia and awareness promotion workshops.

5. Promoting System Supply Chain Collaboration and Enhancing Supply Chain Value and Quality Performance

In order to promote substantive cooperation between SMEs and large enterprise supply chain systems and provide guidance on value enhancement demonstration systems in order to drive business opportunities and provide a chance for SMEs to upgrade their technological capabilities, the SMEA has implemented the “System Supply Chain Value and Quality Efficiency Enhancement Guidance Project.”

The project contains the following tasks: (1) establishing a common quality improvement manual for both enterprises and guidance consultants; (2) providing guidance proposals and solutions for SME operational excellence and sustainable development; (3) establishing a model system for providing guidance to encourage substantive cooperation and value enhancement between SMEs and large enterprise system supply chains; (4) conducting exchange and demonstration of model systems and model release.

6. Providing Guidance to SMEs in Response to the International Green Supply Chain

To help SMEs respond to international green product directives and the green procurement requirements of major international manufacturers, establish a capability for green supply chain management, effectively adapting to customers’ green supply chains and creating green business opportunities, the SMEA has promoted the “SME Response to the International Green Supply Chain Guidance Project” with the following priorities:

- (1) Providing guidance to SMEs that have been affected by European Union (EU) directives on green products (WEEE, RoHS, EuP, ELV, GHG, REACH and customers’ green procurement requirements).
- (2) Providing guidance to enterprises on compliance with green product standards and certification and on deepening their quality control technology in order to provide products with stable quality in the long term.
- (3) Providing guidance on green supply chain system models and propagating the supply chain of SMEs.
- (4) Implementing cases in new directive guidance models and compiling teaching materials on model cases for follow-up and expanded applications.
- (5) Organizing green supply chain management classes for instructors and auditors, and also green supply chain expert forums, workshops and seminars to promote related concepts and applications.

7. Providing Guidance to SMEs on Energy Conservation and Reduced Carbon Emissions

In order to provide guidance for SMEs on energy conservation and reduced carbon emissions as well as to enhance the capacity of SMEs to respond to changes and explore new business opportunities, a “Project for Energy Saving and Carbon Emissions Reduction Consulting for SMEs” has been initiated with the following key tasks:

- (1) Helping SMEs with diagnosis of their manufacturing equipment on energy efficiency, greenhouse gas emissions, green products, low-carbon production and other issues, and providing consultation and recommendations on improving production efficiency, carbon footprint and energy consumption.
- (2) Providing assistance to SMEs on improving the efficiency of production equipment, optimizing production parameters and energy saving technology deployment as well as on greenhouse gas inspection.
- (3) Providing assistance to SMEs in production with energy-efficient, low-carbon technologies and improvement of energy-efficient capabilities (e.g., guidance on EuP eco-design and low-carbon design for energy-efficient products), greenhouse gas carbon reduction inspection certification, product carbon footprint inspection certification and other in-depth guidance efforts.
- (4) Organizing a series of workshops or technical seminars to help SME personnel responsible for environmental protection, energy conservation and clean production as well as instructors for green practices to build skills.

8. Serving SMEs by Organizing Manufacturing Sector Energy Conservation and Carbon Reduction Service Teams

In order to carry out the environmental policies of the government, the Industrial Development Bureau (IDB) continues to administer the “Taiwan Industrial Greenhouse and Energy Reduction Services Corps,” utilizing professional technical guidance capabilities to provide guidance work such as advisory services on environmentally friendly practices to factories in the manufacturing sector, diagnostic services for SMEs, efficiency testing for energy-consuming equipment, improvement plans on energy usage and carbon emissions, as well as tracking and review. As of April 2010, the Corps has provided advisory services on 748 cases from the 138 companies whose applications for environmental guidance have been accepted. Among these cases, the Corps has conducted visits and completed consulting work for 40 companies, performed energy efficiency diagnostics for 21 SME firms and inspection of energy-consuming equipment for 21 other firms. A total of 15 reports have been produced and 61 environmentally friendly practices have been recommended, with an estimated reduction in greenhouse gas emissions of 7,226 tons of CO₂ / year.

9. Assistance with Sustainable Development of Industries and Response to International Environmental Standards

To provide support to industry on an effective response to international environmental guidelines/standards, product environmental information disclosure, corporate social responsibility reports and other requirements, the IDB has launched the “Industrial Sustainable Development and Response to International Environmental Standards Guidance Project.” Details of the program are as follows:

- (1) Guidance category/technical cooperation category: 1. Guidance on product eco-design systems; 2. Guidance on Environmental Product Declarations (EPD); 3. Establishment of Product Category Rules (PCR).

- (2) Advisory services category/technical tools category: 1. EU EuP / ErP directive advisory services; 2. International environmental guidelines/standards advisory services; 3. Advisory services on non-compliant product disclosure in Europe and North America; 4. Corporate Social Responsibility report advisory services; 5. Chemical substance information management tools; 6. Integrated product green procurement assessment tools.

10. Promoting Innovation and Integration Services for Knowledge-intensive Service-oriented Clusters

In order to promote the upgrading of industrial technology and knowledge, and to utilize cluster-based guidance models to help enterprises upgrade and transform themselves and to enhance their competitiveness, the SMEA has launched the “Knowledge-intensive Service-oriented Cluster Innovation and Integration Services Project.” Specific measures of the program include the following:

- (1) Assisting service-oriented SMEs in the formation of clusters with the advantages of international competitiveness, and to provide a comprehensive support program via technology, innovation, culture, knowledge, e-Commerce and referrals from an industry cluster’s perspective to help cluster member companies form a cluster with a tight value chain consisting of high added-value products and a high knowledge-based economy.
- (2) Assisting manufacturing-oriented SME clusters, combined with knowledge service providers, in providing customer-oriented service and innovative models: e.g., R&D services (product planning and engineering technology) and logistics services (warehousing, inventory checking, one-stop shopping), creating a business model to increase profitability via a combination of simple manufacturing and added service value.

11. Improving the Working Environment for SMEs

In order to reduce industrial occupational hazards in the country, the IDB has implemented the “SME Working Environment Improvement Project” with the following key tasks:

- (1) Basic technical guidance on working environment improvement: 1. Guidance on technical diagnostic consultation; 2. Guidance on engineering improvement; 3. Tracking and visits; 4. Guidance on working environment improvement in older industrial parks.
- (2) Guidance on industrial park safety and health mutual aid system (SHMAS): 1. Regional SHMAS response technical guidance; 2. Regional SHMAS organization guidance; 3. Regional SHMAS network platform functional expansion and maintenance; 4. Assistance in responding to emergencies and establishing databases.
- (3) Guidance on risk management: 1. Occupational safety and health management system technical guidance; 2. Safety culture Central Satellite System guidance; 3. Industrial park emergency preparedness assessment technical guidance.
- (4) Research on regulations and collection of international safety and health trends: 1. Research on regulations; 2. Collection of international safety and health trends.

- (5) Other policy awareness promotions and campaigns: 1. Promotion via the Internet; 2. Industrial park workplace safety and health week activities; 3. Exhibitions of guidance results and achievements.

III Providing Technology Upgrading Assistance to SMEs

1. Providing Guidance on Real-time Technology to SMEs

In order to help SMEs upgrade and transform, the IDB has implemented the “Project for SME Real-time Technology Guidance” by utilizing existing mature technological capabilities of the corporate world, academic community and technical services industry to provide R&D, design, production, logistics, automation and electronic technologies necessary for upgrading the industry and to provide real-time, small scale, short-term technical guidance, so that the technology levels of SMEs can be upgraded and their competitiveness enhanced.

Unlike other long-term or large-scale research and development subsidy plans, the “Project for SME Real-time Technology Guidance” aims to provide small subsidies, in which the government is responsible for 80% of the funding to reduce the financial burden on industry. It is hoped that through the mature technologies and capabilities of the supporting institutions, the technological level of SMEs can be upgraded rapidly, and assistance can be provided to domestic SMEs to carry out comprehensive technology upgrading or transformation through expansion from only a few points initially.

The government allocates NT\$200 million each year for the program. In each individual guidance case, the company must secure at least 20% of the project’s total costs, and the amount of government subsidy is limited to a maximum of NT\$200,000. For industries that are most vulnerable to the impact of free trade agreements such as the Economic Cooperation Framework Agreement (ECFA), each company under the project’s guidance will be required to assume at least 5% of the project’s total costs, with the government subsidy subject to a maximum of NT\$237,500.

2. Providing Guidance to Food Processing Industry on Traceability to Comply with International Standards

In support of the government’s initiative on RFID applications, the Department of Commerce has launched a program on RFID verification technology as applied to the food processing industry and on the improvement of the safety of the food distribution supply chain in order to satisfy the public’s demand for food tracking and traceability. In 2007, the Department began the active promotion of the “Processed Food Traceability Project” to provide guidance to the food processing industry on implementing a food traceability and tracking management mechanism and application environment, thus driving the demand and development of the related industry value chain and enhancing its access to international markets.

3. Optimizing Business Innovation and Internet Development to Expand Opportunities in New Markets

In order to encourage commercial services providers to explore new market opportunities or enhance service value to consumers, the Department of Commerce has launched the “Business Innovation and Internet Development Optimization Project.” Businesses submitting proposals must be commercial services providers that utilize information and communications technology (ICT) in business transactions with their commercial partners, and must also satisfy one of the following requirements:

- (1) Enhancement or restructuring of cross-border business management systems, deployment of overseas business locations, channel integration and development, customer service or marketing and other business operations for the purposes of exploring new market opportunities.
- (2) Expansion of service scale and overall competitiveness to carry out business model innovation and to form inter- or intra-sector strategic alliances for the purposes of developing diversified service models.
- (3) Development of innovative services or reengineering of inter-enterprise business processes, improvement of service processes, knowledge sharing and the development, strengthening and integration of marketing channels for the purposes of enhancing consumer service capability or values.
- (4) Other endeavors to expand business opportunities for commercial services providers or to enhance consumer service capability or values.

IV Enhancing SME Research and Development Capabilities

In order to encourage businesses to invest in R&D to enhance core strengths in international competition, the Ministry of Economic Affairs has offered many guidance measures and funding sources for innovative R&D, including the six major projects: Small Business Innovation Research Program (SBIR), Industrial Technology Development Program (ITDP), Innovative Technology Application & Service (ITAS) Program, Conventional Industry Technology Development (CITD), Leading Product Development Guidance Project, and the Assist Service Sector Technology Development Guidance Project. However, from the second half of 2008, Taiwan has been under severe pressure from the global financial crisis. In order to prevent enterprises from reducing or suspending innovative endeavors, the Ministry launched in 2009 the policy “Industry Restructuring - Support for Industrial R&D Innovation and Upgrading” and authorized additional subsidy amounts for 2009 to projects for which contracts had been signed. Large-sale projects received 20% additional funding and smaller ones received 30%, a move to encourage enterprises to continue their innovative research and development activities.

The above six major subsidy programs to promote R&D have been quite effective in encouraging businesses to invest in R&D and innovation. In terms of submitted and approved applications, as of December 2009 the cumulative number of applications submitted was 2,779,

an increase of 26% over 2008; the total number of applications approved was 1,382, an increase of 54% over the previous year. In terms of funding, the approved amount for 2009 totaled NT\$5.46 billion, an increase of NT\$2.28 billion over 2008 (72% growth); funds raised by companies themselves amounted to NT\$8.06 billion, an increase of NT\$2.08 billion compared with 2008 (35% growth). In terms of the effectiveness of implementation, enterprises responsible for executing subsidized projects committed a total of 16,079 individuals in R&D, which represents an increase of 5,209 over 2008 (48% growth); 4,080 new jobs were created, which represents an increase of 2,147 over 2008, a significant 111% growth. (Table 9-4-1)

Table 9-4-1 Status of MOEA Innovative R&D Guidance and Funding for 2008 to 2009

Unit: No. of cases; NT\$ billion; persons.

Item	2008	2009	Annual Growth
No. of applications	2,213	2,779	26%
No. of approved applications	898	1,382	54%
Annual subsidy approved by government	3.18	5.46	72%
Annual amount raised by enterprises	5.98	8.06	35%
Original budget	4.76	4.82	1%
Additional amount budgeted	-	0.76	-
No. of R&D personnel invested	10,870	16,079	48%
No. of employment opportunities added (newly available manpower)	1,933	4,080	111%

Source: IDB, Department of Commerce, DOIT, 2010.

In view of the promotion of the 2009 “Additional Funding for R&D Subsidies” program, the MOEA recognized that the benefits of the measure were indeed positive for encouraging industry to accelerate its innovation activities. In order to further encourage the private sector to engage in R&D investment and to strengthen innovation, the project funding approved for 2010 will be following the practice for 2009. In other words, an “Additional 10% to 15% Funding for R&D Subsidies,” with the added proviso that the funding for each project does not exceed 50% of the total approved funding. In the following paragraphs the purposes and guidance tasks of the six major projects will be explained further:

1. Small Business Innovation Research Program (SBIR)

To encourage and assist domestic SMEs to engage in active technology research and innovation or product development, the Small Business Innovation Research (SBIR) program has been launched in accordance with the “Incentive Schemes for Enterprises to Develop Industrial Technologies, MOEA.” Through grants and subsidies provided by SBIR, the risks and costs of SMEs engaging in innovation and R&D activities will be reduced. The program encourages SMEs to carry out active innovation and helps to expand private-sector investment in R&D so that the results and achievements will help the country further its economic development.

In the second half of 2008 the MOEA expanded the scope of the SBIR program in terms of existing subsidies and redefined the definition of the term “innovative technology.” “Innovative technology” was re-defined to be technology-related “innovative applications” and “innovative R&D,” which was announced and became effective on November 10 in the same year. An innovative application refers to one that has not received any subsidy from the program and is of itself innovative or capable of improving its own technical level. In addition, in order to promote the wide adoption of the innovative efforts and results of SMEs, an additional Phase 2+ stage has

been added to the SBIR's Phase 2 R&D stage, with further R&D results and demand for the development of value-added applications.

From the inception of the SBIR program in 1999 until June 2010, a total of 3,655 cases of innovation and R&D projects were approved and implemented, with government subsidies exceeding NT\$7.5 billion and over NT\$14 billion in private-sector investments. This has been instrumental in enhancing the technological capabilities of SMEs in this country and improving the industry's competitiveness, as well as in providing assistance on upgrading and transformation to conventional industries.

2. Industrial Technology Development Program (ITDP)

To encourage enterprises to engage in technical innovation and research in applications, and to help enterprises build research capacity and institutions, nurture and utilize technology talents, as well as to foster exchange and collaboration between the industry, academia and research communities, the MOEA launched the "Industrial Technology Development Project" in 1999.

Since February 1999, when the project was first introduced, enterprises have been very enthusiastic in submitting applications. As of the end of 2009, a total of 584 projects had been approved out of 1,205 submitted applications, with 945 enterprises participating. (Table 9-4-2)

Table 9-4-2 Industrial Technology Development Program Implementation Performance

Unit: No. of projects; No. of enterprises; NT\$

Item	2006	2007	2008	2009	1999-2009
No. of projects	61	64	60	87	584
No. of manufacturers	137	117	101	136	945
Total funding	5,962,966	3,711,547	3,283,720	4,690,017	50,491,893
Total subsidies	1,749,253	1,170,426	1,128,257	1,901,380	14,731,366

Source: Industrial Technology Development Program website at <http://innovation1.tdp.org.tw>.

Aspects of technological development cover the following fields: communications and optoelectronics (electronics and IT), machinery and aerospace, as well as materials, chemical engineering, biotechnology and pharmaceuticals. As of December 2009, a total of 945 enterprises had been granted subsidies, of which 402 were SMEs, which shows that technology programs have provided effective guidance for domestic SMEs on technological innovation and applied research.

Human talent is the foundation of technology development. The project has contributed to the increase in the number of domestic and overseas R&D personnel with advanced graduate degrees, securing of national defense reserve officers, and the improvement of the R&D environment as well as enhancing the training of R&D personnel. When submitted projects are being reviewed, enterprises submitting the proposals are required to recruit additional high-level talent in relevant fields.

In the past three years, R&D personnel invested in by the ITDP has approached the 6,700 mark. The number of R&D individuals with advanced academic degrees (PhDs and Master's) totals 2,815, accounting for 42% of the total number of R&D personnel in all projects. The proportion of individuals with advanced degrees also exhibits an upward trend, which shows that

the recruitment of top talent into the technology R&D industry has been effective and the scheme has been instrumental in enhancing the quality of R&D personnel in enterprises (Table 9-4-3).

Table 9-4-3 R&D Manpower Invested in by the ITDP for 2008 to 2009

Unit: No. of cases; persons; %

Year	No. of contracts signed	Academic qualifications				R&D staff with graduate degrees (%)	Gender	
		Ph.D.	Master's	Bachelor's	below Bachelor's		Male	Female
2007	61	163	1,163	1,165	753	40.88	2,840	404
2008	58	104	520	486	377	41.96	1,249	238
2009	84	91	774	685	420	43.91	1,652	318
Total	203	358	2457	2336	1550	42.01	5,741	960

Source: Same as Table 9-4-2.

3. Innovative Technology Application & Service (ITAS)

Since 2008 the Ministry of Economic Affairs has been in support of the “twin engines” economic development requirements of high-value manufacturing and knowledge-oriented services and has launched the Innovative Technology Application & Service project in order to promote industry upgrading, enhance industrial value and encourage enterprises to engage in innovation and applications research, or to engage in the development of applications and services with technological content and implication, thus creating innovative business models.

The major themes of the Project in 2010 include: (1) promoting cross-sector system integration; (2) manufacturing and service promotion; (3) digital content and design information application promotion; (4) device service-based policy items; and (5) healthcare innovative service policy items.

From the Project's inception in 1999 to the end of 2009, a total of 354 projects have been approved out of 725 submitted applications, with 424 enterprises participating, of which 26% or 109 are SMEs. (Table 9-4-4)

Table 9-4-4 Innovative Technology Application & Service Implementation Performance

Unit: No. of projects; No. of enterprises; NTS

Item	2007	2008	2009	1999-2009
No. of projects	64	48	17	354
No. of firms/instances of participation	71	64	22	424
Total funding	1,565,815	876,024	622,975	14,752,893
Total subsidies	589,165	320,354	242,292	4,737,559

Source: ITAS website: <http://itas.tdp.org.tw/index.php>.

4. Conventional Industry Technology Development (CITD)

“Conventional Industry Technology Development” is a government-funded program that provides enterprises with R&D subsidies which are used to encourage conventional industries to develop new products and new technologies to expand service offerings and make R&D endeavors more prevalent in conventional industries. The features of the program include:

- (1) New product development: the target under guidance should exceed other companies within the industry in terms of technological level.

- (2) Maximum subsidy of 50%.
- (3) Product development: maximum amount subsidized per case is NT\$2 million.
- (4) Product design: maximum amount subsidized per case is NT\$500,000.
- (5) R&D alliance: 1. maximum amount subsidized per case is NT\$10 million; 2. maximum amount granted is NT\$2.5 million to the leading enterprise and NT\$2 million each for other individual companies.

5. Leading Product Development Guidance Project

The “Leading Product Development Guidance Project” promoted by the IDB aims to encourage enterprises with R&D potential to actively engage in the development of leading products and new products. Development projects that have been reviewed and approved will receive government subsidies (not exceeding 50% of the total project funding) so that the R&D risks faced by enterprises can be shared.

The funding provided by the Project will mainly be used in the initial research stage of the enterprise’s product development cycle. The expenses associated with volume production, marketing and sales are not covered by this Project.

The maximum funding amount and related guidelines are listed as follows:

- (1) The subsidies provided by the Project are limited to expenses incurred during the R&D phase (including small trial productions). The proportion of the subsidy is limited to a maximum of 50% of the total project costs;
- (2) For a non-policy project with only one participating company, the maximum amount of subsidy within a 3-year period is NT\$30 million; the cap for a joint application project is based on the limit that applies to each individual company involved with the project.
- (3) For a non-policy project, the maximum amount of subsidy is calculated based on the amount of taxes paid for the past 3 years.

6. Assist Service Sector in Technology Development

A comprehensive survey of the service industry’s future development reveals that innovation is required to establish a differentiated, high value-added opportunity for success. In order to foster the development of the commercial services industry and encourage enterprises to engage in research on “new service products,” “new modes of business operation” and “new marketing models” or the development of “new business application technologies,” the Department of Commerce has initiated the “Assist Service Sector Technology Development” program to provide case-based subsidies, thus facilitating the introduction of new aspects and categories of business activities and enhancing the core competitiveness of the industry, while increasing its added value and creating a competitive advantage.

Subsidies are provided to: (1) support enterprises in pursuit of new services and products and new modes of business operations, as well as new marketing models or the development of new commercial application technologies, with a level of sophistication exceeding that of competitors in the same industry; the maximum annual funding provided is NT\$2.5 million, and

the maximum for a two-year period is NT\$5 million; (2) in principle only one application is accepted from each enterprise; (3) a maximum subsidy of 50% is applicable.

The project implementation performance for the Assist Service Sector in Technology Development program in 2009 is as follows:

- (1) Industry innovation and R&D projects: approved funding totaled NT\$320,012,000 for 235 cases. The funding resulted in R&D spending by the industry totaling NT\$508,761,143. It is estimated that industry output value will increase by NT\$36.59 billion for the following year. Increase in employment opportunities: 1,289. The number of technology transfer cases is 537 and the number of newly-established brands is 60.
- (2) Innovative franchise stores: 20 subsidy cases with approved funding amounting to NT\$18,776,050. The funding resulted in R&D spending by the industry totaling NT\$42,229,350. The increase in employment opportunities is 415 and the number of additional stores opened is 101.

V Enhancing Guidance on Enterprise Business Management

The following sections present the tasks and achievements of the various measures or projects carried out in enhancing guidance on enterprise business management for 2009 to 2010.

1. Providing Guidance to SMEs on Assessing Intellectual Property Innovation Value

In order to provide guidance to SMEs with technological innovation capability in the assessment of economic value and the diverse utilization of intellectual property (IP), the SMEA launched the “Project for Innovation Value of Intellectual Property for Small and Medium Enterprises” in 2010 in the hope that experts in the program can provide assistance to the IP organizations of the enterprises and to strengthen awareness on IP rights, as well as to help them adopt the Taiwan Intellectual Property System (TIPS) so that development time can be shortened and associated savings in R&D costs can be achieved. It is hoped that integrated connectivity and assessment guidance services can be provided to enterprises with regard to intellectual property within the entire value chain, including IP management and protection, acquisition and transfer, as well as circulation and utilization.

The project is as follows:

- (1) Implementing an SME IP and competitiveness assessment scheme to help enterprises conduct self-examination to identify gaps in their circulation and utilization of IP.
- (2) Providing short-term diagnostic advisory services, recommendations and solutions to SMEs on IP rights utilization.
- (3) Establishing a patent value-added assessment mechanism to help SMEs conduct customized IP and patent analysis.

- (4) Implementing an IP innovation and operational mechanism is that linked to government resources and providing guidance on the matching of SMEs to carry out diverse IP applications.
- (5) Establishing an IP service platform and advocacy website to provide relevant enterprise resources and to facilitate the dissemination and propagation of knowledge and benefits.
- (6) Establishing an SME industry-academia patent cooperation mechanism to facilitate the transfer of the fruits of university research to industry so that R&D results and resources can be made available to a wider community.
- (7) Matching SMEs with academic institutions in securing patent licensing and providing guidance on creating value-added patents, patent infringement analysis and circumvention design.
- (8) Assisting SMEs in the adoption of an IP management system and providing guidance on securing TIPS certification.

2. Providing Guidance to Enterprises on Creating Brand Blueprints for Innovative Products and Service Values

To help enterprises to develop their private brand blueprints and to escape the OEM model as well as to help enterprises develop innovative products and services through branding so that market opportunities can be expanded and enterprise sustainability can be achieved, the SMEA has launched the “Project for the Guidance on Brand Establishment and Marketing Management for SMEs.” The approaches adopted for the project are: compiling an SME marketing resources handbook to help enterprises gain access to relevant resources and information; setting up the 0800-520-358 advisory hotline to provide enterprises with on-site brand advisory and diagnostic services; and subsequently selecting and providing guidance to enterprises with competitiveness or potential in brand building to help them create their own brand value and upgrade and transform themselves.

The results for the guidance program for 2009 include: (1) the publication of 3,500 copies of a brand marketing resources manual; (2) 10 cases of assistance in enterprise resource referral; (3) 50 cases of providing consulting on private brand marketing and 17 cases of the brand marketing of diagnostic services; (4) providing 6 enterprises with assistance in building their private brand blueprints, providing guidance to 2 companies on brand management systems, and providing assistance to an industry chain in adopting a common brand marketing and management system; (5) providing an additional estimated NT\$40 million in business opportunities to enterprises under guidance for products under their private brands.

3. Training for Management Consultant Capabilities

In order to fully and effectively enhance the guidance capabilities of Taiwan’s management consulting services and to build international competitiveness, the “Management Consulting Service Technology Development Project” was set up in 2009, in addition to providing training to SME business management consultants. The service capabilities of management consultants can be raised and the industry’s overall competitive advantages can be enhanced through the following approaches: supply and demand surveys of management consulting services,

implementation and maintenance of websites that provide information exchange and management consulting service supply/demand matching, training of high-level consultants (including overseas studies and training), and the promotion of management consulting services strategic alliances.

4. Organizing Various SME Awards and Recognition Events

Each year the SMEA organizes a number of selection and recognition events. The activities for 2009 have been completed on schedule. Refer to Table 9-5-2 for the purposes and results of the various awards.

Table 9-5-2 Various Awards and SMEs Recognized in 2009 for Their Outstanding Performance

Dimension	Type of Award	Name of Award	Purpose	Results
Business Management	Business Management	National Award of Small and Medium Enterprises	Encourage industrial upgrading and development	199 SMEs selected in 18 years
	Enterprise Export	Rising Star Award	Encourage development of international markets	204 SMEs selected in 12 years
	Enterprise Innovation	Taiwan SMEs Innovation Award	Enhance enterprise innovation and R&D capabilities	594 SMEs selected in 16 years
Knowledge Dissemination	Guidance personnel	Superior Guidance Service Personnel Awards	Recognize personnel engaging in SME guidance services	210 individuals selected in 16 years
	Topics of Research	SME Master's and Ph.D. Dissertation Award	Encourage graduate students to engage in research of topics in SME management	172 master's theses and 62 Ph.D. dissertations selected in 14 years
	Management library series	Gold Book Award	Select outstanding management book series to enhance enterprise competitiveness	198 volumes selected in 14 years

Source: SME Administration, MOEA, 2010.

CHAPTER 10

Strengthening SME Financing and Investment Capabilities

SMEs generally find it difficult to obtain funding from the capital markets because of their small size, operational weaknesses, and lack of financial transparency; in addition, SMEs often lack assets that can be used as collateral. Currently, many SMEs in Taiwan possess unique technology and innovative products, but because most venture capital providers in Taiwan are focused on high-tech companies, the vast majority of SME owners still find it difficult to obtain financing. This situation has a direct negative impact on the SMEs' ability to grow; there is a clear need for the government to provide more in the way of financing guidance and credit guarantees.

The government should be working actively to establish effective financing guidance mechanisms. Besides encouraging SMEs to make use of the various types of policy loan that are available from the government, establishing "SME Financing Service Windows" at major banks to give SMEs better access to financing information, and encouraging SMEs to make full use of the various low-interest loan schemes that the government provides, the government should also be using the SME financing guidance system and the SME Troubleshooting Center to provide various types of guidance and information, to help SMEs with requests for emergency assistance, and to provide consulting services. In addition, the government should also arrange for financial institutions to provide financing help for SMEs that are experiencing financial difficulties, help SMEs to establish sound financial and accounting systems and to enhance their financial management capabilities, and use the SME Credit Guarantee Fund to provide credit guarantees, thereby increasing banks' willingness to extend loans to SMEs; this could be supported by investment in SME startup incubation, to help newly-established SMEs obtain the working capital they need.

In order to provide comprehensive assistance for SME development, and achieve a further strengthening of financing channels, the Ministry of Economic Affairs has also been working actively to provide innovative new value-added services with respect to SME credit guarantees, investment and guidance, including: helping SMEs to make effective use of their intellectual property to obtain financing, arranging the provision of direct credit guarantees by the SME Credit Guarantee Fund, providing assistance for business startup, launching the Phoenix loan scheme for micro-enterprises, using the Firefly mutual guarantee scheme to help SMEs in the upstream, midstream and downstream segments of particular industries to obtain loans at preferential interest rates, and organizing SME investment plans, etc., thereby giving SMEs a wider range of financing channels to choose from. In 2009 - 2010, the measures described in the following sections were implemented to strengthen SME financing and investment capabilities.

I SME Financing Diagnostic Guidance

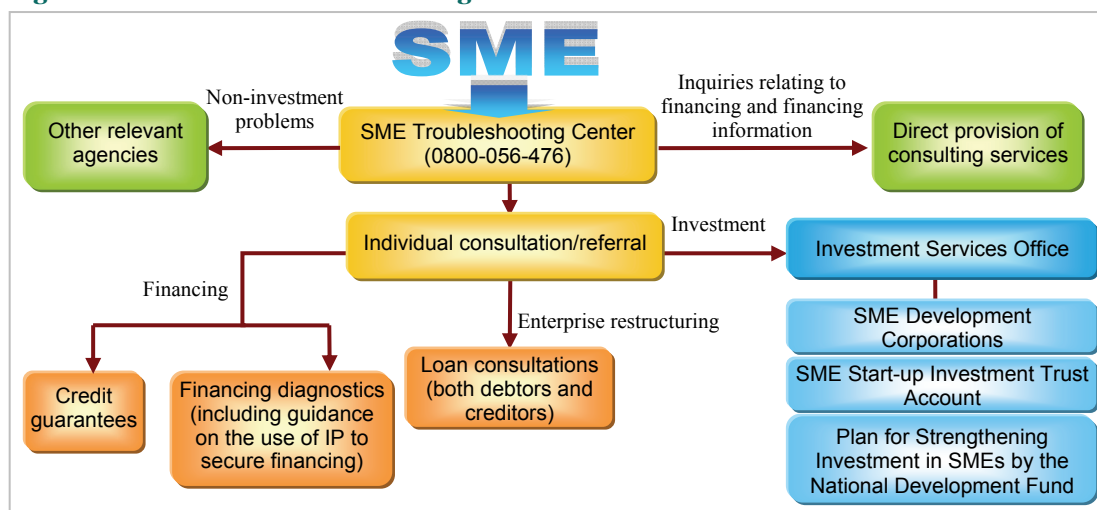
1. Establishment of the SME Financing Service Contact Windows, to Provide Investment and Financing Consulting Services

To help provide SME owners and managers with the financing information they need, and to expand the range of financing service channels available to SMEs, the SMEA has arranged for the establishment of SME Financing Service Contact Windows in the branches of major financial institutions. These Contact Windows provide inquiry and consulting services relating to financing guarantees, investment and financial management. In all, 34 banks have established SME Financing Service Contact Windows. SMEs can use the Contact Windows to obtain comprehensive financial information, and to find out about the various types of low-interest loan that the government makes available to SMEs, thereby helping to solve SMEs' financing problems.

2. The SME Troubleshooting Centers – Providing Finance and Financing Consultation and Assistance

The SMEA has established the SME Troubleshooting Centers to provide SMEs with consulting services in line with their individual needs. The SME Troubleshooting Centers provide assistance in a wide range of areas, including financing diagnostics and consulting, and consultation, referral and guidance, etc., regarding loans (for both borrowers and creditors). The consultation mechanisms are outlined in Figure 10-1-1.

Figure 10-1-1 Finance and Financing Consultation Mechanism



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

3. Integrating the Various Financing Services Organizations through the Establishment of a Financing Services Team

The Financing Services Team has been established to serve as a platform for communication between SMEs and banks, facilitate implementation of the Plan for Strengthening Investment in

SMEs by the National Development Fund, and coordinate the operations of the various financing services organizations. By integrating the work of the government's guidance teams with the guidance services that banks provide, the aim is to provide SMEs throughout Taiwan with timely consulting services relating to financing problems, financial management, accounting systems, etc. On-site diagnostic and guidance service is available for a quota of 300 firms (including ordinary financing diagnostics, debt consultation for creditors and debtors, operational management diagnostics, and financial and accounting system diagnostics and guidance). Teams of experts undertake evaluation to help SMEs establish appropriate accounting systems, improve their management structure and make themselves more credit-worthy, thereby increasing the likelihood that banks will be willing to lend to them. By helping SMEs to obtain the working capital they need, the Financing Services Team contributes to raising the competitiveness of Taiwan's SMEs.

4. Measures for the Provision of Assistance by the MOEA to Help SMEs Obtain Working Capital

The Ministry of Economic Affairs (MOEA) has formulated the Measures for the Provision of Assistance by the MOEA to Help SMEs Obtain Working Capital, to help business enterprises cope with the current period of dramatic change in the economy and overcome their operational difficulties. The main features of the Measures are outlined below:

- (1) A less rigorous approach to the handling of dishonored bills: According to Point 11 of the Points to Note Regarding the Credit Status of Checking Account Holders, where an enterprise experiences difficulty because of the economic environment, the enterprise may submit an application to the regulatory authorities at least 10 days prior to the date on which a bill will become due for payment; once the authorities have examined the firm's operational status and confirmed that it conforms to the criteria for guidance, the authorities may assist the firm in question by sending a notification to the Central Bank and Taiwan Clearing House asking that the firm be given a 6-month grace period before it is blacklisted for a dishonored bill; the aim is to give the firm in question time in which to reach agreement with the bill-holder regarding cancellation of the bill, so that it can regain normal credit status.
- (2) Bank loan mediation (debtors and creditors): In accordance with the bank loan mediation self-regulation mechanism established by the Bankers' Association of the Republic of China:
 1. Where an enterprise is still operating normally (with no cessation of work, suspension of business, dishonored bills, etc.) and making interest payments: With respect to the principal of loans that will come due before the end of December 2010, and where an extension is required, a financial institution may, at the request of the borrower, give an extension of at least 6 months.
 2. Where an enterprise has not been operating normally, or has been failing to make interest payments, or a negotiated settlement of the firm's debt led by the largest financial institution creditor (and involving its other creditors) has been proposed: After the case

has been reviewed by the responsible MOEA contact window, the enterprise's application and a list of the enterprise's largest creditor financial institutions may be submitted to the Bankers' Association to be passed on to the largest creditor, which will then convene a meeting of the creditors. If financial institutions owed at least half of the total debt owed by the enterprise in question are in favor, all of the financial institutions concerned will be expected to abide by the decision reached at the meeting.

With respect to this measure, the MOEA has appointed the SMEA's SME Troubleshooting Center to receive applications from SMEs, and the Industrial Development Bureau to receive applications from large enterprises. The assistance provided to enterprises over the period from September 30, 2008 to the end of June 2010 is shown in Table 10-1-1 below.

Table 10-1-1 Provision of Assistance by the Ministry of Economic Affairs to Help SMEs Obtain Working Capital

Implementation Period		2008	2009	2010	Total
No. of applications received (cases)		155	289	64	508
Received by:	Industrial Development Bureau	41	35	4	80
	Small and Medium Enterprise Administration	114	254	60	428
Application type:	Extension on repayment of dishonored bills	46	42	4	92
	Debt renegotiation	109	247	60	416
Total amount of renegotiated debt (NT\$ millions)		221,606	201,667	21,436	444,710

Note: Data for 2008 covers the period from September 30, 2008 to December 31, 2009; data for 2010 covers the period from January 1, 2010 to June 30, 2010. Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

5. Helping SMEs to Use Their Intellectual Property to Obtain Financing

In the business environment created by the dawning of the era of the knowledge economy, intellectual property has become one of a business enterprise's most important assets, both in emerging industries and in traditional industries; intellectual property is now closely tied up with a firm's core competitiveness. The special characteristics of intellectual property – including the fact that its value is difficult to measure and tends to fluctuate, and the relative difficulty of realizing the value of the value of intellectual property – have created a situation where financial institutions tend to be reluctant to accept intellectual property as collateral for loans. The Plan for Promoting the Use of Intellectual Property by SMEs to Obtain Financing has been formulated to help knowledge-intensive enterprises make effective use of their intellectual property to obtain the funding they need, with government guidance services and matching platforms being used to enhance enterprises' competitiveness and their ability to commercialize new products, while at the same time integrating the operations of the SME Credit Guarantee Fund to help reduce the credit risk that financial institutions are required to bear, thereby increasing financial institutions' willingness to extend credit to SMEs; in this way, SMEs are able to gain maximum benefit from their intellectual property, which should help to encourage firms to innovate and undertake R&D, thereby contributing to the transformation and development of the SME sector as a whole. The Plan's service content is as follows: (1) Supporting the diffusion of information relating to the use of intellectual property for financing

purposes; (2) Providing intellectual property management guidance; (3) Providing financial and accounting diagnostic and guidance services; (4) Providing technology visits guidance service; and (5) Providing enterprises with case studies and finding matching consultancy services.

II SME Financing and Credit Guarantees

As a rule, SMEs find it more difficult than large enterprises to secure working capital loans from financial institutions. The government has worked actively to encourage SMEs to apply for various categories of special loans, thereby helping to expand the range of financing channels available to SMEs, and has worked closely with the SME credit guarantee fund to provide SMEs with financing diagnostics and credit guarantees, in an effort to help resolve SMEs' funding difficulties.

1. Setting up the SME Financing Service Platform to Help SMEs Secure Financing

At a meeting of the SME Development Fund Managing Committee held in April 2008, the Committee approved the disbursement of NT\$5 million from the SME Development Fund (along with an additional NT\$5 million each from five banks – Taiwan Cooperative Bank, First Commercial Bank, Taiwan Business Bank, E.Sun Bank and Chinatrust Commercial Bank – for a total investment of NT\$30 million) to establish an SME Financing Services Platform to make it easier for SMEs to secure bank loans by providing clear, transparent details about SME operations that banks can use as a basis for decision-making when determining whether to grant loans to SMEs. If banks have a clearer picture of the business models that SMEs are using and of what their funding needs are, they are more likely to expand the provision of loans to SMEs, creating a win-win situation for SMEs (which often find it difficult to secure working capital), banks, and the government, which is seeking to provide active support to help SMEs achieve steady growth. The SME Financing Services Platform formally commenced operations on April 1, 2009.

2. Using Policy Loans to Help SMEs Obtain Financing for Special Projects

The government provides SMEs with various types of policy loans, either directly or through collaboration with banks. What distinguishes these loans from ordinary loans is that the loans are granted for specific purposes, and have preferential interest rates. Altogether, 24 different types of loan are available in 11 categories: SME upgrading loans, loans for the purchase of production equipment, business start-up loans, R&D loans, tourism development loans, export and overseas investment loans, recovery loans, small-value loans, international patent dispute loans, distribution services loans, and loans for entrepreneurs who have returned to Taiwan from overseas.

3. Implementation of the Fourth Stage of the Plan for Increasing Loans to SMEs by Domestic Banks

On July 1, 2005, the Financial Supervisory Commission (FSC) launched the Plan for Increasing Loans to SMEs by Domestic Banks, to be implemented over a period of three years, with the aim of helping SMEs to secure working capital loans by strengthening the banks' role as intermediaries; implementation of the original three-year plan was completed on June 30, 2008, with the objective of boosting provision of loans to SMEs by at least NT\$200 million per annum having been successfully achieved. To encourage the development of a long-term partnership relationship between SMEs and banks, and thus help SMEs to obtain working capital, the FSC decided that implementation of the Plan for Increasing Loans to SMEs by Domestic Banks should continue into a Fourth Stage (from July 1, 2008 to December 31, 2009), and then a Fifth Stage (from January 1, 2010 to December 31, 2010). As of the end of June 2010, the total value of outstanding loans to SMEs by domestic banks stood at NT\$3,370.4 billion.

It is anticipated that implementation of the Fifth Stage of the Plan for Increasing Loans to SMEs by Domestic Banks by the Financial Supervisory Commission will boost lending to SMEs by at least NT\$150 billion; the SME Credit Guarantee Fund will provide support by offering credit guarantees that cover 50 – 90% of the total value of the loan.

4. Provision of Credit Guarantees by the SME Credit Guarantee Fund

To help strengthen the provision of credit guarantees to SMEs, the government established the SME Credit Guarantee Fund in 1974. More recently, as part of the government's efforts to ensure that the operation of the credit guarantee system and industry guidance system conform to the needs of the government's industrial policy (thereby facilitating effective policy implementation), on May 15, 2003 the Executive Yuan approved the replacement of the Ministry of Finance by the Ministry of Economic Affairs as the regulatory authority with oversight over the SME Credit Guarantee Fund; from this point on, the SME Credit Guarantee Fund was able to provide both direct and indirect credit guarantees.

(1) The Principles That Underlie the SME Credit Guarantee Fund's Operations, the Fund's Functions and Its Evolution over Time

The main purpose that the SME Credit Guarantee Fund was established to fulfill was to provide credit guarantees to SMEs, and to work closely with financial institutions in the development of financing guidance services for SMEs, helping SMEs to obtain the funding they need from financial institutions and thereby contributing to the healthy development of Taiwan's SME sector and promoting Taiwan's economic growth and social stability.

The SME Credit Guarantee Fund's main functions are as follows: (1) To implement the government's SME guidance policy, helping SMEs to overcome the difficulties that they experience when trying to provide the collateral needed to secure loans. (2) To make financial institutions more willing to provide loans to SMEs. (3) To maximize the efficacy of guidance projects undertaken by other SME guidance organizations.

(2) Expanding the Scope of Credit Guarantee Operations in Line with the Requirements of Government Policy

Besides undertaking regular SME credit guarantee operations, the SME Credit Guarantee Fund also collaborates with government policy implementation by providing a range of other credit guarantee services. As of the end of June 2010, the Fund was providing the following types of credit guarantee to meet the needs of various government policy initiatives:

1. Credit Guarantees for Young Entrepreneur Loans: Since October 1986, to help young people to start their own business, create new employment opportunities, and stimulate national economic development.
2. Credit Guarantees for Brand Development Loans: To help Taiwanese enterprises establish and develop their own brands in international markets, beginning in October 1990.
3. Credit Guarantees for R&D Loans for Industrial Upgrading: In line with government policy, to provide credit guarantees for R&D Loans for Industrial Upgrading in January 2003.
4. Credit Guarantees for R&D Environment Construction Loans: To encourage R&D activity in the private sector and build Taiwan into a leading international center for R&D and innovation, the Loans were provided in October 2005.
5. Credit Guarantees for Digital Content Industry and Cultural and Creative Industry Development Loans: To develop Taiwan into a major Asia-Pacific region digital content design, development and production hub, the Loans began in October 2004.
6. Credit Guarantees for Loans to Help Taiwanese Enterprises Fight International Patent Lawsuits: To begin on July 1, 2005.
7. Credit Guarantees for Loans to Help SMEs Invest in Countries with Which Taiwan has Diplomatic Relations: To begin in January 2006.
8. Credit Guarantees for Disaster Recovery Loans: To begin in May 2006.
9. Credit Guarantees for Low-interest Loans for Film and TV Content Production: To revitalize the film and TV industries, credit guarantees for Low-interest Loans began in February 2007.
10. Credit Guarantees for Firefly Counterpart Guarantee Loans: To promote women's interests, the Loans began in May 2007 and merged with Micro-enterprise Start-up Loans.
11. Credit Guarantees for Firefly Counterpart Guarantee Fund Loans for People Who Have Been in Care: To help people who have been in care find work or start their own business, the Loans began in February 2008, so that individuals can obtain working capital to enable them to get new businesses off the ground.
12. Credit Guarantees to Help Medium-Large Enterprises Obtain Financing: To help enterprises that have grown too large to be classed as SMEs to obtain financing, in March 2008 the SME Fund began to provide the Financing.
13. Credit Guarantees for Loans to Repair Buildings Damaged in Natural Disasters: To provide Loans in October 2008.
14. Credit Guarantees for the Project Loan and Credit Guarantee Project for the Provision of Assistance to Non-SMEs by Financial Institutions to Help Revitalize the Economy: In

January 2009, to help non-SMEs obtain working capital and thus contribute to getting the economy as a whole back on its feet.

15. Credit Guarantees for Kaohsiung City Government's "Little Giants" Business Loans: To stimulate commercial activity in Kaohsiung City, the SME used the Firefly model in January 2009, to help small enterprises obtain the working capital they need.
16. Credit Guarantees for Taipei County Government's "Happy Start-up" Low-interest Loan Program: To provide credit guarantees using the Firefly counterpart guarantee model in February 2009 to help people in low-income households obtain the funding they need to start their own business.
17. Credit Guarantees for Taipei City SME Financing Loans: To provide credit guarantees, in April 2009, to help SMEs obtain working capital.
18. Credit Guarantees for Taipei City Strategic Industry Financing Loans: To provide credit guarantees using the Firefly counterpart guarantee model, in June 2010, to help SMEs obtain working capital.
19. Credit Guarantees for Loans for Enterprises Affected by Typhoon Morakot: To help business enterprises that were affected by Typhoon Morakot in 2009 to obtain the loans and to provide extensions to already approved credit guarantees, the SME Credit Guarantee Fund began providing credit guarantees to help enterprises affected by the disaster to obtain the funds needed for recovery.
20. Credit Guarantees for Loans to Tourism Industry Enterprises Affected by Typhoon Morakot: For the Tourism Bureau, Ministry of Transportation and Communications to help enterprises in the tourism industry that were affected by Typhoon Morakot, the SME Fund began providing credit guarantees for project loans to help affected tourism industry enterprises in December 2009.
21. Credit Guarantees for Travel Industry Loans: For the Tourism Bureau, to revitalize Taiwan's tourism industry, the SME Credit Guarantee Fund began providing credit guarantees using the Firefly counterpart guarantee model in December 2009, to help companies in the travel industry obtain working capital.
22. Credit Guarantees for Small Retailer Loans: To promote job creation, the SME Fund began providing credit guarantees for Small Retailer Loans in May 2010, to encourage banks to use their own capital to help small businesses obtain working capital.
23. Credit Guarantees for Loans for Key Service Industries: To promote the development of key service industries, the SME Fund began providing credit guarantees for Loans for Key Service Industries in May 2010, to help enterprises with significant development potential in key service industries to obtain funding and strengthen their competitiveness.
24. Credit Guarantees for New Business Start-ups: To provide for the Start-ups on July 1, 2010, to encourage innovation and creativity, promote new business development, stimulate the adoption of new business models, promote innovation in industry, and enhance the competitiveness of Taiwan's industries.
25. Credit Guarantees for Loans to Help Industries Affected by Trade Liberalization to Upgrade and Transform Themselves: On July 1, 2010, the SME Fund began to provide for the Loans

to help enterprises in industries that have been negatively affected by trade liberalization obtain the funding they need to move into new industries or develop new products.

(3) Development of Innovative New Services by the SME Credit Guarantee Fund

Over the years, the SME Credit Guarantee Fund has been vigorous in its implementation of credit guarantee services in accordance with the government's SME guidance policy. In the last few years, the Fund has introduced a range of innovative new services in line with the changes in the financial environment and in customer needs.

1. Direct Credit Guarantees

In line with government policy regarding industrial development and the strengthening of SME financing, SMEs with significant R&D, operational or market development potential may now apply directly to the SME Credit Guarantee Fund for credit guarantees, which they can then use to secure financing from financial institutions. Over the period from 2004 to June 2010, a total of 836 direct credit guarantees were provided, with a combined value of NT\$14,606 million, enabling the enterprises concerned to obtain financing that totaled NT\$18,730 million.

The makes of the successful movie *Cape No. 7* were able to secure NT\$15 million in loans using direct credit guarantees provided by the SME Credit Guarantee Fund. The producers of Santimen glass beads, which are referred to in the movie, had secured direct credit guarantees totaling NT\$3 million back in September 2005.

2. Credit Guarantees for Firefly Counterpart Guarantee Fund Loans

In March 2006, the SME Credit Guarantee Fund launched the Firefly Counterpart Guarantee Fund (FCGF) loan scheme, whereby leading enterprises would make donations that would be matched by equivalent funding from the SME Credit Guarantee Fund to provide credit guarantees for the leading enterprises' suppliers, customers, partner companies, distributors, and/or franchisees, thereby helping to ensure recovery of receivables, and providing encouragement for investment in innovation, R&D, activities that can boost product value-added, and industrial upgrading. Well-known companies that have made donations under this scheme include China Steel, Chunghwa Telecom, New Land Developers Group, etc.

As of June 2010 a total of 7,177 credit guarantees had been provided under the FCGF scheme, with a combined value of NT\$5,907 million, enabling the enterprises concerned to secure loans to the value of NT\$6,302 million.

(4) Implementation by the SME Credit Guarantee Fund of the "Golden Lever" Project and Plan for Promoting Employment through Credit Guarantees

To help business enterprises cope with the recent changes in the economic climate, the Ministry of Economic Affairs has been leveraging the SME credit guarantee mechanism to make it easier for SMEs (which tend to suffer from a lack of resources) to obtain working capital loans, in line with the government's "Three Supports" policy (whereby the government supports the banks, the banks support business enterprises, and business enterprises support their employees). The "SME Credit Guarantee Fund Golden Lever Project" incorporates an expanded range of credit guarantee measures, including a raising of the credit guarantee multiplier, increasing the total

amount of funding available for the provision of credit guarantees, increasing the maximum amount of credit guarantees available per enterprise, a raising of the standard subrogation rate for batch-type credit guarantees, and a reduction in credit guarantee handling fees. From late 2008, when implementation of the Project began, to the end of December 2009, a total of 248,371 credit guarantees were granted, worth a total of NT\$462 billion, which enabled SMEs to obtain loans worth NT\$613.1 billion. The Project has thus made a significant contribution towards combating the impact of the unfavorable business climate, and helping to mitigate the effects that the combination of a global financial crisis and economic downturn have had on SMEs. The key results achieved are as follows:

1. Raising the credit guarantee multiplier, to encourage banks to make more credit guarantee referrals

Implementation of the SME Credit Guarantee Fund Golden Lever Project began in November 2008. In fiscal 2009, the credit guarantee multiplier rose to 75.8% for special project credit guarantees, and to 76.6% for credit guarantees obtained through financial institutions, up from 64.4% and 60.1%, respectively, in fiscal 2008.

2. The total funding that enterprises were able to obtain through the use of credit guarantees rose to its highest level in 35 years

Over the period from June to December 2009, the monthly total amount of funding that enterprises were able to secure using credit guarantees provided by the SME Credit Guarantee Fund exceeded NT\$50 billion in every single month; in December 2009, the monthly total reached NT\$68.3 billion, the highest monthly total ever recorded in the 35 years that the SME Credit Guarantee Fund has been in existence.

3. The volume of loans extended to SMEs by domestic banks stopped falling and began to rise again

The total amount of loans that enterprises were able to obtain using credit guarantees provided by the SME Credit Guarantee Fund had begun to rise again as of the end of April 2009, and the total volume of loans extended to SMEs by domestic banks also stopped falling and began to rise again, helping to ease SMEs' financing difficulties.

To continue to support the government's efforts to revitalize the economy and create jobs, by helping enterprises to obtain the working capital they need from financial institutions, the Plan for Promoting Employment through Credit Guarantees has been launched. This Plan represents a revision and continuation of the relaxation of restrictions on credit guarantee provision that was introduced by the Golden Lever Project, and also reduces the fees which it is felt can make a significant contribution towards the maintenance of employment stability and the creation of new jobs that enterprises are required to pay for credit guarantees.

(5) Establishment of the SME Credit Guarantee Fund College, and Torchbearer Fund of Guidance and Assistance, and Other Guidance Mechanisms

The SME Credit Guarantee Fund College and the Torchbearer Fund of Guidance and Assistance were established by the SME Credit Guarantee Fund as part of its efforts to create a

comprehensive guidance mechanism framework. The idea is that, through the operation of these two mechanisms, besides providing credit guarantees the SME Credit Guarantee Fund will also be contributing to the exchange of knowledge and experience, thereby helping to raise the competitiveness of Taiwan's SMEs and improve their risk management and financial management capabilities.

1. The SME Credit Guarantee Fund College

Set up in July 2005, the SME Credit Guarantee Fund College currently comprises three platforms: the SME Credit Guarantee Fund College Forum, the SME Credit Guarantee Fund College Lectures, and the SME Credit Guarantee Fund College Courses. The SME Credit Guarantee Fund College Forum provides a venue for the exchange of ideas and knowledge between SMEs, successful entrepreneurs and academics; the SME Credit Guarantee Fund College Lectures provide an opportunity for sharing management knowledge and experience, and the SME Credit Guarantee Fund College Courses give SMEs' financial managers the opportunity to discuss case studies, and to take advanced courses in risk management and financial management.

Over the period from July 2005 to June 2010, 12 sessions of the SME Credit Guarantee Fund College Forum were held, with a total of 4,868 people participating; 47 SME Credit Guarantee Fund College Lectures were held, with 4,641 people participating; 1 international conference was held, with 135 people attending; 53 SME Credit Guarantee Fund College Courses were provided, with a total of 2,802 trainees.

2. The Torchbearer Fund of Guidance and Assistance

The Torchbearer Fund of Guidance and Assistance was created to give full play to the Torchbearer spirit and allow the SME Credit Guarantee Fund College to operate at maximum efficiency. Using donations provided by enterprises that received credit guarantees from the SME Credit Guarantee Fund in the past and have since secured stock market or OTC listing, and from financial institutions that have signed agreements with the SME Credit Guarantee Fund, the Torchbearer Fund of Guidance and Assistance enables SMEs to obtain guidance for specialist guidance organizations, thereby helping to strengthen their financial and accounting systems, improve their operational capabilities and enhance their competitiveness, while at the same time reducing the level of risk that the banks and the SME Credit Guarantee Fund are required to bear. The Torchbearer Fund of Guidance and Assistance began operation in December 2006; by June 2010 it had raised a total of NT\$12.8 million. Applications for funding assistance under the Torchbearer scheme have already been received from 83 firms; it is anticipated that this mechanism will help Taiwan's SMEs to strengthen their operational capabilities and performance, thereby enabling them to create more value.

(6) The Benefits Achieved in Terms of SME Funding

After 35 years of hard work, the SME Credit Guarantee Fund has achieved impressive results, whether in terms of expanding the types of enterprise and industry that are eligible to receive credit guarantees, introducing new types of credit guarantee, increasing the size of the credit guarantees provided, recruiting new financial institutions to collaborate with the Fund, and

supporting the implementation of new SME financing measures. The total volume of credit guarantees provided has grown rapidly.

Funding is the lifeblood of any business enterprise; whether a firm can obtain sufficient funding is closely linked to whether that firm succeeds or fails. Funding may be raised internally or obtained from external sources. Due to their limited capitalization, SMEs are often forced to rely on external funding sources to raise working capital. At the same time, funding needs vary depending on the stage of development that an enterprise has reached and on the specific purpose to which the funds will be put. The SME Credit Guarantee Fund provides a wide range of credit guarantees to meet the needs of different types of business enterprise, and makes effective use of a variety of different credit guarantee delivery methods (including delegated credit guarantees, project loan credit guarantees, direct credit guarantees and batch-type credit guarantees) to help SMEs obtain smooth access to financing.

As of the end of June 2010, the SME Credit Guarantee Fund had helped a total of 295,833 enterprises. The total number of credit guarantees provided through financial institutions was 4,009,343 with a cumulative credit guarantee volume of NT\$7,406.3 billion. The SME Credit Guarantee Fund has thus made a major contribution towards helping Taiwan's SMEs to grow, and towards the development of the economy as a whole. The number and value of credit guarantees provided by the SME Credit Guarantee Fund over the last eight years are shown in Table 10-2-1 below.

Table 10-2-1 The Performance of the SME Credit Guarantee Fund in Credit Guarantee Provision, 2001-2010

Year	Item	Cumulative No. of SMEs in Receipt of Credit Guarantees	No. of Credit Guarantee Applications Accepted	Combined Value of Credit Guarantees (NT\$ millions)	Total Amount of Financing Secured (NT\$ millions)
2003		187,517	199,783	2,051.79	3,478.52
2004		216,964	265,137	3,154.49	5,167.75
2005		243,325	271,401	3,330.20	5,389.47
2006		262,441	261,824	3,196.04	5,304.59
2007		273,215	238,801	2,906.11	4,952.57
2008		280,714	237,446	3,307.57	5,231.51
2009		290,572	254,807	4,752.48	6,312.07
Jan. – June 2010		295,833	146,912	3,201.01	3,998.34
Cumulative Total (1974 – June 2010)		295,833	4,009,343	50,706.37	74,062.90

Source: SME Credit Guarantee Fund.

(7) The Results Achieved through the Provision of Credit Guarantees to SMEs

According to statistics compiled by the SME Credit Guarantee Fund, as of the end of 2009, 71.66% of the SMEs in receipt of SME credit guarantees had been granted guarantees of less than NT\$2 million, 85.88% had been granted guarantees of less than NT\$5 million, and 93.69% had been granted guarantees of less than NT\$10 million. It can thus be seen that most credit guarantee resources are used to help firms obtain small-value loans.

The vast majority of SMEs that receive credit guarantees from the SME Credit Guarantee Fund find that, within a few years, they have grown sufficiently and their credit record has improved sufficiently that they no longer need credit guarantees; instead, they are able to raise

money on the capital markets or obtain loans directly from banks. As of June 2010, out of 199 SMEs that had won the National Award of Small and Medium Enterprises, 151 had previously been recipients of credit guarantees from the SME Credit Guarantee Fund; the same was true of 150 out of 203 winners of the Little Giant Award, 367 out of 634 winners of the Small and Medium Enterprise Innovation Research Award, and 10 out of 15 winners of the National Quality Award. Furthermore, 2,439 of the SMEs that have been granted credit guarantees in the past have since grown sufficiently large to be classed as “large enterprises” rather than SMEs, and 620 have secured stock market or OTC listing.

(8) The Results Achieved in the Provision of Different Types of Credit Guarantee by the SME Credit Guarantee Fund

In 2009, the SME Credit Guarantee Fund provided credit guarantees worth a total of NT\$475,248 million, helping approximately 139,700 enterprises to obtain NT\$631,207 million in bank loans. 248,371 of the credit guarantees were not supported by special project funds; these guarantees had a combined value of NT\$460,020 million, and helped SMEs to secure financing worth 613,125 million from financial institutions. As of the end of 2009, the total amount of outstanding credit guarantees was NT\$393,928 million, representing an increase of 19.74% compared to the end of 2008; the amount of loans outstanding stood at NT\$532,439 million, representing an increase of 6.19%. The number and value of the various types of credit guarantees as of the end of 2009 are shown in Table 10-2-2 below.

Table 10-2-2 The Cumulative Number of Cases and Value of Individual Types of Credit Guarantees as of June 2010

Type of Credit Guarantee	Cumulative No. of Guarantees Provided	Cumulative Value of Guarantees Provided (NT\$ millions)
Credit guarantees for young entrepreneur loans	15,908	11,652
Credit guarantees for brand development loans	116	2,406
Credit guarantees for digital content industry and cultural and creative industry development loans	174	1,445
Credit guarantees for R&D loans for industrial upgrading	439	5,143
Credit guarantees for R&D Environment construction loans	6	90
Credit guarantees for loans to help Taiwanese enterprises fight international patent lawsuits	9	141
Credit guarantees for disaster recovery loans	156	445
Credit guarantees for firefly counterpart guarantee fund loans	1,695	818
Credit guarantees for low-interest loans for film and TV content production	15	196
Credit guarantees to help medium-large enterprises obtain financing	257	2,320
Credit guarantees for the project loan and credit guarantee project for the provision of assistance to non-SMEs by financial institutions to help revitalize the economy	2,643	20,070
Credit guarantees for Kaohsiung City Government's "Little Giants" business loans	319	115
Credit guarantees for Taipei County Government's "Happy Start-up" low-interest loan program	56	30
Credit guarantees for Taipei City SME financing loans	1,212	1,100
Credit guarantees for home repair loans for households affected by Typhoon Morakot	75	95
Credit guarantees for loans for enterprises affected by Typhoon Morakot	371	2,351
Credit guarantees for loans to tourism industry enterprises affected by Typhoon Morakot	65	264

Source: SME Credit Guarantee Fund.

III Financing Guidance and Support for Enterprises Affected by Natural Disasters

The Ministry of Economic Affairs has implemented a number of measures to help business enterprises affected by Typhoon Morakot, which struck Taiwan in 2009, and by the 2010 Kaohsiung Earthquake.

1. Measures Relating to Reconstruction in the Aftermath of Typhoon Morakot

To help SMEs that had been affected by Typhoon Morakot, besides providing special project loans, the government also provided funding to help enterprises recommence operations, and promulgated the Regulations Governing the Provision of Financing Assistance to Enterprises Affected by Typhoon Morakot, and the Key Points Regarding the Provision of Loans and Interest Rate Subsidies to Enterprises Affected by Typhoon Morakot, etc.

- (1) The Special Statute for Reconstruction Following Typhoon Morakot: This Statute was promulgated on August 28, 2009 and has a period of implementation of three years.
- (2) The Regulations Governing the Provision of Financing Assistance for Enterprises Affected by Typhoon Morakot: These Regulations were promulgated on September 17, 2009.
- (3) The Key Points Regarding the Provision of Loans and Interest Rate Subsidies to Enterprises Affected by Typhoon Morakot: These Key Points were promulgated on September 17, 2009.
- (4) The Key Points Regarding the Extension of Loan Repayment Periods on Loans Granted by Financial Institutions to Enterprises Affected by Typhoon Morakot: These Key Points were promulgated on October 2, 2009.

2. Measures Relating to the Provision of Financial Assistance for Enterprises Affected by Typhoon Morakot

The measures adopted to help enterprises affected by Typhoon Morakot with their financial difficulties:

- (1) With regard to enterprises that are experiencing operational difficulties as a result of Typhoon Morakot, where such enterprises had taken out loans prior to the typhoon, the deadline for repayment of the principal and interest may be extended by a period of one year in the case of working capital loans and three years in the case of loans intended to finance capital expenditure.
- (2) Where an enterprise that has been affected by Typhoon Morakot needed financing to support the recommencement of operations, arrangements may be made for financial institutions to provide loans covering up to 80% of the total amount needed; the SME Credit Guarantee Fund will provide a credit guarantee covering 90% of the value of the loan.
- (3) The maximum amount of loans to help enterprises recommence operations in the aftermath of Typhoon Morakot shall be as follows: For SMEs, the maximum size of working capital loans shall be NT\$30 million, and the maximum size of loans intended to finance capital expenditure

shall be NT\$50 million; for micro-enterprises and legally-registered sole proprietorships and partnerships, the maximum size of working capital loans shall be NT\$1 million, and the maximum size of loans intended to finance capital expenditure shall be NT\$4 million.

- (4) Establishment of the Post-disaster Enterprise Reconstruction Service Team: The Post-disaster Enterprise Reconstruction Service Team is formed from representatives of local SME organizations, along with managerial, financing and accounting experts. The Team goes right into the areas affected by the disaster to help SMEs.
- (5) Provision of financing consulting services for enterprises that have been affected by the disaster: The SME Troubleshooting Center established by the SMEA provides financing consulting services for enterprises that have been affected by the disaster, helping them to secure the working capital they need, arranging loan rescheduling talks with banks, and helping to arrange for lenient treatment of dishonored bills.
- (6) Establishment of a Financial Consultation Contact Window: A Financial Consultation Contact Window has been established at the Ministry of Economic Affairs Southern Region Service Center, to help enterprises in areas that have been affected by the disaster to recommence operations, and provide financial consulting and diagnostic services to help minimize the negative impact on enterprise operations and help each firm return to normal operation as quickly as possible.

3. Results Achieved in the Provision of Financing Assistance for Enterprises Affected by Typhoon Morakot

To ensure effective implementation of the measures outlined above, starting from the end of September 2009 the Ministry of Economic Affairs joined forces with the SME Credit Guarantee Fund and Joint Guidance Center to hold a series of 45 presentations targeting the head offices of financial institutions, financial institution branches located in those cities and counties affected by Typhoon Morakot, and enterprises affected by Typhoon Morakot. As of June 30, 2010, a total of 512 credit guarantees had been provided for loans to enterprises affected by the typhoon; the total value of the guarantees provided was NT\$245 million, and enterprises that had been affected by the typhoon were able to obtain NT\$2.73 billion in financing to help them recommence operations. The government also helped to arrange 49 loan repayment deadline extensions, involving credit guarantees totaling NT\$61.83 million and loans totaling NT\$93.6 million. The Small and Medium Enterprise Administration's SME Troubleshooting Center handled 562 inquiries from enterprises affected by the typhoon, and provided financing consulting services on 324 occasions.

4. Measures to Assist Business Enterprises Affected by the 2010 Kaohsiung Earthquake

A number of business enterprises in Southern Taiwan suffered damage to their factory equipment and inventory during the 2010 Kaohsiung Earthquake. The SMEA implemented the following measures to assist them:

- (1) All enterprises affected by the disaster that were able to could present a certificate issued by their local township, city or metropolitan district office or other local government authority.

- (2) Those firms that were unable to provide sufficient collateral could apply to the SME Credit Guarantee Fund for a credit guarantee covering up to 90% of the value of the loan.
- (3) The SMEA's SME Troubleshooting Center provided financing consulting services to enterprises that had been affected.
- (4) Services would be provided where enterprises had special needs relating to operational management issues.

IV Strengthening Investment in the SME Sector

SMEs have always been the foundation on which Taiwan's economy rests, and they play an important role in ensuring social stability through job creation. To enhance the competitiveness of Taiwan's SMEs and create new financing channels for them, on March 26, 1993 the government promulgated the Regulations Governing the Establishment, Operation and Management of SME Development Corporations, with the aim of investing in the SME sector and providing SMEs with managerial and consulting guidance through the establishment of SME Development Corporations. In October 2003, to help SMEs overcome the difficulties that they often experience in securing equity investment, the SMEA established the SME Start-up Investment Trust Account system; in August 2007, the National Development Fund, Executive Yuan allocated NT\$10 billion for use in this project, with the SMEA being commissioned to implement the Plan for Promoting Investment in SMEs. The SME investment architecture formed by these three measures (Figure 3-2-2) and the current state of investment are outlined below.

1. Promoting Investment – the SME Development Corporations

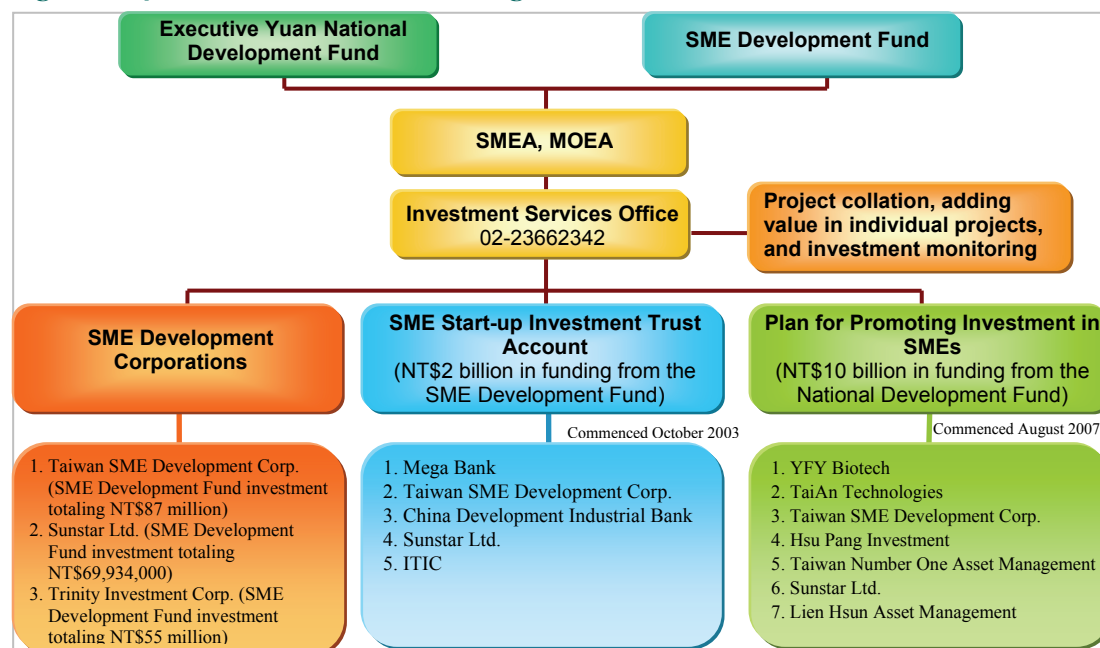
In accordance with the SME Development Statute, the government set up the SME Development Fund, which in turn has established a number of SME Development Corporations. Besides helping SMEs to obtain funding through direct and indirect investment, these corporations also provide assistance with domestic and international technology collaboration, market and product development and management consulting services, as well as helping SMEs to formulate medium- and long-term funding plans.

Development corporations that have received funding from the SME Development Fund include: (1) Taiwan SME Development Corporation Ltd. (SME Development Fund investment totaling NT\$87 million); (2) Sunstar Ltd. (NT\$69,934,000); (3) Trinity Investment Corporation (NT\$55 million).

The distribution of the SME Development Corporations' investment by industry is: optoelectronics industry–18%; biotechnology–10%; electronic components manufacturing–28%; software and IC design–15%; other (including nanotechnology)–29%.

Investment by the SME Development Corporations as of the end of June 2010 is shown in Figure 10-4-1.

Figure 10-4-1 Framework for Promoting Investment in the SME Sector



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

2. Establishment of the SME Start-up Investment Trust Account to Invest in SMEs with Significant Growth Potential

On May 29, 2003, the SMEA received approval from the Executive Yuan to transfer NT\$2 billion from the SME Development Fund to establish the SME Start-up Investment Trust Account, with the funds in question to be entrusted to the custody of designated banks. Investment from the SME Start-up Investment Trust Account began in October 2003.

Using the investment trust investment model, five asset management companies – Mega Bank, Taiwan SME Development Corp., China Development Industrial Bank, Sunstar Ltd. and ITIC – were appointed to evaluate the advisability of investing in selected SMEs that were either innovation-oriented or had undertaken upgrading or transformation within the past five years.

The distribution of this investment by industry has been as follows: optoelectronics industry–24%; biotechnology–7%; electronic components manufacturing–26%; software and IC design–21%; other (including nanotechnology)–22%.

As of the end of December 2009, the SME Start-up Investment Trust Account had invested in 80 SMEs. The total investment by the SME Development Fund came to NT\$1,518,300,000, with the asset management companies providing a further NT\$1,679,210,000. The return on investment was: cash dividends – NT\$64.85 million; profits from disposal of assets – just over NT\$146.93 million; loss – NT\$369.11 million.

3. The National Development Fund's Plan for Promoting Investment in SMEs

To stimulate investment in the SME sector by venture capital firms and other private-sector companies, on April 17, 2007 the National Development Fund, approved the Plan for Promoting Investment in SMEs; the Fund allocated NT\$10 billion for investment in SMEs. This Plan is being implemented over a period of 10 years, with the actual investment taking place during the first seven years, with the remaining three years being devoted to the disposal of remaining investments. The formal launch of the Plan for Promoting Investment in SMEs took place on August 30, 2007.

The SMEA has established an Investment Services Office to be responsible for providing investment-related services. Using an investment trust account system, a group of seven asset management companies (YFY Biotech, TaiAn Technologies, Taiwan SME Development Corp., Hsu Pang Investment, Taiwan Number One Asset Management, Sunstar Ltd., and Lien Hsun Asset Management) have been appointed to evaluate the advisability of investing in particular Taiwanese SMEs, and in overseas investment plans by Taiwanese citizens (and Overseas Chinese). If the investment targets are approved, matching funding is provided from the money allocated by the Fund. The total amount of government funding provided may not exceed 49% of the capitalization of the firm that receives the investment.

The distribution of this investment by industry is as follows: optoelectronics industry–17.7%; biotechnology–21.6%; electronic components manufacturing–11.7%; semiconductors–5.9%; energy–11.8%; information and communications–5.9%; digital content–1.9%; electromechanical and machinery–5.8%; other–17.7%.

As of the end of June 2010, a total of 51 firms had been invested in. The actual amount of investment was NT\$1,481.10 million, with the asset management companies providing an additional NT\$1,282.45 million of investment, for a combined total of NT\$2,763.55 million.

CHAPTER 11

Strengthening Business Start-up Capabilities and Promoting New Business Incubation

In 2009, the SMEA launched the Start-up Guidance Plan, with the aim of creating a first-class environment for new business start-up, fostering the entrepreneurial spirit, building Taiwan into an entrepreneurial society, and reinvigorating the Taiwanese economy. In addition, the SMEA has made extensive use of incubation centers to provide the SME sector in Taiwan with the technology, knowledge and funding guidance and support needed for new business start-up.

In 2008, the government launched the Value-added Plan for Collaboration between Industry and Universities on New Business Incubation. One of the most important tasks to be undertaken within the framework of this Plan is the promotion of industry-specific specialist incubation networks. In 2009, it was decided to implement incubation network plans targeting the biotech and healthcare industry, the green energy industry, the cultural and creative industries, and the information and communications technology (ICT) applications industry, in line with the “Six Key Emerging Industries” plan being promoted by the Executive Yuan (the project to establish these networks constitutes a sub-plan of the Entrepreneur Success Plan).

In today’s era of knowledge integration, the model for successful industrial development needs to move beyond linear growth and create new space for innovation and R&D. There is a clear trend towards collaboration between government, industry and universities, so as to bring this about. In 2007, the Executive Yuan began to integrate the resources of the Ministry of Education, the National Science Council, and the Ministry of Economic Affairs, through the establishment of the Inter-ministerial Working Group for Promoting Coordinated Collaboration between Industry and Universities. By integrating the resources of different government agencies, it has been possible to formulate comprehensive strategic planning of the operations of incubation centers, industry-university collaboration centers and technology transfer centers, thereby strengthening the linkages between industry and the innovation and R&D work undertaken by academic institutions, and maximizing the benefits created by industry-university collaboration.

In addition, the Female Entrepreneur Guidance Plan initiated by the SMEA, the “Free and Young Program” launched by the National Youth Commission and the Business Start-up Phoenix Plan initiated by the Council of Labor Affairs, provide women who are interested in starting their own business with access to managerial knowledge and resources, thereby reducing the time needed to get a new business off the ground, and strengthening female entrepreneurs’ capabilities to help them become outstanding female business owners. The main programs implemented by the government to promote new business start-up in 2009–2010 are outlined below.

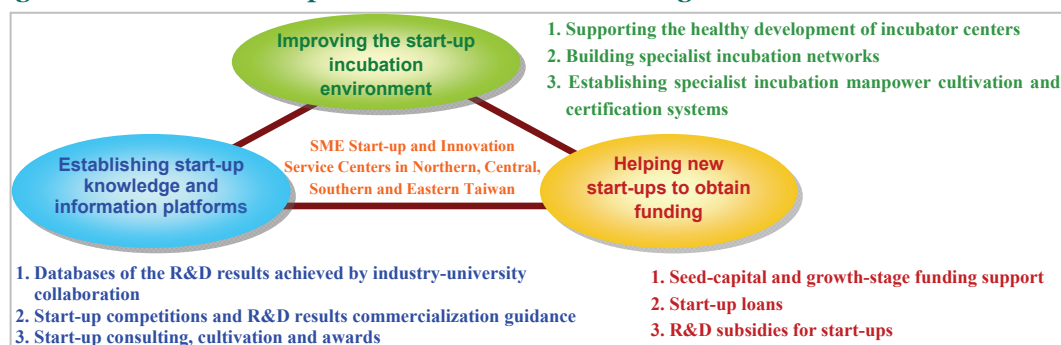
I Promotion of the Start-up Guidance Plan

The Start-up Guidance Plan incorporates 16 sub-plans relating to new business start-up and incubation. It is being implemented through the SME Entrepreneurship and Innovation Service Centers in Northern, Central, Southern and Eastern Taiwan, creating regional service networks that expand local service provision capabilities to help Taiwanese SMEs leverage innovation, technology and aesthetics to survive and prosper in the face of intense market competition. It is anticipated that, by the end of December 2011, a total of 800 core innovation-oriented SMEs will have been cultivated. During the period 2009–2011, an annual total of around NT\$386 million in funding is being allocated to the Plan. It is intended that, each year, guidance will be provided to 1,200 firms, thereby creating 2,000 new jobs, and stimulating private-sector investment in excess of NT\$5 billion.

1. The Core Strategy Underpinning the Start-up Guidance Plan

The Start-up Guidance Plan embodies three core strategies: Improving the start-up incubation environment, building start-up knowledge information platforms, and helping new businesses to secure seed capital. The aim is to provide would-be entrepreneurs, owners of new businesses, and existing SMEs and microenterprises with the services they need. The key work tasks to be undertaken for each of the three core strategies are outlined below (Figure 11-1-1):

Figure 11-1-1 The Start-up Guidance Plan – Core Strategies and Measures



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

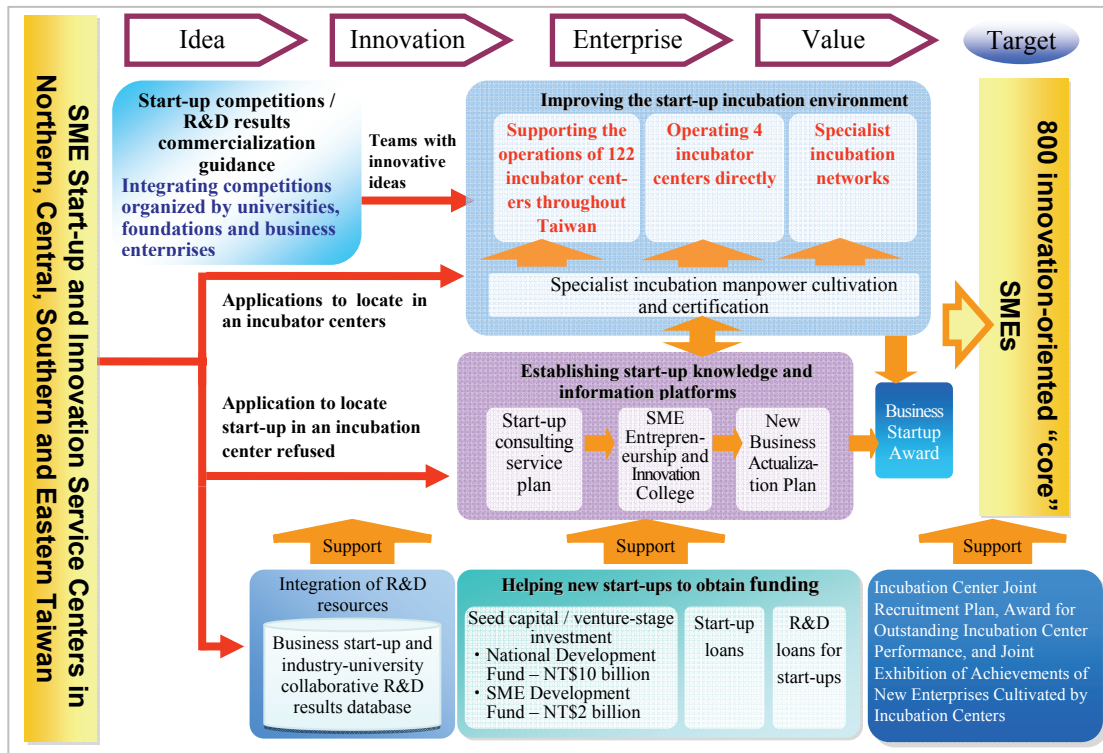
2. The Relationship between the Start-up Guidance Plan Sub-plans

The Start-up Guidance Plan integrates the SMEA's various existing start-up guidance plans and incubation networks; it represents an effective linking together of the guidance mechanisms and value chains that have been built up over the years to stimulate SME innovation, encourage R&D activity by SMEs, promote business start-up and stimulate the creation of new value. The Start-up Guidance Plan provides entrepreneurs with a comprehensive learning map; through the establishment of physical support centers and virtual networks, it creates a one-stop-shopping service environment. Both people who are interested in starting their own business and owners of existing start-ups can access the guidance services they need through a variety of channels, including the existing business start-up service hotline (0800-589168), the Entrepreneur Success Plan website (<http://sme.moeasmea.gov.tw>), and the newly-established regional service network

of SME Entrepreneurship and Innovation Service Centers covering Northern, Central, Southern and Eastern Taiwan.

The Start-up Guidance Plan includes the sub-plans as shown in Figure 11-1-2:

Figure 11-1-2 The Relationship between the Sub-plans of the Start-up Guidance Plan



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

3. The Start-up Guidance Plan Regional Service Network – The SME Entrepreneurship and Innovation Service Centers

To implement the industrial restructuring required by the government's new economic policies, and to help Taiwan's SMEs to develop, SME Entrepreneurship and Innovation Service Centers have been established in Northern, Central, Southern and Eastern Taiwan. Starting in 2009, the Service Centers in Northern Taiwan (located in the Nangang Software Park), Central Taiwan (located on the Central Science Park Campus of Feng Chia University), Southern Taiwan (located in the Kaohsiung Software Park), and Eastern Taiwan (located in the Stone and Resource Industry R&D Center, Hualien) have been linked together to form an integrated network of physical service centers. The aim is to integrate the knowledge, human capital, funding and technology resources of each region, while linking together existing incubation centers and guidance measures relating to start-up funding, start-up knowledge, specialist consulting services, etc., so that the Service Centers can play the role of local service networks for the provision of government guidance resources and for the development of regional expertise, thereby facilitating SME Entrepreneurship and Innovation. As of the end of June 2010, the SME

Entrepreneurship and Innovation Service Centers had handled a combined total of over 7,270 start-up consulting cases, had provided in-depth diagnostic service to 379 SMEs (including 58 Taiwanese-invested companies operating overseas), and had promoted 104 industry-university collaboration projects, worth a total of NT\$32.18 million.

The functions and services provided by the SME Entrepreneurship and Innovation Service Centers are:

- (1) Establishment of regional service locations: The Service Centers integrate local service network resources through the establishment of physical service locations in Northern, Central, Southern and Eastern Taiwan, and the creation of regional service alliances.
- (2) Strengthening of regional start-up and innovation service capabilities: Establishment of specialist start-up and innovation service teams to provide specialist consulting services – covering technology transfer, business matching, resource referral, start-up information and consulting/diagnosis, etc. – to both SMEs and Taiwanese businesspeople who have been operating overseas and are now considering investing in Taiwan, with the aim of providing meaningful value-added services.
- (3) Strengthening start-up and innovation knowledge services: Establishment and maintenance of the start-up and innovation knowledge and information platform, expansion of case-study databases and development of standardized operational and service procedures, with the aim of providing both SMEs and Taiwanese businesspeople who have been operating overseas but are now considering investing in Taiwan with the start-up and innovation knowledge and information they need, strengthening the functionality of virtual service platforms, and enhancing the specialist capabilities of service personnel.
- (4) Organizing and publicizing business start-up and innovation activities: Holding of regular activities to showcase innovative new products, as well as business matching and promotion presentations; strengthening and promotion of start-up and innovation service business opportunities, establishment of industry-specific and cross-industry exchange platforms, promotion of business matching, and efforts to invigorate market transactions.

4. Results Achieved Through the Implementation of the Start-up Guidance Plan

The results that have been achieved through the implementation of the Start-up Guidance Plan can be outlined as follows: In 2009 and the first six months of 2010, business start-up consulting service was provided on 18,237 occasions, and guidance was provided to 3,688 enterprises (of which 1,316 were new start-ups), thereby leading to the creation of 7,959 new jobs and the maintenance of 32,772 existing jobs, and stimulating private-sector investment worth NT\$12,367 million (in addition, a total of 368 industry-university collaboration projects were promoted, worth a total of NT\$149.81 million). In the future, ongoing efforts will be made (in line with the overall strategy laid down by the Executive Yuan's Six Key Emerging Industries plan and the Industry Innovation Corridor project) to integrate regional start-up and innovation guidance resources, strengthen the existing start-up incubation guidance systems, promote the SME Innovative Service Certification System, help enterprises to strengthen their R&D capabilities

through industry-university collaboration, promote the enhancement of SME competitiveness, stimulate continued economic growth in Taiwan, and boost the creation of new jobs.

II Developing the Industry-University Incubation Network

1. Support for and Direct Operation of Incubation Centers

To help SMEs get established and undertake innovation, since 1997 the SMEA has been working with other government agencies, research institutions, universities and private-sector companies to implement the government's incubation center policy and encourage the establishment of new incubation centers. The Administration has used incubation centers to provide Taiwan's SMEs with the technology, knowledge, funding and other guidance and assistance they need for new business development, and has sought to build up business start-up learning mechanisms to help forge a knowledge-intensive entrepreneurial society.

An incubation center is a facility that cultivates new businesses, new products and new technologies, and helps SMEs to upgrade and transform themselves. It provides a wide range of resources in an efficient, integrated manner (including the provision of office space, access to equipment, R&D technology, help in finding funding, business services, management consulting, etc.), thereby reducing the costs and risk that new businesses need to bear in the start-up stage and in the early stages of R&D projects. By creating a first-class cultivation environment, incubation centers increase the likelihood that a new business will be a success. The following sections describe the current state of incubation center operation in Taiwan.

- (1) As of June 2010, there were a total of 122 incubation centers in Taiwan, located in 22 different counties and cities. Of this total, 65 incubation centers received subsidies from the SMEA in 2010; the combined total of subsidies received was NT\$2,202 million.
- (2) In line with government policy needs, the Ministry of Economic Affairs has been directly involved in the establishment of a number of incubation centers in both northern and southern Taiwan, including the Nangang Software Incubator (ICT industry guidance), the NanKang Biotech Incubation Center (biotech industry guidance), the Tainan Science Park incubator (general innovation and research guidance for the biotech, electronics, information and precision machinery industries), and the Kaohsiung Software Incubator (focusing on digital content, software, IT-enabled services, etc.).
- (3) Trial operation of the Kaohsiung Software Incubator began on December 1, 2009; the Incubator was formally opened on February 3, 2010. A total of 27 enterprises were selected to be allowed to locate themselves within the Incubator, filling the Incubator to 100% of capacity. It was estimated that the Incubator would create production value in excess of NT\$300 million in 2010, and would create (or maintain) at least 100 jobs. Planning is already underway for another incubation center: the Hsinchu Biotech and Healthcare Science Park Incubation Center.
- (4) Geographical distribution of incubation centers, and distribution by incubation center type: As of June 2010, Northern Taiwan had the largest concentration of incubation centers, with a total of 51 centers; Southern Taiwan had the next largest number of incubation centers, at 39.

Taiwan's incubation centers can be divided into four categories. Incubation centers attached to universities are the largest single category, with 96 centers; there are 10 incubation centers structured as independent foundations, and 14 centers that are run by government agencies. The distribution of incubation centers is shown in Table 11-2-1 below.

Table 11-2-1 Incubation Center Categories and Regional Distribution

Incubation Center Category	Total	Northern Taiwan	Central Taiwan	Southern Taiwan	Eastern Taiwan
Total	122	51	28	36	7
University incubation center	96	40	21	29	6
Foundation-type incubation center	10	4	4	1	1
Government-run incubation center	14	6	2	6	0
Private-sector incubation center	2	1	1	0	0

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, March 2010.

- (5) Regarding the industries that individual incubation centers seek to support, 32% of Taiwan's incubation centers are oriented towards supporting the information, communications and electronics industries, followed by the biotech and healthcare field (18%) and electromechanical equipment manufacturing (18%). Consumer goods and chemicals account for 6% of the total, environmental protection for 4%, "other" incubation centers for 14%, tourism and leisure for 1%, and culture and the arts for 7%.
- (6) Incubation center performance: In 2010, the government provided total funding of NT\$170 million to incubation centers. As of June 2010, Taiwan's incubation centers had successfully cultivated 1,551 start-ups, including 874 innovation-oriented start-ups. The total number of people working at firms located in incubation centers was 27,324. The cumulative total of patents secured by firms located in incubation centers over the years was 2,428; there have been 1,118 instances of technology transfer. 52 firms that had been cultivated in incubation centers have secured stock market or OTC listing. The cumulative performance of Taiwan's incubation centers over the period from 1997 to June 2010 is shown in Table 11-2-2.

In 2008, the SMEA began implementation of a new "Creating Value through Industry-University Collaboration" plan. One of the key tasks to be undertaken under this plan was the promotion of networks of industry-specific incubation centers. In line with the Executive Yuan's "Six Key Emerging Industries" strategy, it was decided to focus on the creation of incubation networks for the biotech and healthcare industry, the green energy industry, the cultural and creative industries, and the ICT applications industry. The aim was to adopt an industry-specific approach towards encouraging individual incubation centers to collaborate and share resources with one another, strengthen incubation guidance capabilities, and provide firms at different stages of the incubation process (pre-incubation, incubation, and post-incubation) with the specialist services they need in terms of technology R&D, IP strategy planning, market development, finance and financing, commercialization of R&D results, etc. The idea is that firms undergoing incubation do not need to move to another facility, or seek support from another organization, just because they have moved to a new stage in the incubation process; enterprises can obtain all the support they need from within the specialist incubation network.

Table 11-2-2 The Results Achieved by Taiwan's Incubation Centers

Performance		Year					Cumulative Performance, 1997 – June 2010
		2007	2008	2009	June 2010		
Inputs	Funding support for incubation centers (NT\$ millions)	172	176	175.4	170	2,202	
	SMEs cultivated by incubation centers	1,356	1,433	1,633	1,551	4,354	
Outputs	Innovation-oriented SMEs cultivated by incubation centers	577	418	835	874	1,649	
	Number of persons employed by firms located in incubation centers	27,133	35,345	28,038	27,324	83,773	
	Increase in capitalization of firms located in incubation centers (NT\$ billions)	5.2	6.6	6.4	2.3	60.7	
	(New venture capital investment) (NT\$ billions)	(1.796)	(2.839)	(3.943)	(1.004)	(18.946)	
	Ratio of outputs to inputs (increase in capitalization divided by total funding support)	30	37.5	36.57	13.5	27.56	
	No. of patents secured by firms located in incubation centers	416	402	484	-	2,428	
	No. of instances of technology transfer implemented by firms located in incubation centers	149	181	270	-	1,118	
	No. of firms cultivated by incubation centers that secured stock market or OTC listing	3	5	6	-	52	

Notes: 1 Ratio of outputs to inputs = increase in capitalization of firms located in incubation centers / total amount of funding support provided to incubation centers.

2. In principle, firms will normally be located in an incubation center for a maximum of three years; the figures for the number of firms cultivated and for the number of employees are based on the number of firms located in incubation centers in the year in question.

3. Increase in capitalization is the sum of additional venture capital investment and capital increments due to business expansion.

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

2. Establishment of Industry-specific (ICT Applications, Biotech and Healthcare, Green Energy, and Cultural and Creative Industries) Incubation Networks

To achieve effective coordination of the resources of Taiwan's incubator centers, so that they can make full use of their guidance resources to improve the start-up cultivation performance and overall competitiveness of specific industries, the government is working to establish a comprehensive, practical incubation mechanism that meets market needs, along with first-rate industry-specific incubation networks that can provide a full range of services to meet the needs of firms that locate themselves in incubation centers, thereby contributing to both the improvement and specialization of the incubation center system in Taiwan.

- (1) Improved incubation networks: 1. Special training courses are being provided to upgrade the quality of specialist incubation networks in Taiwan, with the aim of leveraging the technology, management and marketing guidance capabilities of the network members to support the development of the industries concerned. 2. Network resources are being integrated to provide comprehensive guidance services to the industries concerned.
- (2) Guidance and service: 1. Providing Taiwan's SMEs with industry-specific consulting and diagnostic services. 2. Planning and designing practicable service models and processes, and using the implementation of these service models and processes to promote industry-specific

industry-university collaboration projects, while also promoting the establishment of new start-ups in the areas concerned, and cultivating new groups of core SMEs.

- (3) Promoting the formation of incubation networks and organizing activities beneficial to industry upgrading, including manpower cultivation programs, procurement meetings, exhibitions, competitions, R&D results presentations, and assessment activities.

As of June 2010, 206 instances of industry-specific consulting, diagnostic and guidance service had been provided, and 76 industry-university collaboration projects had been initiated, worth a total of NT\$259.9 billion. In addition, 10 innovative specialist industry clusters had been launched (including digital cultural and creative industries, in-car communications, and care provision), and 27 firms had been helped to apply for government subsidies or guidance resources.

3. Establishment of a Resource Integration Platform for Industry-University Collaborative Research Projects

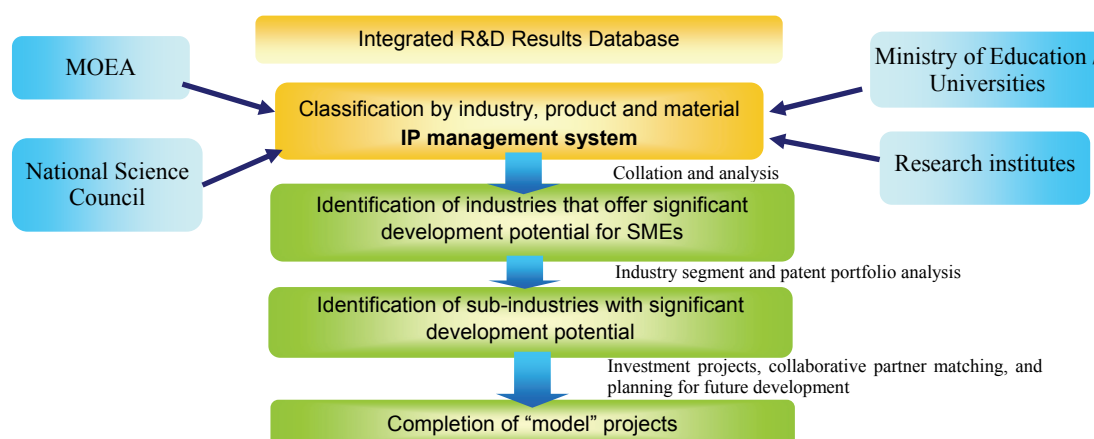
(1) Establishment of an Integrated R&D Results Information Platform

Establishment of an integrated R&D results information platform based on industry and product classification, bringing together on one platform the R&D results achieved by academic research institutions in Taiwan in relevant fields so that business enterprises can perform search targeting of specific industries or products, employing a user-friendly interface that meets enterprises' needs. This would be an integrated, cross-technology, cross-institution R&D results database (Figure 11-2-1).

(2) Promotion of Collaborative R&D within Sub-industry Clusters

With respect to opportunities for the development of new industries on which research has already been undertaken, collaborative R&D planning will be undertaken that integrates the activities of firms in the upstream, midstream and downstream segments of the same industry. This planning will cover technology analysis, analysis of the linkages between key technologies, analysis of key patents, and analysis of relevant R&D results. Planning will also be undertaken with respect to technology collaboration models and IP protection models, so as to stimulate the formation of industry clusters based on supply chain linkage, while also ensuring the effective utilization in industry of R&D results produced by universities and research institutes.

It is anticipated that, in 2010, the integrated R&D results information platform will be expanded to cover at least 20 industries, making available over 160,000 items of R&D results data for the use of SMEs, and helping incubation center staff to enhance incubation centers' ability to make effective use of the platform to strengthen their ability to provide guidance to SMEs. Objective planning and mechanisms for collaborative R&D aimed at product commercialization will be completed for the 3D display and LED lighting sub-industries, and at least 10 industry-university collaborative R&D projects will be initiated.

Figure 11-2-1 Industry-University Collaborative R&D Results Database

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

4. Promotion of SME Innovative Services Certification Subsidies and Grants, to Enhance SMEs' Innovative Service Development Capability

In line with national industrial development and technology policy, in 2010 the SMEA began promotion of the SME Innovative Service Certification Plan, to encourage SMEs to make effective use of the resources available from academic institutions and research institutes to develop innovative R&D services, thereby strengthening existing industry-university collaborative innovative service development capabilities, and stimulating market demand for this type of services, while also driving bi-directional interaction between industry and the university sector.

This project is being implemented on a trial basis in 2010, with 31 universities and colleges that have participated in industry-university collaboration development projects (and which have been approved by the Ministry of Education) acting as the knowledge-intensive service institutions, and with innovative service plans submitted by firms that are located in or have “graduated” from incubation centers in receipt of funding from the SMEA. Those firms that secure approval can obtain innovative service certification subsidies (or grants) of NT\$300,000, which they can use to access customized, innovative services from the knowledge-intensive service organization. The anticipated benefits of this program are as follows:

- (1) Technology integration innovation: It is anticipated that, following the selection and review process, at least 90 “SME Innovative Service Certificates” will be issued, leading (directly or indirectly) to the creation of over 180 technological breakthroughs and R&D planning service achievements, thereby helping SMEs to obtain genuinely useful technology support services and achieve breakthroughs in production technology.
- (2) Technology policy management: Instead of the government’s current supply-side-oriented R&D subsidy policy, a demand-oriented R&D support policy will be adopted. Besides providing a model for the future planning of SME R&D support optimization, this policy will

also be conducive to the formation of knowledge service networks that take into account the differing characteristics of industries in different regions. Whether in terms of R&D service talent cultivation, the creation of an environment that facilitates bi-directional interaction in industry-university collaboration projects, or the building of an effective support system for innovative R&D, this new policy can be expected to produce significant benefits.

- (3) Industrial and economic development: Through the technological breakthroughs and R&D planning services achievements outlined above, implementation of this plan will help to speed up the achievement of the goals relating to the promotion of industry-university collaboration that form part of the government's plan for strengthening the human resources of Taiwan's industry. In quantitative terms, the percentage of university R&D funding derived from industry will be doubled, to 10%; university revenue from technology transfer as a percentage of government subsidies will be doubled to 1%, and the number of innovation-oriented firms spun off from universities and colleges will also be doubled.

5. Implementation of the Plan for the Provision of Assistance to SME Technology Development by the University Sector, to Speed Up the Transformation of SME R&D Activity

Faced with competition from emerging, low-wage economies, and with the trend towards internationalization and regional economic integration that globalization has brought, Taiwan's SMEs are experiencing serious challenges. In order to help SMEs to change and innovate, and to adopt the new ways of thinking that will be needed to cope with the constantly changing global environment, in 2008 the Department of Industrial Technology, Ministry of Economic Affairs began implementation of the Plan for the Provision of Assistance to SME Technology Development by the University Sector, to help Taiwanese industry to upgrade itself by making effective use of the extensive R&D capabilities of the university sector. Expert diagnostic service is provided to help enterprises to develop their R&D activity, and to make use of the R&D subsidies available from the government. The idea is to make the university sector a long-term partner for enterprise development, thereby strengthening SMEs' core technology capabilities and enhancing the competitiveness of Taiwanese industry.

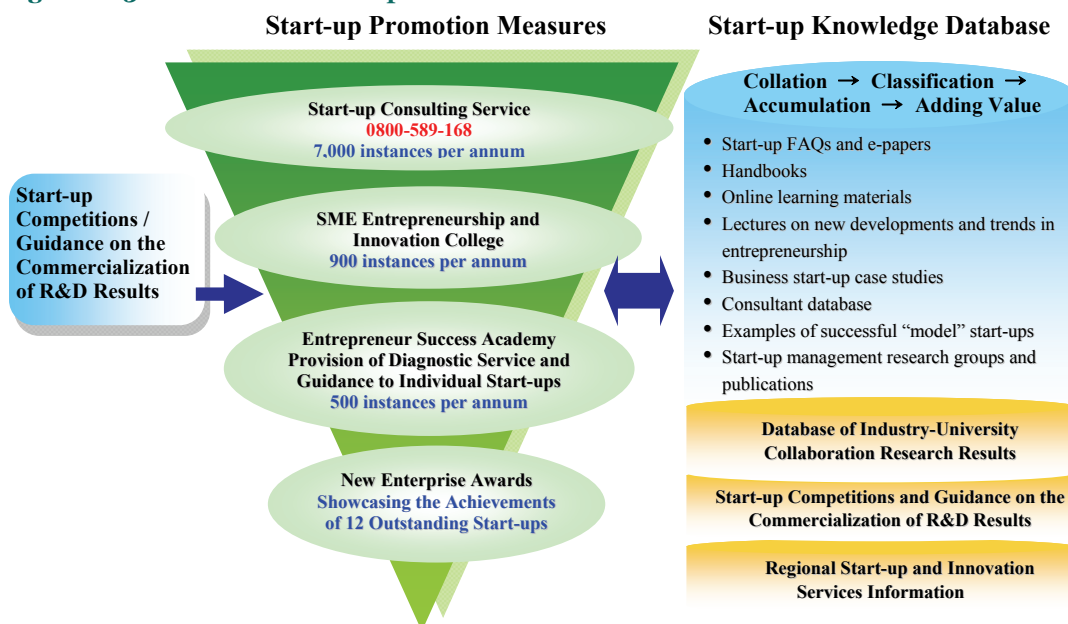
The Metal Industries Research and Development Center, which has been given responsibility for implementing the Plan for the Provision of Assistance to SME Technology Development by the University Sector, has brought together nearly a dozen foundations and institutes, including the Alliance of Innovation in Traditional Industry, along with 3,000 experts from almost 140 universities and colleges throughout Taiwan, to create an industry-university research value platform. Starting in Southern Taiwan, the program will gradually be expanded to include SMEs throughout the country. The industries to which guidance is being provided include the information, electronics, machinery, chemical, food products and biotechnology industries. By integrating innovative design, materials and manufacturing design with everyday household goods, the aim is to create value through innovation, achieving the maximum value-added effect from industry-university collaboration. As of June 2010, nearly 1,800 SMEs had benefited from the Plan. University and college experts had helped provide timely solutions to over 3,700 problems; assistance had been provided to help secure SME participation in 78

government research projects, involving a total of over NT\$280 million in R&D funding; SMEs had been helped to install R&D equipment worth a combined total of over NT\$400 million; SMEs had been helped to secure orders worth approximately NT\$2 billion, and more than 900 new jobs had been created.

III Building an Environment Conducive to New Business Start-up

With the aim of building an environment conducive to the establishment and development of new businesses, in 2004 the SMEA launched the New Business Actualization Plan (Figure 11-3-1), to provide entrepreneurs with a comprehensive business start-up roadmap. The idea is that entrepreneurs can choose the guidance resources they need according to the stage that they have reached in the new business establishment process, thereby shortening the business start-up learning curve, helping to minimize the obstacles that need to be overcome, and increasing the likelihood that the new business establishment will be successful. Different guidance resources are provided depending on the stage that the enterprise has reached in the start-up and growth process. As of June 2010, a cumulative total of 54,813 instances of business start-up consulting had been provided, and training had been provided for 14,868 start-up managers. In addition, the Entrepreneur Success Academy had provided guidance leading to the successful establishment of 1,501 new businesses, 124 new start-ups had received awards, a total of 8,398 new jobs had been created, and around NT\$7,879 million in private-sector investment had been stimulated.

Figure 11-3-1 Business Start-up Promotion Methods



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

In addition, the SMEA has been continuing to improve the start-up knowledge base function established to support implementation of the New Business Actualization Plan, and to strengthen

linkages with other resources. This includes the establishment of the Industry-University R&D Results Database, set up in 2009 to strengthen the commercialization of R&D results, and the promotion of the Start-up Competition Commercialization Guidance Plan, whereby presentations, business matching and other follow-up commercialization value-added activities will be used to help groups that have won start-up competitions to achieve successful commercialization of their ideas.

1. Guidance for the Commercialization of Award-winning Start-up Projects

In 2009, the SMEA Ministry of Economic Affairs launched the Plan for the Provision of Commercialization Guidance for Start-up Award Winners. The aim is to create systematic guidance mechanisms for creativity, innovation and business start-up, and to provide individual consulting and in-depth guidance services for the winners of domestic start-up competitions and other outstanding start-up projects with significant potential, as well as helping to match start-up projects with venture capital providers, thereby contributing to the emergence of more new businesses that are capable of creating significant economic value, and which can inject new vitality into Taiwan's SME sector. In 2009, out of 835 start-up teams that participated in business start-up competitions, 110 were selected to receive collaborative value-added guidance, and in-depth guidance and value-added commercialization services were provided for 37 start-ups. These efforts led to the successful establishment of 23 new firms. In addition, new business planning, IP management, technology transfer and referrals assistance were provided on 82 occasions, stimulating investment worth NT\$28.3 million.

The project implementation method and key work items are outlined below.

- (1) Selection of high-quality start-up candidates: Identification of teams and individuals that have participated in domestic innovation, creativity or business start-up competitions, and selection of those projects offering the most development potential for inclusion in the Plan for the Provision of Commercialization Guidance for Start-up Award Winners so that follow-up collaboration can be implemented to help them create value.
- (2) Provision of guidance and value-adding activities for outstanding new start-ups: The SMEA will provide individual consulting and in-depth guidance for outstanding projects, including customized market opportunities analysis, IP analysis and assistance with related applications, help with the finalizing of technology application and service concepts, technology and service concept appraisal and development, operational plan optimization, financing method evaluation, guidance on securing entry to an incubation center, and other value-added services.
- (3) Provision of follow-up value-added services for new businesses and new business opportunities: The Administration will help high-quality projects to negotiate funding assistance from venture capital providers, and will provide follow-up value-added services to support new business start-up, the creation of value from IP, and the development of new business opportunities from technology licensing or technology transfer, etc.

The results achieved in 2009 were as follows:

- (1) Out of 835 competition entrants, 110 were selected for collaboration on value creation.
- (2) 37 projects were selected for in-depth guidance and to receive value-added services aimed at assisting in commercialization; these efforts led to the establishment of 23 new enterprises.
- (3) The Administration assisted with 82 new business planning, patent and IP development, technology transfer and referral cases, stimulating a combined total of NT\$28.3 million in investment.

2. Providing Information and Consulting Services to Support New Business Start-up

To help would-be entrepreneurs and the owners of existing small businesses to make their dreams a reality, the government provides business start-up information and consulting services. These services help citizens to carry out the preparatory work that is necessary when starting a new business, thereby increasing the likelihood that their entrepreneurial efforts will be successful, stimulating the growth of the entrepreneurial spirit in Taiwan, and making Taiwan an ideal location for SME development. The key work items of the Business Start-up Consulting Service Plan are as follows:

- (1) Start-up consulting services covering enterprise management, marketing, finance, legal affairs, intellectual property rights, human resources, etc.
- (2) An “Electronic Kitchen Window” by using a virtual marketing platform to help new businesses develop their distribution channels.
- (3) Business Start-up Knowledge and Information Platform for a wide range of information relating to new business establishment, broken down by industry and function.
- (4) Business start-up e-papers relating to legal and regulatory issues, financing, general business news, and new concepts in business start-up on a monthly basis.
- (5) Business start-up periodicals by publishing various start-up management periodicals and handbooks.
- (6) Business start-up activities and lectures by holding conferences, seminars for the sharing of experience, international forums, etc.

3. Promotion of the SME Entrepreneurship and Innovation College

In response to the dawning of the new era of globalization and the knowledge economy, the SMEA has been promoting the SME Entrepreneurship and Innovation College project, which provides would-be entrepreneurs and owners of new businesses with an opportunity to undertake specialist training.

4. Providing Assistance and Guidance through the Entrepreneur Lab

The Entrepreneur Lab was established to provide assistance and guidance for would-be entrepreneurs and for SMEs that have been in existence for less than three years; it provides specialist consulting and guidance services to help entrepreneurs overcome the problems that they may experience when starting up or running a business. In-depth guidance is used to help new businesses get off the ground, with a wide range of activities to increase the likelihood of success when setting up a new business. The Entrepreneur Lab is helping to promote

entrepreneurship, strengthen new business establishment capabilities, create new jobs and revitalize the private sector. The Entrepreneur Lab's key work areas are as follows:

- (1) In-depth guidance for enterprise management for brand development planning and for securing professional certification, along with short- and medium-term consulting services.
- (2) Technology guidance and matching services for start-ups that, having received individual guidance, are also in need of technology matching services and for incubation centers and industry-university collaboration centers.
- (3) Business matching activities to promote exchange among would-be entrepreneurs, start-ups and investors for collaboration.
- (4) Marketing and media promotion to help new businesses to get exposure in the media, thereby increasing their brand recognition and opening up new marketing opportunities.
- (5) Business Start-up Awards to showcase start-ups that have developed innovative technology or services.

5. Honoring Successful Start-ups through the Business Start-up Awards

The Business Start-up Awards are held on an annual basis to encourage new businesses to actively develop new technology, new designs, new products and new services. All new businesses that have been established within the last three years and that are lawfully registered as business enterprises in Taiwan may take part. The Awards are divided into four sections: Technology-intensive niche industries; Innovative traditional industries; Strategically-important knowledge-based service industries; and Micro-enterprises. The top three firms in each section receive prize money of NT\$300,000, NT\$200,000 and NT\$100,000 respectively, along with trophies and commemorative plaques. The Business Start-up Awards help to identify new businesses with significant growth potential for the future. As of June 2010, 9 of the prize-winners from the First to Eighth Annual Business Start-up Awards had gone on to secure stock market or OTC listing or implement an IPO; 5 had been acquired by leading corporations; 6 had secured investment from a large enterprise or venture capital firm; 16 had gone on to participate in international exhibitions; and 15 had moved into an incubation center. Overall, the results achieved through the holding of the Business Start-up Awards have been very impressive.

The results achieved so far through implementation of the New Business Actualization Plan, along with the anticipated results for the remainder of the Plan implementation period, are shown in Table 11-3-1 below.

Table 11-3-1 Results Achieved through Implementation of the New Business Actualization Plan over the Period 2008–2011

Performance Indicator		Year				
		2008	2009	2010	2011	Total
Amount invested (NT\$ millions)		38.50	40.10	36.95	36.95	122.50
Benefits	Provision of start-up consulting services (instances)	7,000	7,000	8,000	8,000	30,000
	Cultivation of start-up managerial talent (instances)	840	840	700	700	3,630
	Provision of guidance to new SMEs (firms)	200	200	220	240	860
	Private-sector investment stimulated (NT\$ billions)	0.5	0.5	0.55	0.6	2.15
	New jobs created	1,000	1,000	1,050	1,100	4,150
	No. of firms honored through the Business Start-up Awards	12	12	12	12	48

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

IV Provision of Guidance for Female Entrepreneurial Activity

In 2007, the SMEA launched the Female Entrepreneurship Guidance Plan, which has helped many women to make their dream of starting their own business a reality. 2010 saw further integration of resources and capability expansion with the initiation of the Female Entrepreneur Cultivation Network Plan, which is specifically designed to provide a comprehensive range of resources and business matching platforms for female entrepreneurs in the cultural and creative industries, the hi-tech sector, the health and beauty field, and the software industry. By promoting the dissemination of entrepreneurial experience and knowledge, the Plan aims to encourage female entrepreneurs to focus on innovative, knowledge-intensive fields. As of June 2010, a total of 24,763 instances of consulting service had been provided under the Plan, and 7,349 start-up managers had been cultivated. In addition, guidance provided under the New Business Actualization Plan had brought about the successful establishment of 611 female-owned businesses, creating 4,602 new jobs and stimulating private-sector investment totaling around NT\$1,524 million.

By integrating the resources provided under the Female Entrepreneur Cultivation Network Plan with those provided by the New Business Actualization Plan, it has been possible to create a comprehensive service provision mechanism for female entrepreneurs.

In addition, the National Youth Commission has launched the Flying Goose Program to help solve the problems that women experience when starting their own business, increase the success rate of female entrepreneurs and improve the operational efficiency of female-owned businesses, while the Council of Labor Affairs, Executive Yuan has been implementing the BeBoss Plan, under which a range of different resources are provided to reduce the time that needs to be spent on preparation before starting a new business, and enable female would-be entrepreneurs to strengthen their own business start-up capabilities. Guidance measures implemented by the government in 2009–2010 that were of relevance to female entrepreneurs are outlined below:

1. Mechanisms for the Provision of Services to Female Entrepreneurs

(1) Free Consulting Service Hotline for Female Entrepreneurs

A toll-free hotline (0800-589-168) has been established to provide female entrepreneurs with friendly, expert consulting and guidance services. Consulting and guidance services are available over the phone, online, and in person.

(2) Compilation of the Female Entrepreneur Resources Handbook

The *Female Entrepreneur Resources Handbook* has been compiled to help women make effective use of the guidance resources that the government provides for entrepreneurs. The *Handbook* provides up-to-date information on government services and resources (including planning and loan information), so that female would-be entrepreneurs and new business owners can access the resources they need quickly and conveniently.

2. Strengthening Women's Business Start-up Capabilities

(1) Arranging Training Courses for Female Entrepreneurs

Working in concert with the SME Entrepreneurship and Innovation College, a set of training courses has been designed specifically for female entrepreneurs, so that women can increase their chances of successfully establishing their own business. In addition, grants are provided for research on female entrepreneurship, so that the resources of the university sector can be leveraged to gain a clearer understanding of the current state of female entrepreneurship in Taiwan, and put forward policy recommendations.

(2) The "Female-owned Business Concern Train"

The "Female-owned Business Concern Train" has been established to give female entrepreneurs meaningful opportunities to share their experience in new business establishment, and to provide management suggestions, psychological support and encouragement.

(3) Helping Female-owned Businesses to Participate in Award Schemes and Obtain Subsidies

The SME Start-up and Innovation Service Centers work to identify female-owned enterprises with significant growth potential and help them participate in award programs and apply for government subsidies.

(4) Encouraging Female-owned Businesses to Participate in International Activities and Events

Assistance is provided to help Taiwanese female-owned businesses to participate in international female entrepreneurship activities, thereby helping female-owned businesses and entrepreneurs in Taiwan to keep pace with international trends. Examples of the type of activity that female-owned businesses have been helped to take part in include the APEC Women Leaders' Network, the Global Summit of Women, the International Small Business Congress, etc.

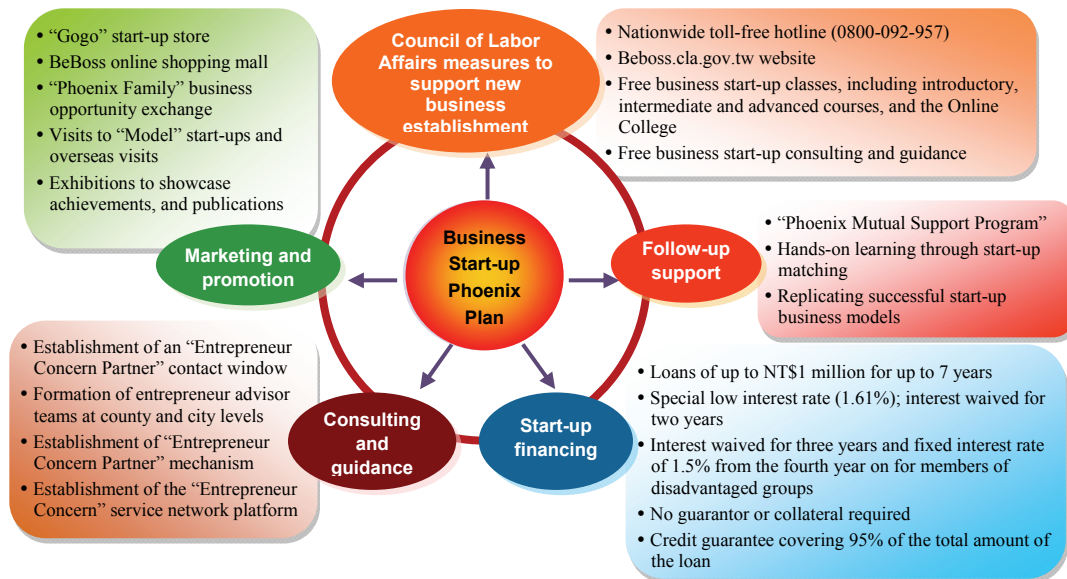
(5) The National Youth Commission Flying Goose Program

The National Youth Commission launched the Flying Goose Program to help solve the problems that women experience when starting their own business, increase the success rate of female-owned start-ups, and enhance their operational efficiency. Every year, 21 classes are arranged for female entrepreneurs, with a total of 1,950 women participating. Assistance is also provided to "graduates" of the scheme to help them strengthen their marketing and distribution networks, with the aim of promoting female entrepreneurship and boosting the capabilities of female-owned businesses, and female entrepreneurs are encouraged to participate actively in international exchange activities. In addition, efforts are being made to strengthen the function of local Flying Goose Program affiliated mutual assistance and liaison mechanisms, and subsidies are provided to civic organizations that undertake activities aimed to strengthening the cultivation of female entrepreneurship. In 2010, a new marketing course was launched under the Flying Goose Program. It is anticipated that a total of 10 classes will be offered with this course, which will focus on product marketing methods and hands-on practice; the aim is to cultivate the marketing knowledge and capabilities of young female entrepreneurs. Around 800 people are expected to enroll in this course.

(6) Council of Labor Affairs Measures to Support New Business Start-up – the Business Startup Phoenix Plan

The Council of Labor Affairs has launched the Business Startup Phoenix Plan to boost labor-force participation by women and the middle-aged, establish a business environment conducive to new business creation, and help women and the middle-aged to start their own microenterprises, thereby creating new jobs. The Plan also provides entrepreneurs with advisors, and help in securing credit guarantees and loans. The structure of the Business Startup Phoenix Plan and the implementation measures are shown in Figure 11-4-1.

Figure 11-4-1 Business Start-up Phoenix Plan – Implementation Measures



Source: Council of Labor Affairs, Executive Yuan, 2010.

To help middle-aged and female entrepreneurs secure financing, on February 16, 2009 the Council of Labor Affairs combined the existing Micro-enterprise Start-up Loan program and Phoenix Small-value Loans for Female Entrepreneurs program to create the Phoenix Micro-enterprise Loans program, which provides assistance in securing low-interest loans of up to NT\$1 million.

Business Startup Phoenix Plan implementation performance: As of the end of June 2010, a total of 310 introductory classes had been held nationwide under the Business Startup Phoenix Plan, with 26,502 people participating, and 150 advanced classes had been held, with 11,223 people participating. A total of 5,081 people have already started their own business after attending one of these classes (of which 1,704 were helped to obtain start-up financing), creating 14,742 jobs.

3. Organization of Mutual Assistance Networks for Female Entrepreneurs

The government has established the Female Business Owners Consultative Committee and Female Entrepreneurship Volunteer system to help get female-owned businesses in Taiwan

working together, and to facilitate the integration of relevant resources and information so that female entrepreneurs can secure more wide-ranging assistance. In this way, the process of new business establishment by female entrepreneurs can be made smoother, assisted by business matching activities that can help women to develop networks of personal contacts and build up experience. The SMEA and the Executive Yuan's Central Taiwan and Southern Taiwan Joint Services Centers have already assisted with the establishment of Northern, Central and Southern branches of the Female Business Owners Consultative Committee.

4. Information Exchange Platforms for Female Entrepreneurs

The government provides female entrepreneurs with a range of online consulting services through the establishment of information exchange platforms and provision of e-business guidance for female-owned enterprises; one example is the Female Entrepreneurs program that has been established within the New Business Actualization Plan. In addition, female-owned businesses are encouraged to develop new business opportunities (both in Taiwan and overseas) through websites such as the Women Village e-commerce site and the Women Business portal site.

5. Financing Support for Female Entrepreneurs

Funding is the most vital resource for female entrepreneurs. The following types of low-interest loan are available to women:

- (1) Young Entrepreneur Loans: The National Youth Commission, Executive Yuan provides Young Entrepreneur Loans for entrepreneurs aged between 20 and 45; to be eligible, they must be the owner of, or a shareholder in, a firm that has been in existence for less than five years.
- (2) Phoenix Micro-enterprise Loans: In 2009, the Council of Labor Affairs combined the existing Micro-enterprise Start-up Loan program and Phoenix Small-value Loans for Female Entrepreneurs program to create the Phoenix Micro-enterprise Loans program. These loans are available to women aged 20–65, and to men aged 45–65, who are the owners of or shareholders in a firm that has been in existence for less than two years; individual loans are capped at NT\$1 million.

CHAPTER 12

Revitalizing Local Economies and Promoting the Development of New Business Opportunities

Over the last few years, the government has been working actively to promote the development of “local cultural industries” and tourist itineraries that leverage the distinctive features of Taiwan’s local communities, while at the same time providing guidance to help SMEs in rural areas upgrade and transform themselves, thereby strengthening the features of individual localities that make each place special, and creating economic benefits for the local economy. “One Town, One Product” (OTOP) is a local cultural industry guidance plan the implementation of which began in 1989. It involves identifying local industries that have historical and cultural significance, are distinctive, and have the potential to provide significant economic benefit to the local community, and then arranging for specialist guidance teams to collaborate with business enterprises in these industries, making use of local resources, and adopting new products, technologies, creativity, services and branding concepts to refine and develop the industry and enhance its market competitiveness.

The Small and Medium Enterprise Administration, Ministry of Economic Affairs launched the Plan for Helping Local Cultural Industries to Create Value in 2008, to direct guidance resources towards supporting the development of local cultural industries in Taiwan. The Plan aims to foster the creation of “One Town, One Product” by leveraging the special characteristics of local industries, enhancing the value that industry value chains can create and developing both domestic and export sales of local cultural industries’ products. This was followed in 2009 by the launch of the ICT747 Plan, which uses information and communications technology (ICT) to help Taiwan’s traditional industries transform themselves and speed up the upgrading of Taiwan’s SMEs.

Other related initiatives include the Creative Lifestyle Industry Development Plan launched by the Industrial Development Bureau (IDB), and others. These projects seek to promote the development of local tourism, innovation and new business models, to encourage SMEs to participate actively in local cultural industry R&D, and to revitalize local economies by strengthening the competitiveness of local industries.

To ensure Taiwan’s continued economic development in the aftermath of the global financial crisis, besides the ongoing promotion of trade liberalization, the development of those industries that are more oriented towards the domestic market – and which have an important role to play in creating jobs and ensuring social stability – is also an important aspect of government policy. In 2009, the Executive Yuan allocated a budget of NT\$1 billion to establish the Local Industry Development Fund. Local government authorities will be proactively involved in

drawing up roadmaps and plans for the development of local cultural industries. The central government will provide funding support to help local governments put these plans into action, thereby supporting the development of local industries, with a particular focus on those areas that have low average income levels, are remote and underdeveloped, or have experienced substantial out-migration, so as to boost local employment opportunities. It is anticipated that this initiative will help to give Taiwan's local industries a brand new face.

I Strengthening Local Industries

1. The Plan for Helping Local Cultural Industries to Create Value

The SMEA launched the Four-year Plan for Helping Local Cultural Industries to Create Value (2008–2012) in 2008. The Plan, which has the “One Town, One Product” (OTOP) concept as its goal, uses “Taiwan OTOP” joint branding to promote products that embody a high quality image for Taiwan's local cultural industries, aiming to promote both domestic and export sales and stimulate the development of local tourist industries. The Plan also involves identifying those local cultural industries that have significant potential for developing international markets and helping them to upgrade their individual value chains, creating “bright spots” in the map of Taiwan's local cultural industries that can help to strengthen Taiwan's overall national image. The Plan for Helping Local Cultural Industries to Create Value is being implemented in two stages: the Integration and Value-adding Stage from 2008 to 2009, and the Network Deepening Stage from 2010 to 2011.

The vision is to “Use operational management guidance to encourage the firms that make up Taiwan's local cultural industries to expand from local markets to the national market, and from the national market to international markets, creating SME clusters that are globally competitive.”

The overall objectives of the Plan are as follows: (1) Promote the OTOP concept, using “Taiwan OTOP” joint branding to encourage the creation of new local cultural industry products and stimulate sales of local cultural industry products to tourists. (2) Use value chain integration to help local cultural industries create value, producing “bright spots” on the map of local cultural industries in Taiwan. (3) Promote the transmission of knowledge and experience within local cultural industries. (4) Establish resource integration platforms to help local cultural industries create synergy. (5) Encourage local cultural industries to adopt an international mindset and to innovate.

The guidance model involves the classification of local cultural industries into three categories: thematic industries, industries with potential, and regional industries. The implementation structure adopted for the Plan is shown in Figure 12-1-1.

The results achieved in the implementation of the Plan were:

- (1) Provision of guidance to thematic industries: This involves the selection of local cultural industries with significant export sales potential. In 2009, guidance efforts focused on the tea

industry; assistance was given to help enterprises in this industry take part in trade fairs and develop their distribution channels and brands, etc.

- (2) Establishment of the OTOP Local Cultural Industries website (<http://www.otop.tw>): The OTOP website is used to publicize information about industry developments and activities, for e-paper publication, and to implement online marketing, advertising and networking activities. As of 2009, the site had 27,858 members, and had been viewed by 370,000 visitors.
- (3) Taiwan OTOP display centers have been opened to help local cultural industries develop their marketing and distribution networks. In 2009, the display centers located at Kaohsiung's Dream Mall, the Taipei 101 Building, the Taichung (Wujih) High Speed Rail Station, and Sun Moon Lake in Nantou County, posted combined sales of NT\$14.18 million.

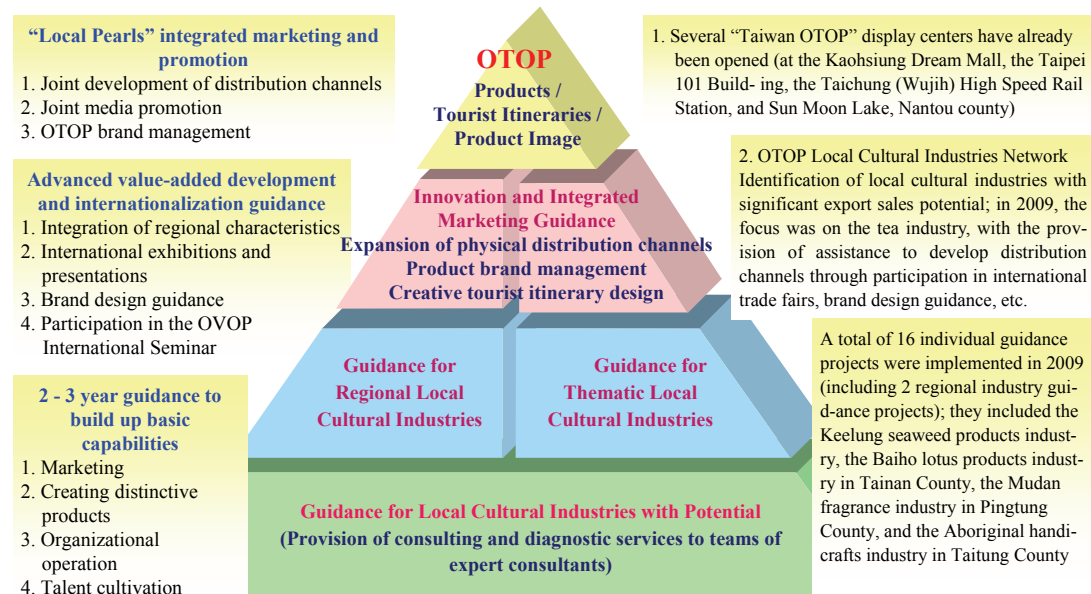
The results achieved by local cultural industries that have been in receipt of guidance during the last few years are shown in Table 12-1-1.

Table 12-1-1 Results Achieved by Local Cultural Industries That have Received Guidance in the Past Few Years

Item \ Year	2005	2006	2007	2008	2009
No. of instances of enterprise cultivation	2,046	2,142	2,273	2,408	2,243
No. of jobs created	1,461	1,491	1,644	1,825	1,713
No. of firms that received guidance	360	388	430	431	504
Additional revenue created (NT\$ thousands)	115,086	116,010	178,730	200,037	598,938

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

Figure 12-1-1 The Plan for Helping Local Cultural Industries to Create Value – Implementation Architecture



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

2. The ICT747 Plan to Revitalize Regional Economies

To help Taiwan's SMEs upgrade and transform themselves, stimulate local cultural development, attract tourists, create new business opportunities and strengthen awareness of Taiwan overseas, the SMEA has launched the ICT747 Plan to revitalize regional economies through value-added creation. The basic vision underlying this project is the "humanistic application of technology, and building LOHAS lifestyles in Formosa."

The ICT747 Plan has the following objectives: (1) Building local cultural industry clusters, developing a high level of local product brand recognition, and marketing local cultural industry products aggressively in specific target markets both in Taiwan and overseas. (2) Encouraging SMEs to make effective use of ICT to achieve growth, transform themselves, and develop the capability to innovate. (3) Establishing "model" local cultural industry clusters from which other industries can learn.

The main contents of the guidance provided under the ICT747 Plan are as follows: (1) Local industry planning, formation, product value-added development, and marketing. (2) Establishing innovation and certification platforms. (3) Providing guidance to help 2,000 small enterprises and micro-enterprises in local industries to adopt ICT value-added services. (4) Helping local industries to develop diversified marketing and to internationalize their operations.

In 2010, the main focus of guidance provision was on the development of four thematic industry clusters that are able to integrate physical operations with ICT in Ilan, Penghu, Pingtung and Taipei.

3. Promoting Industry Cluster Development at the Local Level

Recognizing the global trend towards "industry tourism" and the need for Taiwanese industry to upgrade itself, in 2003 the Industrial Development Bureau and the Central Region Office launched the Factory Tourism Guidance Plan. By developing factory tourism, traditional factories would be transformed into "tourist factories" with significant cultural and educational value, giving the enterprises concerned an opportunity to restructure themselves, and giving the general public new tourism and leisure options that are both fun and educational; factories that already have distinctive local character will be able to develop new business models through tourism that enable people to learn while they are enjoying themselves.

A model for tourist factory appraisal operations was introduced in 2008, making it possible for tourist factories to obtain certification. The results achieved through implementation of the Plan over the period 2006–2009 were as follows: The first stage was completed, with the selection of 53 factories in various industries throughout Taiwan to receive guidance; these factories will serve as "models" of factory tourism development. The Plan has already stimulated NT\$560 million in new investment by factories in Taiwan, and has led to the creation of NT\$510 million in tourism industry production value, while creating 374 new jobs, and attracting over 1 million visitors a year.

2010 has seen ongoing implementation of both introductory and advanced factory tourism guidance, with on-site visits to factories by the guidance teams. Manufacturing enterprises with

significant historical, educational or cultural value are being helped to transform themselves into tourism/leisure industry enterprises. The Plan helps firms to establish business models for tourist factory operation, develop themes to attract tourists, undertake comprehensive planning for the entire factory facility, set up tour guide systems and plan “experience” activities. The Plan is thus helping to invigorate factory tourism in Taiwan and to create new opportunities for achieving sustainable operation.

4. The Creative Lifestyle Industry Development Plan

The Industrial Development Bureau launched the Creative Lifestyle Industry Development Plan to help domestic industries transform and upgrade themselves, create new jobs, help enterprises to integrate cultural and creative elements into their operations, promote the development of innovative new products, services, locations and activities, and stimulate the adoption of new business models that can contribute to value-added creation and the development of new business opportunities.

The results achieved over the period 2003–2009 were:

- (1) Selection of 141 creative lifestyle enterprises, employing a total of 9,020 people; provision of consulting, diagnostic and guidance services to 889 firms, thereby helping to promote the adoption of new business models and stimulating industrial upgrading and transformation.
- (2) Raising cumulative total sales in the creative lifestyle industry to NT\$22.9 billion, thereby stimulating a major new trend in Taiwan’s economic development.
- (3) Promoting investment totaling over NT\$580 million, and an investment growth rate of 97%, thereby helping to drive industrial development along a new path.
- (4) Stimulating visits to creative lifestyle enterprises by around 5 million people a year.

5. The Local Industry Innovation Engine Plan

In 2008, the Department of Industrial Technology introduced a Plan to stimulate the development of local industries in individual counties and cities within Taiwan, thereby contributing to regional prosperity. The Plan involves integrating the capabilities of 18 foundations and research institutes, including the Industrial Technology Research Institute, Academia Sinica, and the Institute for Information Industry, to leverage the division of responsibility and “industry adoption” system that links individual research institutes with particular counties and cities so as to facilitate planning for the development of high-value-added industries and industry clusters in individual counties and cities.

As of the end of December 2009, implementation of the Plan had brought about the formation of 188 local R&D alliances, and had facilitated the formulation of 150 R&D subsidy plans, of which 108 had been approved by the relevant government authorities. These R&D alliances included a total of over 300 enterprises; the total amount of R&D spending generated was NT\$4.35 billion, of which the government provided NT\$1.75 billion through subsidies, with the participating enterprises contributing NT\$2.6 billion.

In 2010, the Department of Industrial Technology has continued to encourage foundations and research institutes to help business enterprises through the Plan. More than 72 local R&D alliance R&D projects have been drawn up and approved.

6. The Local Small Business Innovation Research (Local SBIR) Plan

The Ministry of Economic Affairs has doubled the amount of funding provided to municipal, county and city governments for the promotion of the projects. Since 2009, the Department of Industrial Technology has been working closely with individual municipal, county and city governments to implement the Local SBIR Plan.

7. The Local Business District Branding Development Plan

In 2008, the Department of Commerce launched the Four-year Plan (2008–2011). Applicants for participation in the Plan must be business district organizations, community development associations, community organizations, foundations or other registered civic organizations that have at least one year's experience in community building or special project guidance.

The Plan's service content will include: (1) Coordinating the operations of high-quality business districts towards the building of a strong brand image, and undertaking effective marketing of Taiwanese business district brands. (2) Cultivating local business talent, and building up the competitive advantage of local commercial environments. (3) Developing special tourist itineraries to link individual destinations together and integrate distinctive local activities with tourism, thereby helping to stimulate local economic development.

II Making Effective Use of the Local Industry Development Fund

In 2008, the Executive Yuan undertook planning for the establishment of a Fund to promote local economic prosperity by providing funding assistance in line with the development needs of local industries at the county and city level. It was anticipated that the Fund would help to transform the face of Taiwan's local communities, encouraging people to move back to their home areas from the big cities and from overseas, creating new job opportunities, and imbuing local economic development with new vigor. On August 22, 2008 formal approval was granted for the establishment of the Fund, and the central government would provide funding support. December 26, 2008 saw the promulgation of the *Local Industry Development Fund Receipts, Expenses and Custodial Operations Regulations*; a budget was allocated for the Fund in 2009.

1. Local Industry Development Fund Implementation Strategy

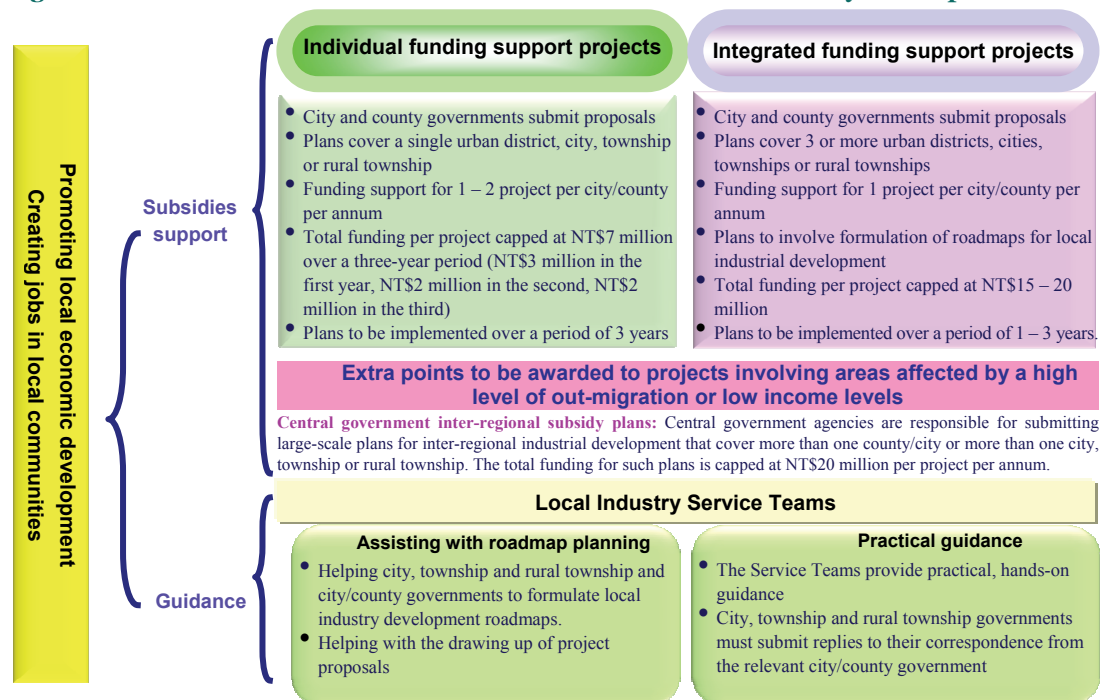
The implementation strategy for the Fund includes: (1) Helping local government authorities to plan the development of "local cultural industries." (2) Promoting enterprise management guidance and manpower cultivation to support the development of local cultural industries. (3) Encouraging local cultural industries to innovate in terms of their organizational structure, production capabilities, technology development, product design, marketing and service provision, technology applications, etc. (4) Providing guidance for local cultural industries that have the potential to internationalize themselves. (5) Undertaking coordinated promotion of the

humanistic and cultural aspects of local cultural industry development, including the development of special tourist itineraries and tourist attractions. (6) Helping local cultural industries to develop mini industrial parks and tourism areas. (7) Helping local cultural industries to redevelop unused assets and undertake landscaping work. (8) Undertaking other work related to local cultural industry development.

2. The Architecture for Utilization of the Local Industry Development Fund

To speed up the achievement of the objectives for which the Fund was established, on July 31, 2009 the Ministry of Economic Affairs approved the *Key Points Regarding Provision of Subsidies by the Local Industry Development Fund*, which specifies three types of subsidy provision: individual, integrated, and regional subsidy plans. The scope of subsidy provision includes: Helping local governments to plan local industry development, providing support for business management guidance, manpower cultivation, R&D, design and marketing, and supporting the Young Entrepreneur Plan, etc. In the project appraisal process, extra points are awarded for projects targeting areas with low income levels, or which have experienced severe out-migration, to help revitalize local industries and create new jobs.

Figure 12-2-1 Overall Framework for Utilization of the Local Industry Development Fund



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

3. Implementation Results

In fiscal 2009, a total of 59 applications were submitted for subsidies from the Local Industry Development Fund. After examination by the Fund's application review committee, 54 projects

(covering 22 counties and cities, and including examples of all three project types) were approved; the total amount of subsidies provided came to NT\$444.28 million.

In fiscal 2010, 163 subsidy applications were received. These included 126 individual subsidy projects, 34 integrated subsidy projects, and 3 regional subsidy projects. The application review process was completed on June 25, 2010, with a total of 58 projects being approved; the total amount of subsidies came to NT\$439.3 million. Approval by the Executive Yuan and public announcement of the subsidy recipients was completed in July 2010.

III The i-Care Plan for Providing Proactive Service to SMEs at the Local Level

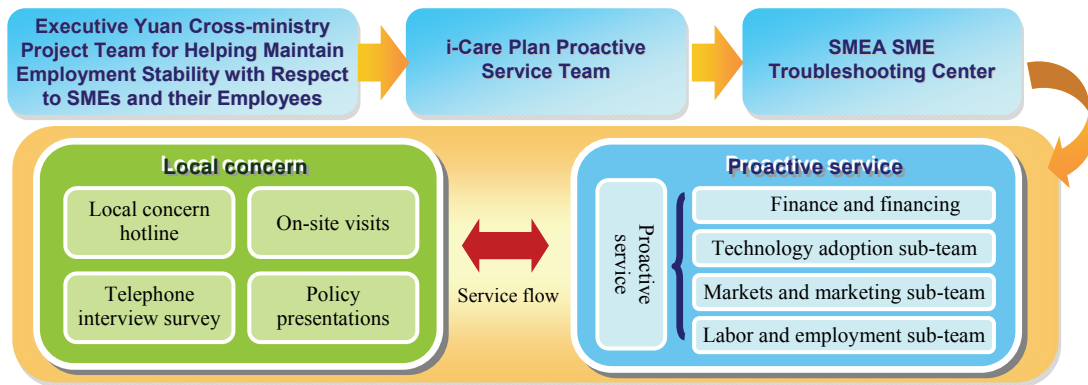
Taiwan's SMEs are having to deal with dramatic transformations in the business environment. The government has been working actively to help SMEs cope with these challenges; in line with the "Three Supports" policy (whereby the government supports the banks, the banks support business enterprises, and business enterprises support their employees), the government has been implementing the i-Care Plan for Providing Proactive Service to SMEs at the Local Level, using the "Local Concern Mechanism" and "Proactive Service Teams" to coordinate the allocation of central government and local government resources so as to help SMEs get through this difficult time.

1. Implementation Architecture and Operational Mechanisms

The Executive Yuan has established a cross-ministry Project Team for Helping Maintain Employment Stability with Respect to SMEs and their Employees, to coordinate the activities of the various government ministries and agencies, and oversee implementation of the i-Care Plan. The SMEA's SME Troubleshooting Center has given the i-Care Plan Promotion Office responsibility for compiling relevant statistics, undertaking analysis of SMEs' problems, reporting and assisting with special cases, passing on complaints and providing follow-up service. The i-Care Plan implementation architecture and operational mechanisms are shown in Figures 12-3-1 and 12-3-2 below.

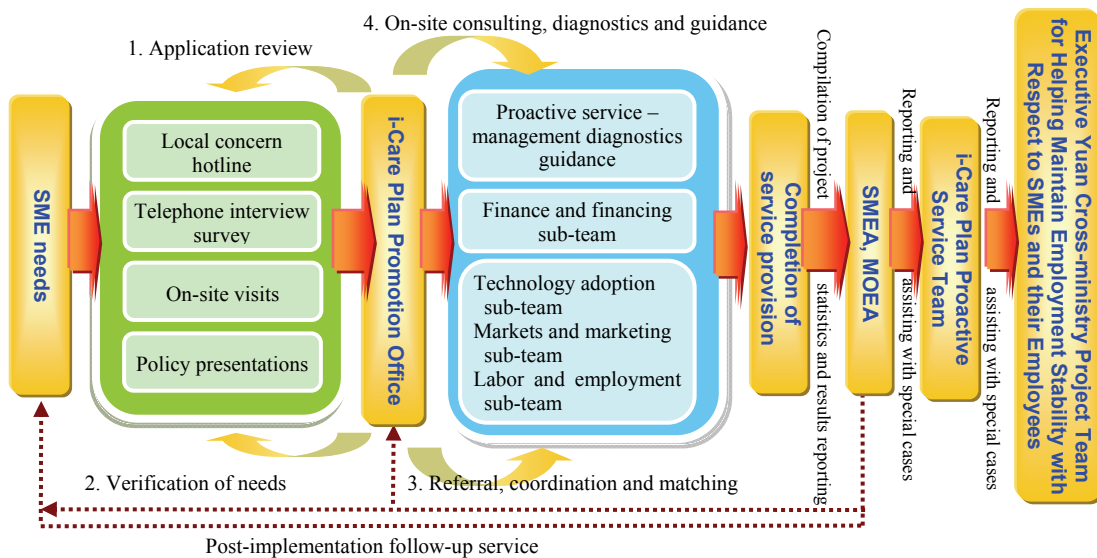
Since implementation of the Plan began, the Ministry of Economic Affairs has been contacted by over 10,000 SMEs. While most of the problems that they reported were to do with finance or financing, in-depth examination suggests that the root causes of these problems may relate to a falling off in the volume of orders, inadequate marketing capabilities, difficulty in upgrading or transforming the enterprise, and inadequate technological capabilities. Enterprises may be able to obtain the assistance they need in these areas from the New Zheng He Plan, being implemented by the Bureau of Foreign Trade, and from the Innovation Promotion Plan being implemented by the Department of Industrial Technology.

Figure 12-3-1 The i-Care Plan – Implementation Framework



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

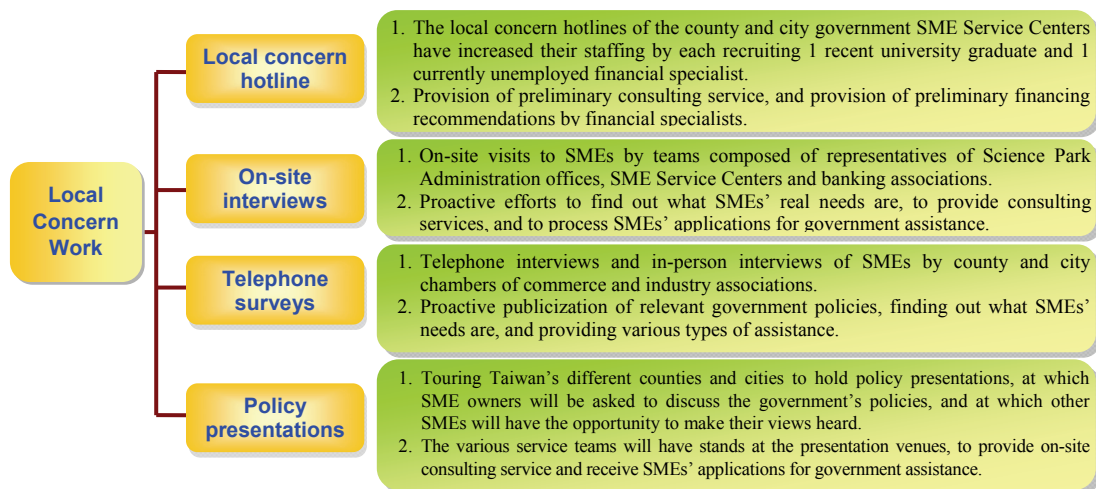
Figure 12-3-2 The i-Care Plan – Operational Mechanisms



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

2. The i-Care Plan – Work Items and Service Content

The main work items being carried out under the i-Care Plan are shown below:



3. Proactive Service Team Service Items and Service Content

- (1) Finance and financing sub-team: The finance and financing sub-team is able to utilize NT\$600 billion in non-SME project loan funding, as well as an additional NT\$300 billion in SME loan funding that was added on December 31, 2009, and the special measures introduced under the SME Credit Guarantee Fund "Golden Lever" project to facilitate access to financing and ensure more lenient treatment of dishonored bills, as well as help in arranging loan repayment extensions. In all of these areas, the aim is to provide supporting services at the local level.
- (2) Technology adoption sub-team: The technology adoption sub-team makes use of existing R&D and production technology guidance system implementation teams, employing consulting, special incentives, subsidies, guidance and other government resources to help business enterprises at the local level develop sales and strengthen cohesion.
- (3) Markets and marketing sub-team: The markets and marketing team uses domestic and international marketing resources to help business enterprises develop new markets.
- (4) Labor and employment sub-team: The labor and employment sub-team makes use of the existing Back to Work Plan and Short-term Skill Plus Program, as well as related employment guidance measures, to provide the help needed to boost employment stability.

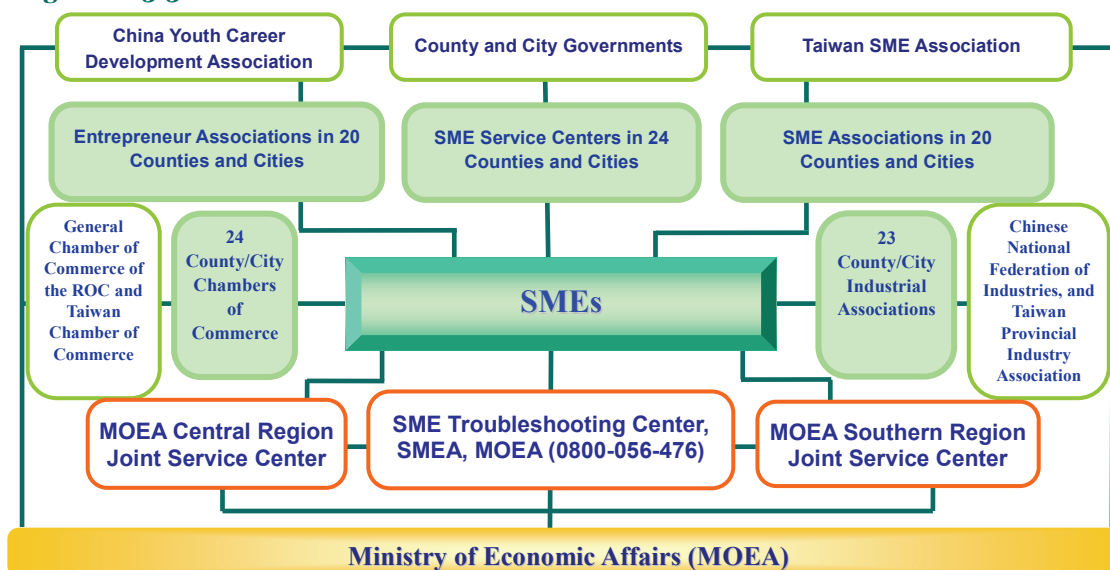
In addition, the Bankers' Association has also been collaborating with the Executive Yuan on implementation of the i-Care Plan, arranging for the major public- and private-sector banks to assign personnel to be stationed at the Local Concern Service Counters in the SME Service Centers of individual counties and cities throughout Taiwan, providing support for financing consulting services; this program is being implemented over the period January – June, 2009.

4. The SME Service Network and Consultation Mechanism

The main reason why the SMEA, Ministry of Economic Affairs has been working so actively to implement the i-Care Plan for Providing Proactive Service to SMEs at the Local Level is that Taiwan's SMEs are facing dramatic changes in the business environment. To help SMEs cope with the rapid pace of change and the challenges that they now have to overcome, the Administration has been working to integrate the resources of central government ministries and local government authorities. Any SMEs that have particular needs that they would like the government to help them meet can contact the Ministry of Economic Affairs' service network directly, making it possible for them to access the resources they need from close at hand.

To support the development of the 1.23 million SMEs that are to be found throughout Taiwan, the Ministry of Economic Affairs provides services to SMEs through the Central Region and Southern Region Ministry of Economic Affairs Joint Service Centers, which coordinate the provision of guidance and business service resources by the various agencies that make up the Ministry. The Ministry also makes effective use of the service capabilities of private-sector organizations; these include the SME Service Centers that have been established in the offices of county and city governments throughout Taiwan, the SME Industrial and Commercial Service Centers established by local industry associations and chambers of commerce, the National Association of Small & Medium Enterprises, and the SME Volunteer Guidance Instructors (Enterprise Service Volunteers) Association, etc. Together, these organizations combine to create a dense SME service network (Figure 12-3-3).

Figure 12-3-3 The SME Service Network

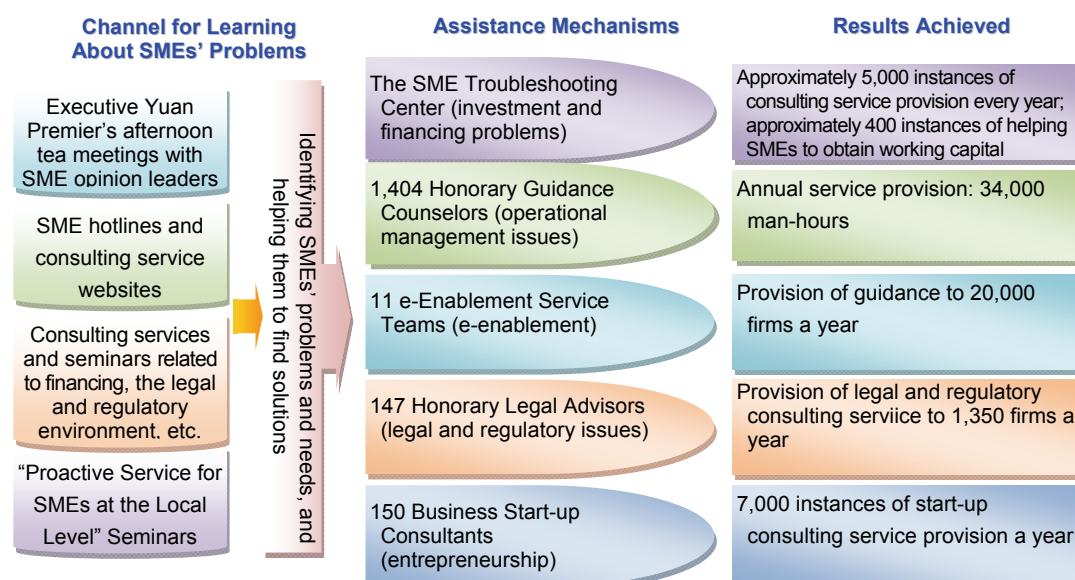


Note: Enterprises located in special zones (such as industrial districts, export processing zones and science parks, etc.) receive service provision from their respective industrial park or zone administration offices.

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

The SME service network functions in a bi-directional manner. It transmits the government’s service provision measures, helping SMEs to learn about and access the resources that are available from the government, while at the same time it also passes on SMEs’ queries and needs to government agencies, for their reference when formulating SME development policy. The results achieved by the SME service mechanism in 2009 are shown in Figure 12-3-4 below.

Figure 12-3-4 Channels for the Provision of Service to SMEs, and Results Achieved



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

5. The i-Care Plan – Implementation Results

The results achieved in the implementation of the i-Care Plan over the period from July 31 to December 31, 2009 are shown in Tables 12-3-1 and 12-3-2 below.

Table 12-3-1 Implementation of the i-Care Plan in 2009

Work Content	Category	No. of Referrals	No. of Instances of Service Provision
1. Telephone survey (local chambers of commerce and industry associations)	Local Concern Service Centers	59	121,317
2. Site visits (industrial parks and districts)	Industrial park, export processing zone and science park service centers	10	3,491
3. Local concern hotline	Proactive Concern Centers (toll-free hotline)	244	37,795
4. Other sources of service provision	Online inquiries, and cases reported by the project office and sub-teams, etc.	1,089	3,511
Sub-total		1,402	166,114
5. Policy presentations, forums, enterprise seminars, etc.		64 sessions / 5,098 instances	

Note: Statistics cover the period from July 31 to December 31, 2009.

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

Table 12-3-2 Proactive Service Provision Implementation Results in 2009

Work Content	No. of Cases Completed	No. of Cases Accepted	No. of Cases Currently Being Handled
1. Finance and financing sub-team	510	510	0
2. Technology adoption sub-team	194	194	0
3-1. Markets and marketing sub-team - domestic	93	93	0
3-2. Markets and marketing sub-team - overseas	106	106	0
4. Labor and employment sub-team	80	80	0
5. In-depth management consulting	526	526	0
6. In-depth management diagnostics	266	266	0
7. Management guidance	78	78	0
8. Other	1128	1,128	0
Total	2,083	2,372	0

Notes: 1. The “Other sources” category includes online inquiries, and cases reported by the project office and sub-teams, etc.

2. Applications for proactive service team local concern service had to be received by July 31; the data therefore covers the period from January 5 to the date of compilation of the table.

3. The “Other” category includes consulting service provided by the project office, as well as assistance provided other than by the sub-teams, or through referral to the guidance systems.

4. The statistics presented in the table cover the period from July 31, 2009 to December 31, 2009.

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

IV Helping SMEs to Develop New Business Opportunities, Develop New Markets and Strengthen Their Marketing Capabilities

The SMEA, Bureau of Foreign Trade and Commerce Department have formulated a number of business development and marketing plans to help Taiwan’s SMEs develop new business opportunities at home and expand into overseas markets. The aim of these projects is to assist SMEs in the development of new markets, in expanding their marketing and distribution channels (both in Taiwan and overseas), in raising the export competitiveness of their products, and in developing their own brands. The following sections examine the plans implemented in 2009–2010, focusing on the provision of assistance for market development and the provision of assistance for brand development.

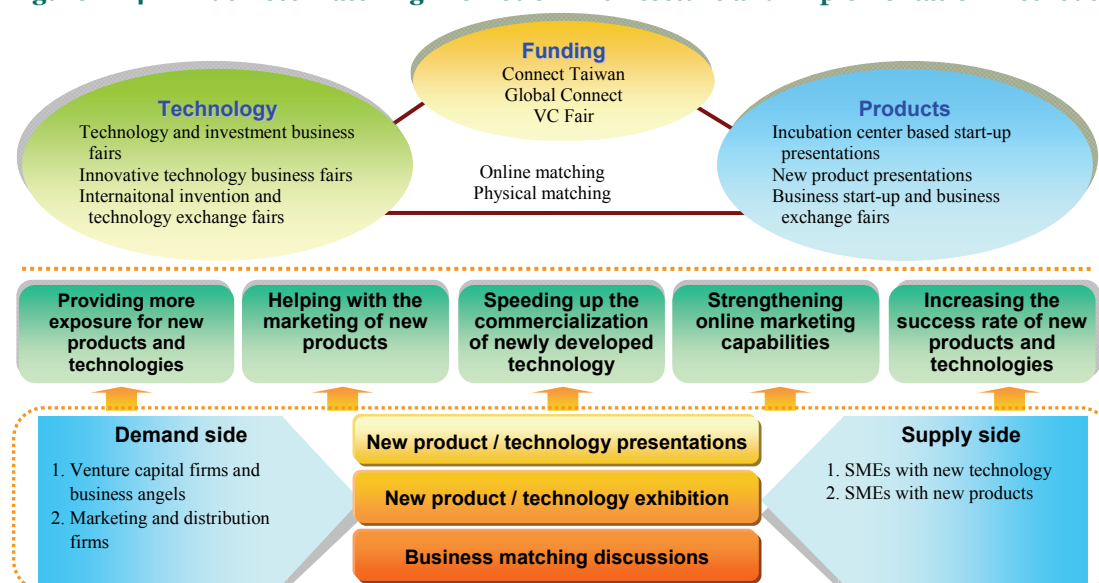
1. Assistance with Market Development

(1) Promoting Business Matching and Technology Development among SMEs

To help enterprises in both traditional industries and emerging hi-tech industries to develop the Taiwanese domestic market and access information relating to high-value-added technologies and products, in 2007 the SMEA launched the “SME Business Matching and Technology Exchange Train” activity, whereby the Administration would provide active support to help SMEs obtain intensive exposure for their new products within a short space of time, giving the general public an opportunity to familiarize themselves with these new products, while at the same time building new channels for marketing collaboration, so that the inventors of new technology can quickly find funding support to commercialize it, or can access key technologies that they require for successful commercialization. In this way, the SME Business Matching and Technology Exchange Train initiative contribute to ensuring that technology development conforms better to the market’s needs, and encourages the use of online platforms and resources

for product marketing and technology presentation. The architecture used for promoting business matching, and the implementation methods used, are shown in Figure 12-4-1 below.

Figure 12-4-1 Business Matching Promotion Architecture and Implementation Methods



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2010.

Implementation results in 2009 were as follows: 15 sessions of the Connect Taiwan, Global Connect and VC Fair activities were held, with a total of 612 enterprises and 101,264 people taking part. These activities led to 4,306 sets of business discussions, resulting in 392 successful instances of business matching, worth a total of around NT\$399.95 million.

(2) Providing Guidance to Help SMEs Develop Their International Marketing Capabilities

The SMEA has launched the SME International Marketing Promotion Guidance Plan to encourage Taiwan's SMEs to expand their international marketing activities, enable them to gain increased international exposure at minimal cost, and undertake collaborative development of overseas markets, thereby boosting the overall image of Taiwanese industry. The Plan's contents include the organizing of overseas marketing teams, the establishment of special display zones for SMEs at major international exhibitions and trade fairs held in Taipei, and helping SMEs to undertake international marketing over the Internet. As of the end of December 2009, a total of 492 firms had participated in these activities, creating business opportunities worth NT\$986.04 million.

(3) Marketing Guidance – Turnkey Plant Exportation Guidance

The SMEA launched the Turnkey Plant Exportation Guidance Plan in 1995, with the aim of providing long-term assistance through the establishment of consulting service contact points (for the development of both the domestic and overseas markets) to offer assistance with regard to business opportunities, legal and regulatory issues, tax issues, contract negotiation, import and export permits, technology patent search, government guidance resources, etc., as well as organizing turnkey talent cultivation activities, conferences and business matching activities, and providing support to help companies develop international marketing for turnkey plant

exportation. In the 15 years that have elapsed since then, turnkey plant exports have grown from NT\$35 billion to NT\$101.8 billion, the number of companies active in this field has risen from 300 to 826, and the number of countries in which turnkey service providers market their services has increased from 21 to 75. Since the late 1990s, the Administration has been helping Taiwanese companies to invest in factory establishment in Southeast Asia and China, as a result of which Taiwanese firms' performance in this industry has remained strong even after two decades. Not only are Taiwanese companies investing in Southeast Asia and China happy to use the services of Taiwanese turnkey plant service providers, but local companies are also eager to purchase turnkey plant services from them. As a result, the Taiwanese SME turnkey plant exportation industry has been able to maintain impressive growth performance. The main focus is:

1. Building a strong brand image for Taiwan's turnkey plant exportation providers: (1) Creating a strong "Made in Taiwan" brand image. (2) Providing increased brand exposure, improved name recognition, and a high reputation for reliability, for Taiwan's turnkey plant firms.
2. Helping SMEs with international marketing of turnkey plant services: (1) Participation in overseas exhibitions and trade fairs. (2) Organizing Taiwanese turnkey plant services industry trade delegations to visit other countries. (3) Strengthening interaction and exchange between turnkey plant service providers and customers. (4) Integrating SME supply chains and promoting micro-plant exportation. (5) Using international collaborative guidance projects to boost turnkey plant exports.
3. Strengthening turnkey service providers' knowledge and information capabilities: (1) Integrating relevant online resources to establish marketing websites specifically designed to meet the needs of turnkey plant service providers. (2) Establishing a database of turnkey plant suppliers and overseas customers. (3) Establishing a database of specialist human talent in the field of turnkey plant exportation. (4) Expanding the online turnkey plant services display function.

(4) Promoting an Across-the-board Expansion of Exportation Capabilities – the New Zheng He Plan

The Bureau of Foreign Trade, Ministry of Economic Affairs launched the "New Zheng He Plan" to encourage Taiwanese business enterprises to emulate the fearless, pioneering spirit of the famous Chinese mariner Zheng He by stepping up their development of export markets in response to the difficulties created by the global financial crisis. Implementation of the Plan began in 2009; implementation is focused on a number of key areas, including funding, markets, industry development, and capability building. The services being provided include:

1. Strengthening Export Financing and Insurance – the "Three Guarantees Plan"

The "Three Guarantees Plan," which seeks to strengthen export financing, re-financing and insurance (the "Three Guarantees") is being implemented to increase the international competitiveness of Taiwanese exporters by reducing funding costs and providing improved protection against trade-related risks. It is anticipated that NT\$5,582 million will be spent on the implementation of this Plan over the period 2009–2010.

2. Aggressive Development of the China Market – the "Pursuing China Project"

The “Pursuing China Project” which is intended to help Taiwanese food and beverage manufacturers increase their exports to China and secure a larger share of the Chinese domestic market, will involve the expenditure of NT\$1 billion over the period 2009–2010.

3. Strengthening the Development of Emerging Markets – the “Whale Trade Plan”

The “Whale Trade Plan” is intended to strengthen Taiwanese companies’ development of key emerging markets such as Russia, Brazil, India, Vietnam, Indonesia, the Middle East and Egypt in six key regions: Central and Eastern Europe, Central and South America, South Asia, the ASEAN member nations in Southeast Asia, the Middle East and Africa. It is anticipated that at least NT\$1.8 billion will be allocated toward the implementation of this Plan over the period 2008–2012.

4. Developing New Purchasing Opportunities – the GPA Project

The Government Procurement Agreement Project is being implemented to strengthen the ability of Taiwanese companies to secure international tenders, by building up a diversified business opportunities network, organizing conferences on business opportunities relating to government purchasing, securing new opportunities for Taiwanese firms to participate in government purchasing in other countries, and encouraging foreign companies that have secured government purchasing tenders to undertake purchasing in Taiwan, etc., thereby helping Taiwanese business enterprises to develop global government purchasing-related business opportunities.

5. Growing “Soft” Exports – The Service Industry Development Plan

The government has been implementing the Plan to Help Competitive Service Industries Develop International Markets, to help enterprises in Taiwan’s cultural and creative industries, healthcare services industry, “green” construction industry and information services industry to enhance their international competitiveness and develop overseas markets.

(5) Stepping Up Efforts to Encourage International Corporations to Undertake Purchasing in Taiwan

A variety of activities – including the Emerging Markets Purchasing Partner Conference, issuing of special invitations to foreign trade delegations and individual large foreign corporations, and encouraging buyers in emerging markets to undertake purchasing in Taiwan – will be used to get foreign buyers coming to Taiwan; a particular effort will be made to attract the interest of buyers in emerging markets and of large international corporations. The key implementation measures include: (1) Invitations to foreign trade delegations and individual large foreign corporations. (2) Encouraging buyers from emerging markets to visit and undertake purchasing in Taiwan.

(6) Promotion of the “Trade Warriors” Plan to Provide Support for Overseas Market Development

The Bureau of Foreign Trade, has formulated the “Trade Warriors Plan” to help Taiwanese SMEs based in Taiwan to develop emerging markets overseas. TAITRA will be dispatching personnel to the countries concerned for periods of 14 to 21 days at a time. Before leaving, they will carry out intensive research on the markets concerned; on returning to Taiwan, they will give touring presentations throughout Taiwan in which they provide businesspeople in Taiwan with detailed information about these overseas markets and the business opportunities that they offer.

(7) Encouraging Large International Corporations to Undertake Purchasing in Taiwan, to Speed up Taiwan's Transformation into a Global Procurement Center

The Bureau of Foreign Trade will be inviting large foreign corporations to send trade missions to Taiwan and undertake purchasing in Taiwan, focusing in particular on the electronics and IT, machinery and consumer products industries, to speed up Taiwan's transformation into a real "global procurement center." TAITRA will be mobilizing its more than 50 overseas offices to encourage foreign companies to undertake purchasing in Taiwan. In 2009, a total of 764 procurement cases were handled, and there were 10,796 instances of service provision to Taiwanese companies.

(8) Provision of Consulting and Appraisal Services to Help Taiwanese Enterprises Interested in Developing Overseas Markets to Establish Business Locations in Other Countries

The Bureau of Foreign Trade, Ministry of Economic Affairs has also been implementing the Plan for Helping Business Enterprises to Establish a Global Presence. The Bureau provides consulting services and appraisal reports in line with businesses' needs. The types of overseas business location that are covered by this Plan include: (1) Contact points and representative offices. (2) Sales offices. (3) Distribution warehouses. (4) Production locations. (5) Building collaborative relationships with local logistics service providers. The service content provided under the Plan includes: (1) Provision of feasibility studies and survey reports with respect to the establishment of overseas business locations; (2) Arranging visits to the countries concerned.

(9) Helping Companies to Develop Overseas Markets in Line with Their Own Specific Needs

The biggest problems that Taiwanese business enterprises encounter when trying to develop overseas markets or establish overseas business locations are: difficulty in recruiting suitable personnel; inadequate marketing capabilities; insufficient understanding of the characteristics of local workers; the excessively high cost of assigning Taiwanese personnel to work overseas, etc. With this in mind, TAITRA has launched the International Market Development Center sales promotion plan, whereby TAITRA personnel stationed at TAITRA's overseas offices provide assistance tailored to meet the needs of individual Taiwanese firms, helping them to develop overseas customers and identify business opportunities, and providing liaison and follow-up support.

Once a company has provided detailed information about its products and sales objectives, the personnel of TAITRA's overseas offices are responsible for assisting with customer development; they will provide regular written reports on sales promotion implementation status, and will help to arrange visits to potential customers (and visits by potential customers to Taiwan).

(10) Helping Taiwan's Machinery Manufacturers to Expand Their Distribution Networks, and Boosting Machinery Purchasing in Taiwan

The Taiwan Machinery Industry Distribution Channel Development Plan is being implemented to encourage overseas machinery distributors and agents that possess large-scale machinery display centers or distribution warehouses to increase their display of Taiwanese manufacturers' machinery products, and to expand the scale of their purchasing in Taiwan. The Plan seeks to

encourage major overseas machinery distributors to undertake procurement in Taiwan, and to help Taiwan's machinery makers to expand their overseas distribution networks. The industries to which this Plan applies include: machine tools; plastics and rubber products machinery; packaging and printing machinery; woodworking machinery; textile machinery; food processing machinery; turnkey plant services; die-making, etc.

Priority is being given to the development of emerging markets, with a secondary focus on the developed markets. The Plan is being implemented in the following manner: (1) Visits to machinery manufacturing industry associations and individual Taiwanese machinery makers, to find out what their needs are. (2) Arranging for TAITRA's overseas offices to collect information on machinery distributors in their region (including display centers and distribution warehouses). (3) Establishment by TAITRA of a database of machinery distributors in individual target markets. (4) Arranging for personnel from the overseas offices of TAITRA and the Ministry of Economic Affairs to visit individual machinery distributors, and to encourage them to make use of the purchasing services available from TAITRA. (5) Assigning specialist personnel to visit the target distributors. (6) Arranging for machinery manufacturer representatives attending international trade fairs to visit local distributors (7) Helping Taiwanese and foreign companies interested in establishing Taiwan Machinery Display Centers or distribution warehouses to hold presentations in Taiwan on overseas market opportunities. (8) Inviting representatives of medium-sized and large overseas machinery distributors to visit Taiwan, and encouraging them to expand the range of items that they purchase from Taiwan.

(11) Provision of Guidance to Specialist Textile Trading Companies, to Help Strengthen Their International Marketing Capabilities

The Bureau of Foreign Trade has been implementing the Plan to Provide Guidance to Specialist Textile Trading Companies, with the aim of helping Taiwan's textile firms to build partnerships with international buyers and overseas manufacturers, strengthening awareness of Taiwan's high-quality textile products among international vendors, expanding the supply chain of Taiwan's textile industry to include overseas locations, reinforcing the key position that Taiwan occupies within the global textile product supply chain, and helping textile firms to enhance their international marketing capabilities, thereby helping Taiwan to develop into a leading Asia-Pacific region textile order processing center.

(12) Helping Industry Associations to Undertake Trade Promotion Activities

The Subsidy Measures for Trade Promotion Activities have been drawn up in accordance with Paragraph 2, Article 20 of the *Foreign Trade Law* to help Taiwanese companies develop overseas markets. It is anticipated that the provision of subsidies to industry associations will help to enhance the results achieved through trade promotion activities.

The following types of organization are eligible to apply for subsidies for the holding of trade promotion activities: (1) Industry associations whose members are involved in import-/export-related activities. (2) Foundations and civic organizations that are involved in areas relating to foreign trade, or at least 50% of whose members have undertaken exportation in

the past. (3) Universities, colleges and other academic institutions. (4) Financial institutions involved in providing exporter insurance.

(13) Providing Exportation-related Services and Guidance to Help Taiwanese Companies Develop Overseas Markets

The Ministry of Economic Affairs Exporter Services Team was established on February 1, 1999. In line with the Team's aim of providing proactive service, it has been implementing the Exportation-related Services and Guidance Plan to help Taiwanese companies develop overseas markets. Regular tasks include the provision of individual guidance, helping firms to identify overseas business opportunities, the provision of international marketing and distribution consulting services, the dissemination of new knowledge relating to foreign trade, and the provision of government resources to help solve exportation-related problems.

The guidance methods used are as follows: (1) Helping firms to identify export-related business opportunities and access business information. (2) Visiting industry associations and importers/exporters to find out what their problems are and how best to solve them. (3) Providing guidance to help firms develop markets with significant potential. (4) Publicizing the government's latest trade measures, financing tools, etc. (5) Strengthening the marketing capabilities of exporters to help them develop overseas markets.

(14) Helping Business Enterprises to Develop Overseas Markets

The Bureau of Foreign Trade has been implementing a number of marketing guidance measures to help industries and enterprises that are particularly vulnerable to protectionist measures to strengthen their export competitiveness and develop international markets; in particular, the Bureau has been providing assistance for industries that the Ministry of Economic Affairs' Mechanism for Strengthening Guidance to Help Business Enterprises Adjust to the Impact of Trade Liberalization Project Team has deemed are in need of extra guidance. The main measures adopted include: (1) Organizing overseas trade missions and inviting foreign buyers to undertake purchasing in Taiwan. (2) Establishing special displays of famous Taiwanese products. (3) Helping firms to participate in specialist trade shows held in Taipei. (4) Providing subsidies to relevant industry associations to help them undertake overseas trade promotion activities. (5) Providing guidance to help enterprises develop their own brands. (6) Providing information about business conditions both in Taiwan and overseas. (7) Assisting with the cultivation of specialist international marketing talent. (8) Undertaking online sales promotion.

2. Assisting with Brand Development

(1) The Branding Taiwan Plan

The Branding Taiwan Plan is being implemented to coordinate the provision of resources to help business enterprises establish their own brands, to build an environment conducive to brand development, to help Taiwanese companies to establish international brands, and to enhance the international value of Taiwanese brands. The Plan involves the implementation of a range of measures – including creating an environment in which brands can thrive, implementing brand value surveys, operating brand development venture capital funds, strengthening the international

image of Taiwanese brands and products, building branding guidance platforms, and increasing the supply of specialist brand development talent – to support the development of brands by Taiwanese enterprises, with the ultimate goal of creating a business environment in which a wide range of different brands coexist. The Branding Taiwan Plan is being implemented over the period 2006–2012.

(2) Promoting Strategic Alliances with Leading International Brands

Taiwan's industrial structure is dominated by SMEs. Partly because of their limited scale of operations, and partly because of their orientation towards the Taiwanese domestic market, it is difficult for Taiwan's SMEs to develop strong brands. However, if SMEs are to move beyond low-margin contract manufacturing, they need to position themselves at the two ends of the "smile curve," where profit margins are greatest. To achieve this, SMEs should try to negotiate licensing agreements with leading brands, so that they can learn brand management techniques which will facilitate the establishment of their own brands and help them to raise the value-added of their products. There are many companies in Taiwan that have the potential to establish licensing agreements with leading foreign brands, but which have not been able to access the right channels to secure collaboration with these brands. The trend towards internationalization is an unstoppable one; the challenge is how to leverage the international brand recognition and brand power of foreign brands in combination with the manufacturing expertise of Taiwanese firms to enable Taiwanese enterprises to move on to the international stage, and licensing is the best way to achieve this.

To help Taiwanese companies make full use of their advantages in terms of design and manufacturing, develop overseas distribution channels, learn how to build up a strong international brand image, strengthen the value-added of their products and achieve high profit margins, in 2003 TAITRA launched the International Brand Alliance (IBA) Project. In this Project, TAITRA plays the role of "matchmaker," matching up Taiwanese manufacturers that have strong R&D, design and distribution capabilities with international brands. The idea is to build strategic alliances based on brand licensing, thereby helping Taiwanese firms to enhance the value-added of their products and develop overseas markets. The benefits that can be achieved by encouraging enterprises to form brand-focused licensing alliances are as follows:

1. Increasing visibility: Taiwanese firms can leverage international brands' existing brand reputation and brand value to build competitive advantage.
2. Learning how to brand: Enterprises can learn and acquire development techniques, manufacturing technology, design capabilities, management experience, etc. from their licensing partners.
3. Cross-industry collaboration: Licensing alliances can reduce the risk involved in entering new markets and developing new products.
4. Expanding distribution channels: Enterprises can join the existing sales networks of their licensing partners, thereby extending their own distribution channels.

Implementation results: Following visits by members of the project implementation team, detailed information has been collected on over 100 brands. There have already been nearly 20 examples of successful matching.

(3) Provision of Subsidies to Help Taiwanese Brands Develop Their Overseas Marketing Capabilities

The main objective behind the implementation of the Plan is to help Taiwanese brands expand their overseas marketing activities and develop international markets. To be eligible for the subsidies, firms must fall into one of the following categories: (1) A winner of the 17th or 18th Annual Ministry of Economic Affairs Taiwan Excellence Awards. (2) A winner of the 20 Leading International Brands in Taiwan Awards. (3) A winner of the Taiwan Superior Brands Award. (4) A winner of any other Ministry of Economic Affairs international brand award. (5) A firm that has previously received brand management system or joint brand guidance under the Branding Taiwan program initiated by the Bureau of Foreign Trade. Applicants must also be seeking to undertake international marketing activities that will contribute to raising the brand's international brand recognition or brand visibility. The subsidy items and amounts are as follows:

1. International sales promotion activities: These may be any sales promotion activities that will help the enterprise to raise its international brand recognition or brand visibility (ideally, the activity should also be related to one of the Ministry of Economic Affairs' award schemes).
2. No individual subsidy may exceed 50% of the total budget allocated for these subsidies by the Bureau of Foreign Trade, and subsidies are also capped at NT\$1.5 million (inclusive of tax); no single enterprise may receive more than one subsidy a year.

(4) Provision of Guidance to Help Industry Clusters Develop Joint Branding and Brand Endorsement

To contribute to the coordinated development of international joint branding, in line with the government's efforts to promote local industry clusters and provide guidance for the development of traditional industries, the Bureau of Foreign Trade has been implementing the Plan for the Provision of Guidance to Help Industry Clusters Develop Joint Branding and Brand Endorsement, to provide assistance for brand establishment, brand strategy formulation and brand management.

To benefit from this initiative, firms must meet the following criteria: (1) Applicants must be lawfully registered as business enterprises in Taiwan, must have a record of past exportation activity, must belong to a key industry that the government is working actively to promote, and must be part of a team or group of at least five companies or enterprises. (2) The enterprise team must be able to submit a letter of recommendation from their industry cluster's local industry association or chamber of commerce, certifying that the enterprises are members of the organization in question, and that they have a strong interest in developing joint branding and brand endorsement. (3) Priority will be given to teams formed from enterprises that have previously received guidance relating to quality management, technology, design, etc. from the government or from a foundation holding juristic person status, or that belong to industries in receipt of guidance from the government, and which seek to develop joint branding or brand endorsement, as well as teams formed from enterprises belonging to the 12 industries designated

as being particularly sensitive to the impact of the ECFA agreement, including the hosiery, footwear, underwear, woolen garments, towel manufacturing, bedding, packing materials, swimwear, garment, ceramics, stone materials and home appliances industries which seek to develop joint branding or brand endorsement.

(5) The Taiwan Excellence Awards

The Taiwan Excellence Awards are held to encourage business enterprises to attach importance to product quality, design, innovation, marketing and brand development, so as to enhance the international image of Taiwanese brands. There are three categories of award: Taiwan Excellence Awards, Taiwan Excellence Silver Awards, and Taiwan Excellence Gold Awards. The winners of the Taiwan Excellence Gold Awards and Taiwan Excellence Silver Awards are chosen from among winners of the Taiwan Excellence Awards. Products must score highly on four criteria – R&D, design, quality and marketing – to be selected for an award; for all four criteria, innovation value is the most important factor. Winners of the Taiwan Excellence Awards are allowed by the Ministry of Economic Affairs to make use of the “Taiwan Excellence” mark. Since 1993, a total of 5,425 products have received Taiwan Excellence Awards, and the government’s Branding Taiwan program has been used to publicize and promote these outstanding products all over the world, thereby helping to enhance Taiwan’s international brand image. The list of winners of the Taiwan Excellence Gold Medals in the 18th Annual Taiwan Excellence Awards is given in Table 12-4-1 below:

Table 12-4-1 The Winners of the Taiwan Excellence Gold Medal in the 18th Annual Taiwan Excellence Awards

	Brand	Name of Product	Name of Company
1	BenQ	BenQ eReader	BenQ Corp.
2	D-Link	DIR685 Xtreme N wireless storage router	D-Link Corp.
3	ASUS	EeeKeyboard PC	ASUSTek Computer Inc.
4	weplay	Wavy Tactile Path	Kiddie’s Paradise Inc.
5	Thunder Tiger	Neptune EP Submarine SC	Thunder Tiger Corp.
6	SYM	SYM GTS 300i EVO motorcycle	Sanyang Industry Co.
7	LUXGEN	Luxgen 7 MPV	Luxgen Motor Co.
8	HIWIN	Ecological & Economical Single Axis Robot	Hiwin Technologies Corp.

Source: “Branding Taiwan” website (<http://www.brandingtaiwan.org/>).

CHAPTER 13

Participation in International Affairs and Other Related Resources

I Participating in International SME Meetings and Events

The Small and Medium Enterprise Administration (SMEA) of the Ministry of Economic Affairs (MOEA) has been involved in the promotion of the internationalization of Small and Medium Enterprises (SMEs) and international cooperation in accordance with the Act for the Development of Small and Medium Enterprises. Through its active participation in regional SME and multilateral trade and economic cooperation organizations, the SMEA endeavors to strengthen bilateral SME development and cooperation on and exchange of SME guidance experiences, and to analyze SME guidance policies and measures and important issues around the world. The purpose is to help SMEs achieve growth, internationalization and a global deployment strategy. From 2009 to 2010, the SMEA hosted or participated in the following international SME meetings:

1. Participation in the OECD Round Table on the Impact of the Global Crisis on SME and Entrepreneurship Financing and Policy Responses

The Organization for Economic Cooperation and Development (OECD) Round Table on the Impact of the Global Crisis on SME and Entrepreneurship Financing and Policy Responses was held in Turin, Italy from March 26 to March 27, 2009, and Taiwan's representatives spoke at the conference about the measures the government had taken to help SMEs respond to the financial crisis, such as the three support policies; enhancing financing and credit guarantees to SMEs, providing support and services to local SMEs (ICARE) and the SME Business Start-up Navigation Project, as well as exchanging views with participants from other parts of the world. Mr. Salvatore Zecchini, current Chair of the OECD WPSMEE Informal Steering Group on SME and Entrepreneurship Financing, accepted an invitation to participate in the APEC Symposium on SME Strategies to Manage the Impacts of the Global Financial Crisis, held in Taipei in June 2009.

2. Hosting the APEC 28th SMEWG and Related Meetings

The 28th Asia-Pacific Economic Cooperation (APEC) Small and Medium Enterprises Working Group (SMEWG) and related meetings were held from June 8 to June 12, 2009, in Taipei. The APEC Symposium on SME Strategies to Manage the Impacts of the Global Financial Crisis was held from June 8 to June 9, 2009, and the APEC 28th SMEWG meeting was held from June 10 to June 12, 2009, allowing Taiwan to continue to voice its views in this international arena and actively demonstrating Taiwan's commitment to fulfilling its responsibilities to the international community.

(1) Organizing the APEC Symposium on SME Strategies to Manage the Impacts of the Global Financial Crisis

The 2-day symposium focused on the impact of the financial crisis on SMEs, strategies of SMEs to manage a credit crunch and reduced liquidity, how financial institutions can assist SMEs to survive the crisis, the stable partnership between large corporations and SMEs, the effect of the financial crisis on women's enterprises, as well as how to carry out government policies, expand markets, facilitate innovation and entrepreneurship, and implement human resources strategies in a flexible manner, providing recommendations to SMEs both at home and abroad on managing risks and taking relevant measures to survive the current financial crisis. The seminar attracted the enthusiastic participation of 400 industry, government, academia and research elites and opinion leaders from 20 APEC member economies.

The APEC Symposium on SME Strategies to Manage the Impacts of the Global Financial Crisis was the first major conference organized by APEC to address the financial crisis. The results of the meeting would form a basis for APEC member economies to assist their SMEs. In addition to presenting the country's SME guidance strategies on development and administrative experiences in reducing risks in response to the financial crisis and other relevant topics, Taiwan also held discussions with representatives of all APEC members and drafted the Principles and Checklist of Financial Crisis Management for APEC SMEs, which was submitted to the APEC SME Ministerial Meeting as policy recommendations for member economies in assisting with the development of their SMEs.

(2) Hosting the 28th APEC SME Working Group Meeting

The 28th APEC SME Working Group meeting, jointly hosted by Taiwan and Singapore from June 10 to June 12, 2009, was a success. SME-related issues have always been important for APEC members. Taiwan's role in urging the organization to address SME concerns in managing the financial crisis was greeted enthusiastically by member economies. This not only represented a particularly meaningful event for both Taiwan and APEC but also highlighted Taiwan's contributions to the organization.

3. Participation in the 54th and 55th Annual Sessions of the ICSB Conference

The ICSB was established in 1955 and is one of the major international SME organizations. It is headquartered in George Washington University, Washington D.C. The organization's main focus is on the research of SME-related theory and practice, and it regularly publishes academic journals and membership newsletters. The ICSB currently has 11 affiliates and chapters with more than 2,500 members in over 60 countries. Its major members comprise four groups: SME policymakers, business owners, students, as well as teachers and researchers in the SME field. The affiliated organization in Taiwan (ICSB-ROC) was established in June 1999, and the China Youth Career Development Association (CYCDA) is currently assuming the role of secretariat on behalf of the organization.

The 54th ICSB Conference was held from June 21 to June 24, 2009 in Seoul. The theme of the conference was "The Dynamism of Small Business: Theory, Practice, and Policy." The 55th

ICSB Annual Conference was held in Cincinnati, Ohio, from June 24 to June 27, 2010, with the theme of “Entrepreneurship Bridging Global Boundaries.” Director Lai of the SMEA was invited as a keynote speaker. Members from industry, government, as well as the academic and research communities joined and participated together in these two conferences. Through topical speeches and activities such as the publication of research papers on business entrepreneurship, experience and results in the development and guidance of SMEs were shared and connections with the international community network were expanded.

4. Attending the 16th APEC SME Ministerial and Related Meetings

The 16th APEC SME Ministerial Meeting was held from October 8 to October 9, 2009, in Singapore. The theme of this meeting was “Help SMEs Access Global Markets and Overcome Trade Barriers” and the meeting focused on three key areas: (1) Helping SMEs position for growth after the crisis; (2) Developing SMEs’ market access capabilities; (3) Supporting implementation of the APEC SME Working Group’s Strategic Plan.

Mr. Hwang Jung-chiou, Deputy Minister of Economic Affairs, attended the meeting with a delegation and delivered a speech entitled “Overcoming the Impact of the Financial Crisis and Supporting the Growth of SMEs,” sharing Taiwan’s experiences in dealing with and surmounting the financial crisis.

In order to enhance the capabilities of SMEs in APEC member economies to respond to the crisis, Deputy Minister Hwang asked APEC members in the meeting to support Taiwan’s proposal for an “APEC SME Crisis Management Center” to help SMEs manage various global challenges and to provide relevant recommendations. During the Ministerial Meeting, Deputy Minister Hwang held bilateral talks with a number of member economies to promote Taiwan’s cooperation with them in SME-related matters.

The most important outcome of this meeting was the Joint Ministerial Statement. The main point of the statement was to “Help SMEs Access Global Markets and Overcome Trade Barriers.” Member economies unanimously agreed in principle to help SMEs gain access to global markets through business facilitation, structural adjustment, the elimination of protectionism and trade barriers, as well as the removal of related regulations. They also submitted this statement to the annual Ministerial Meeting and Economic Leaders’ Meeting held in November 2009.

In order to actively promote the development of market research and the capacity to gain market access, in the meeting Taiwan proposed forming a research group to assess the feasibility of establishing an APEC SME Market Research and Capability Development Centre (SMRC) with Brunei, Indonesia, Malaysia and Singapore. In addition, to continue promotion of the four-year (2009-2012) strategic plan of the Working Group, Taiwan will serve, together with Thailand, as a champion economy for the priority area “building capabilities for management and promoting entrepreneurship,” providing leadership in achieving various key project indicators and carrying out related tasks, the details of which are also listed in the Joint Ministerial Statement.

5. Hosting the APEC Experts' Meeting on the APEC SME Economic Crisis Monitor

The Experts' Meeting on the APEC SME Economic Crisis Monitor was organized by the APEC SME Crisis Management Center from May 21 to May 22, 2010, in Taipei. Members of the monitoring group were invited to the meeting to discuss the construction of an APEC SME crisis monitoring framework with consultants. A total of 17 domestic and foreign experts participated in discussions on the establishment of a crisis monitoring mechanism, including monitoring indicators, scope, newsletter compilation and other related tasks. After a series of discussions the experts reached a consensus on the development of monitoring indicators required by SMEs, which would be defined in APEC's official language (English). Taiwan would translate the newsletters into Chinese and make them available for download by domestic enterprises. The first issue of the newsletter was published in July 2010. Taiwan also delivered the results of this meeting at the APEC SME Working Group meeting held in Hong Kong from June 9 to June 10, 2010, to encourage member economies to participate in the monitoring work. Relevant portions of the newsletter were also translated for the benefit of SMEs in Taiwan.

6. Establishing an APEC SME Crisis Management Center

Given the lack of crisis management resources and response capabilities on the part of SMEs, the SMEA proposed at the 2009 APEC SME Ministerial Meeting the establishment of an "APEC SME Crisis Management Center" in Taiwan, which received the unanimous support of APEC member economies and was accepted as part of the official statement of the 2009 APEC SME Ministerial Meeting. The APEC Economic Leaders' Statement also emphasized the importance of helping SMEs in the Asia-Pacific region to respond to the global financial crisis, as well as their determination to enhance the capacity of SMEs to manage the crisis.

The APEC SME Crisis Management Center was officially established on May 24, 2010, and was the first APEC Center based in Taiwan. The objectives of the Center are to assist SMEs of APEC member economies to manage a variety of cross-border financial risks and challenges as well as to enhance their emergency response capability in the face of economic crises.

The APEC SME Crisis Management Center has the following five major functions: (1) distribution of the monthly newsletter APEC SME Economic Crisis Monitor; (2) analyzing the impact of major international events on SMEs, (3) organizing SMEs crisis management symposia, (4) creating the Management Center website (www.apecscmc.org), and (5) providing SMEs in APEC member economies with crisis advisory services.

7. Organizing SME Crisis Management Symposia

To provide assistance to SME business owners in the understanding of international economic development trends and crisis response strategies, the "Crisis Management Symposium for SMEs" was held on May 24, 2010, in Taipei. High-ranking officials in charge of SMEs in APEC member economies, renowned scholars and international experts were invited to present speeches and serve as forum panelists on the following topics: "Globalization and the Global Financial Crisis," "The Impact of the Global Financial Crisis on SMEs," "Post-crisis Opportunities and

Risks Facing SMEs,” “How SMEs Should Respond to the Impact of Trade Liberalization” and “Operating Mechanisms of Global Financial Markets.”

8. Bilateral Exchange and Cooperation

In coordination with bilateral Minister and Vice Minister-level economic cooperation meetings, the following bilateral SME development cooperation projects were launched:

(1) Memorandum of Agreement between Taiwan and South Africa on SMEs

To implement the resolutions adopted at the “Fifth Taiwan-South Africa Economic and Trade Consultative Meeting” and to enhance bilateral SME cooperation and development between Taiwan and South Africa, a Memorandum of Agreement between Taiwan and South Africa on SMEs was signed in October 2009 as the basis for the two countries to promote bilateral cooperation projects and personnel training. The memorandum provides a framework in which projects such as “The International Best Practice Exposure Program: Learning from the Taiwan Experience” will be implemented in each 3-year period to help members of South Africa’s SME Bureau, Ministry of Trade and Industries, receive training in Taiwan. South Africa’s SME Bureau has sent trainees to Taiwan twice thus far: once in 2009 and once in 2010.

(2) Memorandum of Agreement on Cooperation in SME Food Development Technology between Taiwan and the Philippines

To implement the resolutions adopted at the 15th Taiwan-Philippines Economic Cooperation Meeting and to enhance bilateral SME cooperation and development, the two countries signed a Memorandum of Agreement on Cooperation in SME Food Development Technology between Taiwan and the Philippines on February 12, 2009, at the conclusion of the 16th Taiwan-Philippines Economic Cooperation Meeting. As a follow-up action to the agreement, representatives from the SMEA (MOEA), Taiwan Turnkey Project Association and the Philippines’ Department of Trade and Industry jointly established a technical committee to discuss the details and timetable for the project’s implementation. One of the tasks specified in the memorandum is for Taiwan to send a technical team to the Philippines to provide assistance for industries such as coffee, fruit processing and aquaculture. After several discussion sessions by both parties, a delegation of four members from the Taiwan Turnkey Project Association traveled to the Philippines on October 19, 2009, on a 6-day mission to carry out this project. Their contributions were recognized by the Philippines government and additional follow-up tasks were scheduled.

(3) Memorandum of Understanding on SME Cooperative Principles between Taiwan and Israel

To implement the resolutions adopted at the “Seventh Taiwan-Israel Vice-Ministerial Technology Cooperation Meeting,” both sides continued to improve bilateral SME cooperation based on the Memorandum of Understanding on SME Cooperative Principles between Taiwan and Israel signed in 2008 and to improve technological cooperation and investment opportunities between the two countries.

(4) Other Bilateral SME Exchanges

In coordination with the Taiwan-Singapore Bilateral Ministerial and Vice-Ministerial Economic Cooperation Meeting and with the APEC Ministerial Working Group and SME platforms, Taiwan endeavors to promote international SME trade and economic exchange and collaboration and the sharing of SME development experiences.

9. Participating in the GEM Research Project

The Global Entrepreneurship Monitor (GEM) is an organization established by a number of university professors at Babson College (U.S.) and at the London Business School in 1997. In 1999, GEM officially started its research and investigation activities, and the organization grew from 10 participating countries initially to 54 countries in 2009. Data analysis is performed on a country basis, and currently the endeavor is the largest international entrepreneurial activity research project in the world. It is also an important reference basis for many countries in the development of educational policies.

To assist SMEs to participate in GEM's entrepreneurial activity research, the SMEA sponsored SMEs to attend the GEM Annual Meeting held at Desarrollo University in Santiago, Chile, from January 13 to January 16, 2010, to gain knowledge in international entrepreneurial research methods and receive important reference information. The SMEA also supported the China Youth Career Development Association (CYCDA) and the Center for Creativity and Innovation Studies at National Chengchi University in conducting the GEM survey, achieving the 2,000-sample Adult Population Survey (APS) and National Expert Survey (NES), actively contributing to the promotion of cooperation between industry, government, academia, research communities and GEM, helping to gain up-to-date knowledge of the country's current entrepreneurial status so that appropriate national entrepreneurial policies can be formulated.

II Statistics on Government Resources Allocated to SMEs

It is explicitly stated in the Act for the Development of Small and Medium Enterprises that the government should clearly specify in the SME White Paper the amount of resources allocated to SMEs. Therefore, starting in 2001, the government has begun compiling statistics for resources allocated to SMEs and the information is provided in dedicated sections in the SME White Paper. In addition to the resources expended by the government on SMEs, this section will also contain statistics pertaining to the government's procurement of property, public works or labor from SMEs as well as special loans made available to SMEs. However, statistics on government guidance resources and financing are limited to those from agencies at the central government level. In this section, the statistics provided are on the basis of actual disbursement. In 2009, total government resources allocated to SMEs amounted to NT\$840.81 billion (including contributions to the SME Credit Guarantee Fund), which represents a substantial increase of NT\$33.02 billion compared with NT\$807.78 billion in 2008. This main difference comes from the increases in government procurement from SMEs, which amounts to NT\$35.07 billion. The details are explained as follows:

1. Government Procurement from SMEs Reached NT\$807.94 Billion

According to Government e-Procurement System statistics on awarded contracts, in 2009 the amount contracted or subcontracted by SMEs in government procurement totaled NT\$807.94 billion, a substantial increase of NT\$35.07 billion from the NT\$772.87 billion in 2008. The percentage of SME contracting or subcontracting also increased to 64.00% from 60.65% in 2008. There were 22 government agencies with SME procurement rates of 100%, and the number of government agencies with SME procurement rates exceeding 90% reached 37. The SME procurement rates of all agencies were above 30%, which is the main reason government procurement from SMEs increased substantially in 2008.

2. Assistance to SMEs Totaled NT\$31.11 Billion

The statistics on resources allocated by the government for SME guidance purposes include funding to government agencies that have a significant relationship with SMEs, e.g., the Small and Medium Enterprise Administration, Industrial Development Bureau, Bureau of Foreign Trade, Department of Commerce, Department of Industrial Technology and Department of Investment Services, as well as training expenses of the Council of Labor Affairs, government contributions to the SME Credit Guarantee Fund and financial institutions' contributions to the SME Credit Guarantee Fund.

As for government agencies with a substantial involvement in providing guidance to SMEs, the amount was NT\$38.86 billion in 2009, of which NT\$28.94 billion was allocated to SMEs, representing 74.48% in the final accounts (Table 13-2-1). Viewed by government agency, the Industrial Development Bureau ranked first at NT\$12.34 billion in terms of allocation to SMEs, followed by the SMEA, at NT\$8.75 billion. However, this includes the NT\$6.0 billion of government contributions to the SME Credit Guarantee Fund. The next highest was the Bureau of Foreign Trade, at NT\$ 4.58 billion.

Table 13-2-1 MOEA Resources and Funding Allocated to SMEs

Unit: NT\$1,000; %

Organizer	Annual Funding	Fiscal Year 2009 Final Accounts	Total Amount Allocated to SMEs
Small and Medium Enterprise Administration (including SME Development Fund)		8,746,115	8,746,115 (100.00)
Industrial Development Bureau (industrial technology guidance and industrial park development and management fund)		4,712,864	2,844,245 (60.35)
Bureau of Foreign Trade (overseas marketing guidance and trade promotion fund)		5,074,878	4,575,190 (90.15)
Department of Commerce (promotion of trade modernization and commercial technology development)		1,398,192	434,924 (31.11)
Department of Industrial Technology (DOIT)		18,929,502	12,342,153 (65.20)
Total		38,861,551	28,942,267 (74.48)

Notes: 1. Figures in parentheses represent the percentages in the final accounts;

2. Funding allocated to SMEs contain the NT\$6 billion donated to the SME Credit Guarantee Fund.

Source: Various government agencies.

When compared with 2008, the overall assistance funding for SMEs increased by NT\$2.88 billion. With the exception of the decrease of NT\$861 million from the Industrial Development Bureau, most of the remaining agencies had a relatively higher percentage in SME funding

allocation, notably the Bureau of Foreign Trade, with the largest increase of NT\$1.71 billion. When viewed from the percentage of funding allocation to SMEs, MOEA funding for SMEs increased by 5.42% in 2009 in overall funding, of which the Bureau of Foreign Trade increased by 22.92% with the SMEA remaining at 100%. Most of the remaining agencies had a higher percentage for SME funding, with the exception of the Industrial Development Bureau, which had a drop in funding of 4.43% to SMEs (Table 13-2-2).

In 2009, in addition to the relevant government resources allocated to SMEs by agencies such as the MOEA, close to 40 financial institutions also contributed a total of NT\$ 2.01 billion to the Small and Medium Enterprise Credit Guarantee Fund of Taiwan to enhance the Fund's strength. Therefore, total public and private sector guidance resources available to SMEs totaled NT\$30.95 billion in 2009.

In the area of assistance in human resources investment, two options are available in the enterprise human resources upgrade project of the Council of Labor Affairs, namely, the individual type and the joint type. The funding for this project is NT\$400 million, of which the individual type is available to individual enterprises, and business owners are encouraged to improve productivity and product quality via existing equipment and resources or professional training institutions. For the joint type, three or more enterprises are grouped together for the planning of employee training for the purposes of propagating and sharing training experiences and resources, while at the same time enhancing corporate human resources to facilitate the development of industry or regional upgrading. From the point of view of the overall upgrading of human resources, the funding for this project applicable to SME personnel training reached approximately NT\$159 million, and government funding for providing guidance to SMEs totaled NT\$31.11 billion.

Table 13-2-2 Increase/Decrease in MOEA Funding to SMEs

Unit: NT\$1,000; %

Organizer	Annual Funding	Total Allocated to SMEs in 2008	Total Allocated to SMEs in 2009	Increase/ Decrease (%)
Small and Medium Enterprise Administration (including SME Development Fund)		8,060,239 (100.00)	8,746,115 (100.00)	685,876 (0.00)
Industrial Development Bureau (industrial technology guidance and industrial park development and management fund)		3,705,723 (64.78)	2,844,245 (60.35)	-861,478 (-4.43)
Bureau of Foreign Trade (overseas marketing guidance and trade promotion fund)		2,862,393 (67.23)	4,575,190 (90.15)	1,712,797 (22.92)
Department of Commerce (promotion of trade modernization and commercial technology development)		413,545 (28.47)	434,924 (31.11)	21,379 (2.64)
Department of Industrial Technology (DOIT)		11,023,968 (60.39)	12,342,153 (65.20)	1,318,185 (4.81)
Total		26,065,868 (69.06)	28,942,267 (74.48)	2,876,399 (5.42)

Note: Figures in parentheses represent the percentages in the final accounts.
Source: SMEA.

3. Providing SMEs with Special Loans Totaling NT\$1.76 Billion

Eligible SMEs in Taiwan have access to the following six types of special loans: SME Upgrade Guidance Loans, Youth Entrepreneurship Guidance Loans, SME Development Fund Special Loans, Assistance for SMEs to Take Root Special Loans, Indigenous Integrated Development

Fund Loans (Indigenous youth business loans, Indigenous economic industry loans, and Indigenous micro-business activities loans), Micro Business Start-up Phoenix Loans (Council of Labor Affairs). A total of NT\$1.76 billion in government-funded SMEs loans were made available in 2009 (Table 13-2-3).

Table 13-2-3 Special Loans to SMEs Funded by the Government in 2009

Unit: NT\$100 million

Name of Loan	Eligible Applicant	Structure	Status	
			Total Loan Amount	Gov't Funding
SME Upgrade Guidance Loan	SMEs	Each loan is funded by the Development Fund, Executive Yuan (25%) and lending institution (75%)	36.50	9.13
Youth Entrepreneurship Guidance Loan	Youth aged 20-45 engaging in business start-ups	Each loan is funded by the Sino-American Fund (50%) and lending institutions (50%)	7.99	3.99
SME Development Fund Special Loan	SMEs	SME Development Fund	4.55	2.27
Assistance for SMEs to Take Root Special Loan	SMEs	Earmarked funds from CEPD Long-term Fund	32.39	0.00
Indigenous Integrated Development Fund Loans (Indigenous youth business loans, Indigenous economic industry loans, Indigenous micro-business activities loans)	Indigenous people	Fully funded by the Council of Indigenous Peoples	1.93	1.93
Micro Business Start-up Phoenix Loans	Women aged 20-65 and women aged 45-65	Loans provided by Banks' own funds and interests subsidized by the Council of Labor Affairs	4.57	0.29
Total			87.93	17.61

Source: Various government agencies.

III Manpower Training for SMEs

In order to solve the manpower shortage problem caused by the shift in this country's SMEs from traditional labor-intensive to technology-intensive practices as required for a knowledge economy, the MOEA has allocated a generous budget to bring together experts from industrial, academic and research communities to plan projects for training qualified personnel. The following is a list of training programs carried out by various government agencies for 2009-2010:

1. Digital Learning, Business Incubation, Business, Technology Personnel Training - SMEA

(1) SME Digital e-Learning Program - SME Online University

As of June 2010, the total number of visits to the SME Online University, which was founded in August 2006, had exceeded the 8.3 million mark, and the web platform had attracted participation from more than 360,000 trainees in a variety of training courses. The website currently provides over 950 courses in five major faculties: information technology, financial management, marketing and distribution, human resources and general knowledge. The cumulative number of course participations has reached 2.2 million; some 650 SMEs have even adopted the website as their in-house training platform.

(2) Establishing an SME Entrepreneurship and Innovation College

The SME Entrepreneurship and Innovation College provides a channel through which aspiring entrepreneurs and new business owners can continue to receive training. The college's training options consist of both physical and online campuses, with the following four courses available:

1. Elite entrepreneurial program – required. The main focus of this program is on innovative business models and entrepreneurial plans for six emerging industries, and is combined with creative thinking, R&D management, market analysis, financial management and other topics.
2. Elite entrepreneurial program – electives. In order to enhance the innovative capability and new market knowledge of new ventures, course offerings in the form of seminars in the following areas are available: industry trends, recognizing business opportunities, innovative technology applications, technology transfer, and enterprise innovation modes.
3. Elite entrepreneurial program - intensive program. Combining government R&D grants and awards, business proposal writing guidance courses are available in these areas.
4. Internet entrepreneurial academy. Online learning, class forums, photo download and success stories, providing a digital learning environment with no restrictions of time or space.

(3) Nurturing SME Business Leaders

The SME Business Leaders Research Project was established in 2002 to enhance the core operating capacity of domestic SMEs. After the program has ended, all trainees are invited to participate in the “SME Business Leaders Seminar,” where economic and trade experts and entrepreneurs share their views on international trends and experiences in business management practices. Former trainees of the program are also invited to participate in the events in order to encourage further learning and pass on their experiences, thus effectively expanding the network of enterprise resources and building a community for business leaders. Since its inception, a total of 990 SME executives have participated in the program.

(4) Develop Incubation and Certification of Professionals

The country's capabilities in nurturing new ventures and providing consulting services is shaped and enhanced through the organization of incubation and certification exams for professionals and with a forward-looking, specialized and diverse training system. This provides even more professional assistance in entrepreneurship, innovation and business operations as well as in improving the success rate of new enterprises and the competitiveness of SMEs.

(5) Training Information - Government Training Integrated Services Information Network

To bring together all the educational and training resources provided by government agencies in a more effective manner and to provide a single access point for citizens, businesses and training institutions, the SMEA completed the deployment of the Government Training Integrated Services Information Network (<http://get.nat.gov.tw>) in 2007, which contains information on 10 government training programs. It is hoped that this will strengthen the integration of inter-departmental information and services and further enhance the performance of government administrative services so as to reap the benefits of information integration via the exchange of information and services by various government agencies.

2. R&D and Management Technology Talent Training – Department of Industrial Technology, MOEA

(1) Training Cross-Sector International Management Talent (Cross-sector Technology Management Course)

Starting in 2000, in coordination with the Executive Yuan's initiative on scientific and technological personnel training, the MOEA selects, through DOIT, individuals with technological backgrounds in R&D or management for overseas training in intellectual property rights, technology transfer, investment appraisal and other professional courses, helping the industry to develop international management talent in the technology sector and accelerate the development of emerging industries. The program entered its 10th year in 2009, and during this 10-year period it has produced over 1,000 top industry talents.

The program will continue to run from 2010 to 2013 with a training approach that consists of domestic and overseas training sessions. For the domestic training, trainees will each be responsible for NT\$20,000 in tuition and will receive a 50% subsidy from the government for the overseas training, while the underlying enterprise will be responsible for the remaining 50%. Enrollment is on an annual basis and the recruitment period is from January to March.

(2) Training R&D Management and Business Strategy Professionals

The R&D management and business strategy professional training program is primarily aimed at training senior R&D personnel. The purpose is to provide training on the development of innovative business strategies and on the enhancement of key practices in management operating performance.

The design of the overall learning program focuses on three main areas: innovation and R&D strategic planning, innovation and R&D operational management, and product innovation practices. Coupled with overseas training in selected topics, seminars conducted by foreign experts and panel discussions as well as instructor-led domestic courses, trainees can also work on projects involving actual cases.

3. Professional Training Programs for Various Industries - Industrial Development Bureau, MOEA

(1) Training Programs for Industry Professionals (Total of 12 Projects)

The "Training Programs for Industry Professionals" introduced by the Industrial Development Bureau of the MOEA comprise the following 12 projects: Taiwan design industry take-off project, Network and communications industry promotion plan, White LED lighting industry guidance program, Software quality improvement (CMMI) project, Healthcare and medical equipment industrial technology promotion project, Manufacturing energy conservation and carbon reduction service team project, Pharmaceutical industry technology promotion and guidance project, Digital learning and archival industry promotion program, Food industry quality improvement guidance and promotion plan, Enterprise intellectual property management system promotion plan, Embedded software international supply chain project, and Intellectual property rights circulation and utilization project.

These projects aim to combine the efforts of experts from industry, academia and the research community to conduct analysis on various training programs, and to plan comprehensive training programs that meet the needs of industry according to industry trends and the characteristics of regional industry clusters.

(2) Training Semiconductor Talents - Semiconductor Institute

The Semiconductor Institute has developed two types of courses based on industry trends and requirements: medium-/long-term training courses and short-term professional training courses.

The former are aimed at providing a 200-hour training program for anyone who wishes to enter the semiconductor industry; the latter are aimed at raising the technological expertise and level of knowledge of those already employed by the industry by providing technology or market-related courses.

(3) Training Blue-collar and White-collar Workers in the Machinery Industry

The Training Project for Blue-collar and White-collar Workers of the Machinery Industry is aimed at raising the quality of manpower in the machinery industry and providing the required technological expertise. The program is conducted in association with organizations with actual practical R&D and training experience in precision machinery. Medium level to advanced training courses in technology related to machine tools and components, molds, FPD and IC equipment, lasers, intelligent robotics and general machinery are provided.

(4) Developing Experienced ICT Talents in the Machinery Industry

The Training Project for ICT Experienced Talents in the Machinery Industry allows members of domestic industry, academia and the research community to improve and upgrade their professional knowledge and application technology in ICT. Some are able to attend overseas training after a selection round and are able to learn advanced professional ICT and applications as well as gain innovative operational experience abroad. Through the knowledge passed from these trainees and with domestic training resources, many ICT technology and application professionals can be trained and the demand for additional talents can be met. The government sponsors a maximum of 50% of the tuition fees for domestic training, and for overseas training, a maximum of 70% in fees subsidy is provided.

(5) Manpower Training for Information Application Services

The Bureau promotes a Training Plan for Information Application Services through planning and implementation training programs for professionals in order to nurture the industry's experienced talents in information application services and to help the industry to accelerate its IT applications and service innovation. In this training program, a series of advanced, forward-looking courses such as an information innovation framework, IT applications, information services management and IT consulting services are offered to workers in the IT services industry or other industries, each of whom receives a 40% tuition subsidy from the government.

(6) Training for Design and Technology Professionals in Textile and Related Industries

The “Training Program for Design and Technology Professionals in Textile and Related Industries” is a program that combines elements from the industry, academic and research communities. It provides the textile industry with the training to build up its R&D and design, marketing and management capabilities. Courses include: textile industry technology series, footwear, bags, sports and leisure series, fashion design marketing and series, and high-quality textile application technology series. The government provides a maximum of 50% in tuition subsidy to each trainee (a maximum of 1/3 for overseas courses).

(7) Chemical Industry Talent Training

Based on industry requirements, plastics, rubber, polymers, resins, paper, cosmetics, petrochemical and other related industries have been selected to promote the Chemical Industry Technology Talent Training Program, combining expertise from professionals from the industry, academic and research communities to plan courses that meet industry needs. These training courses include: industrial technology, manufacturing processes, R&D technology, product application, and plant operations and maintenance. The government provides a maximum of 50% in tuition subsidy to each trainee.

(8) Nurturing Innovative Industry, Academia and Research Community Elites (Industry R&D Master’s Degree Program)

The Bureau promotes a Project for Increasing Master’s-Level Industrial R&D Manpower to help businesses and academic institutions to jointly offer an industrial R&D Master’s-level course and provide timely training of R&D talent, which helps the country to transform from a manufacturing-based to an R&D-based industry structure. The training costs of this Master’s-level program, jointly organized by educational institutions and the industry, are partially borne by businesses, which have promised to employ 70% of new graduates in their workforce. Two enrollment sessions are conducted each year (fall/spring). Universities around the country are responsible for providing Master’s-level training and designing the internship programs, as well as planning thesis topics that are consistent with industry R&D objectives. Upon graduation trainees will receive official degrees granted by the Ministry of Education.

4. Fostering International Trade and Business Talent - Bureau of Foreign Trade, MOEA

To assist SMEs to secure trade, marketing and language professionals, each year the Bureau commissions the Taiwan External Trade Development Council (TAITRA) to conduct dedicated courses for both fresh graduates and experienced workers. For the 2009-2010 session, the focus of the training projects includes:

(1) Developing Exhibition Talents and Certification

The purpose is to introduce overseas expertise to this country, train exhibition industry professionals, as well as to provide high-caliber exhibition professionals to enhance the international competitiveness of Taiwan’s exhibition industry through the establishment of a

certification and examination system and MICE (Meetings, Incentives, Conferencing, Exhibitions) expertise database.

Aimed at professional knowledge and requirements of the MICE industry, the following three courses are offered: specialized talent courses, seed instructor courses, and the establishment of a certification system, bringing together scholars and experts in the domestic and international convention and exhibition industry as lecturers; publication of certification materials to develop the country's MICE industry certification and examination system; and coordinating with the various subprojects of the MOEA's Meet Taiwan program to establish a talent database, website and learning assessment mechanism so as to improve the quality of the country's professional MICE service system.

(2) Developing International Business Talents - International Business Management Course

Provides training for talents in international business, which is divided into foreign languages, international trade, overseas study and other courses, and includes the following subgroups: international trade (1 year), English language (1 year), MBA program (1 year), European languages (German, French, Spanish, Russian, Portuguese) / Korean / Arabic (2 years), English language (2 years) and Japanese (2 years). The cost for each year of training is NT\$203,300.

(3) Developing International Business Talents - International Trade Program

The program aims to provide trade professionals with solid skills in the English language and knowledge in international trade practices. Courses include international trade, marketing, law and import/export financial operations. Case studies and practical teaching sessions are also arranged. English language courses are taught mainly by foreign teachers and in small classes and they focus on practical knowledge and drills. Enrollment fees are NT\$115,000 per 6-month term, and two terms are offered each year.

(4) Developing International Business Talents – Post-master International Marketing Courses

To address the need for international marketing talents in the foreign trade and business community and to accommodate the expectations of young workers with master's degrees who aspire to build a career in international marketing, a 210-hour professional course in international trade is offered to individuals from various backgrounds and with master's degrees. Courses include various international trade and marketing areas. The tuition for the 6-month term is NT\$50,000, and two terms are offered each year.

(5) Developing International Business Talents – Bachelor and Master's-level Business English Course

Business English courses are offered to address the need for international business talents. The purpose is to enhance professional business English skills and capabilities, enhancing competitiveness in the workplace. The classes are planned and taught by experts and focus on listening, speaking, reading and writing skills, as well as on social and cultural aspects necessary for communication with international business people. The classes, taught by foreign instructors with

international English teaching certification, are small and provide an interactive learning environment. The tuition for the 6-month term is NT\$ 38,000, and two terms are offered each year.

(6) Developing International Business Talents – Training for Experienced Professionals

This is aimed at providing international trade practices training and short-term foreign language training. Courses include various topics on international trade and languages. The course can last from 6 to 72 hours.

(7) Developing International Business Talents – International Trade Elite Service Network

The International trade elite service network is a dedicated website of the Training Center. The purpose is to recommend trainees who have completed courses at the Training Center to import/export companies in Taiwan, serving as a recruitment platform for the industry.

A hiring enterprise may log into the website, register the company's basic information and publish its job vacancies. Upon successful registration at the website, the company must contact the website to receive permission to conduct recruitment. The Training Center also authorizes enterprises to conduct career fairs or recruitment seminars at various educational institutions.

(8) Incubation Program for Pioneering Business Elites in Emerging Markets

When expanding to emerging markets, Taiwanese enterprises are often faced with the problem of being too far away from the target markets and being unable to communicate with potential customers in their local language. Therefore there is often a need to recruit local marketing staff. This program aims to facilitate the short-term training of local target-market personnel in Taiwan for product marketing, taking advantage of local employees' language abilities and local knowledge and training them to become business representatives of Taiwanese corporations.

A database has been created by TAITRA on potential domestic and overseas pioneering business personnel, and is used to match the needs of corporations intending to recruit personnel in the target emerging markets. Those potential employees who have successfully passed the screening process will be invited to participate in training programs offered by Taiwanese companies.

This project targets these 20 emerging markets: Brazil, Argentina, Mexico, Colombia, Chile, Russia, Poland, Hungary, Slovakia, Ukraine, Belarus, Turkey, Kazakhstan, United Arab Emirates, Iran, Saudi Arabia, India, Indonesia, Vietnam and Egypt.

5. Entrepreneurial Incubation for Women – National Youth Commission

(1) Training Courses for Women Entrepreneurs

For women interested in starting their own businesses and gaining comprehensive knowledge in conducting business operations, a series of basic business courses have been provided on: start-up assessment, business preparation, business opportunities, capital, proposal writing, spiritual growth, finance and taxation, story marketing, and relevant legal knowledge and skills.

In 2010 a total of 21 training courses for women will be held and 1,950 women are expected to participate in them.

(2) Course Focused on Female Topics

The marketing courses offered in 2010 aim to provide further skills for women with various types of marketing skills. Three major themes have been planned (Internet auction marketing, blog marketing and creative marketing), allowing women who already own businesses to become more confident. A total of 10 classes are expected to be held, which cover product marketing approaches and actual drills, and are ideal for improving the marketing skills and knowledge of young entrepreneurs. The number of participants is expected to be 800.

IV Improving Legal Rights Adaptation

In view of the key role played by SMEs in this country's economic activities, when various levels of government agencies enact new laws or handle legislative amendments, they often neglect the difficulties facing small businesses, in effect rendering a number of regulations to be unnecessary constraints to the development of SMEs and failing to provide a fair and reasonable environment for SMEs to compete with large enterprises.

Therefore, Article 12-1 of the Act for the Development of Small and Medium Enterprises states that "In enacting or adjusting acts related to small and medium enterprises, governments at various levels shall review the operational scale or characteristics of small and medium enterprises to facilitate observance by small and medium enterprises." This is to prevent regulatory policies or regulations from imposing excessive burdens on SMEs. Relevant measures in this regard are discussed as follows:

1. Status of the Promotion of SME Legal Rights Adaptation Analysis

Since 2004 the SMEA has begun the implementation of SME legal rights adaptation work, and has achieved initial success in helping businesses to resolve problems arising from legislative changes or to accelerate the progress of legal rights adaptation. The main focus for 2009 include the following:

- (1) Adjusting the Draft for legal rights adaptation analysis, including an article-by-article explanation, and adjusting workflow and self-inspection lists to improve the various measures of the legal rights adaptation mechanism. At the same time, a set of operating guidelines and an Q&A manual are also used to rectify and check the workflow of the advisory center's preparatory work and operational procedures, providing each competent authority with this manual to comply with the present analytical mechanism for further improvement in the future.
- (2) Conducting surveys and analysis for cities and counties (special municipalities and provincial counties or cities) and also advancing diagnosis to view the SME legal rights adaptation analysis in order to form a basis on which future improvements can be made.
- (3) Selecting topics for study on the "late payment" issue, a topic closely associated with SME interests, and "tax incentives" and conducting pilot runs on an information platform.

Organizing 12 information seminars and collecting responses and comments from participants.

- (4) Promoting the enactment of laws related to “late payment” to curb this growing problem in conducting transactions.

2. Status of SME-related Legislative Amendments

In 2009 various government agencies completed the enactment or amendment of 29 bills related to SMEs. It is understood that most of this legislation is neither adverse nor favorable to the development to SMEs, and only a few may infringe upon their interests.

3. Improving SME Knowledge of Regulations

In order to educate SMEs on regulations and other common knowledge, in addition to actively advocating the importance of legal knowledge, the SMEA has also provided consulting services to minimize the impact on SMEs with a lack of regulatory knowledge. In 2009 the results of promoting regulatory knowledge among SMEs were as follows:

(1) SME Regulatory Information and Advisory Services

1. Promoting SME regulatory information

- (1) Establishing a legal information service website for SMEs that provides additional legal services and knowledge to safeguard their interests. The website is at: <http://law.moeasmea.gov.tw>
- (2) Producing an “SME Regulation Advocacy Booklet”: In 2009, the main task was to produce a booklet on business regulations for SMEs – Advocacy on the rights and obligations of shareholders, directors and supervisors; analysis is provided on the rights and obligations of directors, supervisors, shareholders and the shareholders’ meeting.

2. Legal advisory services for SMEs

A total of 147 honorary consulting lawyers were hired in 2009 to provide legal advisory services, including telephone and website consultation, serving 1,136 cases. Among them, there were 382 cases involving civil regulations, the largest category, followed by 309 cases related to criminal law. The third largest category was labor laws-related, consisting of 119 cases.

3. Promoting SME awareness in business legal knowledge

The SME business regulations and knowledge awareness promotion tour provided specific advisory channels to help SMEs deal with regulatory issues. The legal consultation cases that were presented at the information seminar were mainly concerned with civil business issues, and the participating enterprises were mainly from the logistics industry, followed by the service industries and by the manufacturing industries. In 2009 a total of 12 seminars on regulatory advisory services for SMEs were held in various cities and counties around the country. A total of 667 SMEs participated in the events.

(2) Promoting SME Awareness of Consumer Protection Legislation

1. Promotion of the awareness of consumer protection legislation: In 2009 a total of 10 SME consumer protection legislation awareness seminars were held. There were 464 participants from 395 SMEs.
2. Preparation of guidelines and handbooks: In line with the promotion of SME awareness of consumer protection legislation, case studies on consumer disputes have been compiled into the form of handbooks, which aim to enhance the concept of the rule of law among SMEs as well as to equip them with the ability to deal with consumer disputes. In the 2009 edition of the handbook, 60 cases based on the 10 handbooks containing 150 cases of consumer disputes (recorded up to 2008) were rewritten to reflect current consumer patterns and technology.
3. Provide SMEs with advisory services on consumer protection issues: In order to reduce the number of consumer dispute incidents, a SME consumer protection awareness website has been set up to provide additional knowledge related to the law and other services so as to safeguard the interests of SMEs: <http://sme.nat.gov.tw/Web/sites/consumer/>.

In addition, an SME consumer protection service window has also been provided to help SMEs to enhance their ability to handle consumer disputes. In 2009, a total of 9 consultation cases were handled, the majority of which involved refunds of online purchases, physical storefront disputes, and lack of clarity in product labeling. Appropriate advice and recommendations have been provided for these cases.

(3) Handmade Soap Industry Operating Regulations and the Handling of Late Payments

In order to help SMEs resolve their business difficulties, the SMEA has assisted handmade soap vendors to secure certification from local county (city) governments for having the status of “not reaching a business scale necessitating setting up as a factory.” This relieves the handmade soap manufacturers of the requirement to register as factories. Although they do not have “factory registrations,” as long as they are able to produce either a certificate of exemption from factory registration, or a certificate of requirement to set up factories, they will be allowed to advertise upon approval by the Department of Health. In addition, regarding the problem of larger enterprises delaying payments to SMEs, the SMEA has coordinated with the Fair Trade Commission to set up or amend relevant guidelines for business transactions in order to maintain order in the market and to protect the rights and interests of SMEs. In this regard, concrete results have been achieved.

4. Analysis of SME-related Laws and Regulations

With respect to the analysis of SME-related laws and regulations in 2009, the focus is on the new directions for the improvement of business environments for SMEs. This year, in addition to focusing on the analysis of the Act for the Development of Small and Medium Enterprises to see if this Act and other related laws should be amended, we will also conduct analysis on the following topics: “Feasibility of unemployment insurance for independent entrepreneurs,” “Assessment of SME regulatory adaptation” and “Improvement of the tax incentive environment for SMEs.” With the enactment of the Industrial Innovation Act and its related regulations, the business laws and regulations as applied to SMEs will become more acceptable.

Appendix



Appendix A

Act for Development of Small and Medium Enterprises

Publicly announced in accordance with the presidential decree dated February 4, 1991.

Revised in accordance with the presidential decree dated May 21, 1997.

Revised in accordance with the presidential decree dated January 21, 1998.

Revised in accordance with the presidential decree dated December 27, 1990.

Revised in accordance with the presidential decree dated December 21, 2001.

Revised in accordance with the presidential decree dated December 17, 2003.

Revised in accordance with the presidential decree dated November 25, 2009.

Chapter 1 General Principles

Article 1

This Act is enacted for the furtherance of sound development of small and medium enterprises by helping them improve their operation environments, promoting mutual cooperation, and assisting them in striving for growth with their own efforts. With regard to matters not provided for in this Act, the provisions of other relevant acts and regulations shall apply.

Article 2

The term "small and medium enterprises" used in this Act shall refer to the enterprises which have legally completed company registration or commercial registration under the Act and conform to the standards for identifying small and medium enterprises.

The standards referred to in the preceding paragraph shall be drawn up by the central competent authority according to the category, capital stock, amount of operating revenue and the number of regular employees and shall be submitted periodically to the Executive Yuan for approval.

Other government authorities, which administer small and medium enterprise assistance and guidance may, in accordance with their respective operational requirements, formulate separate criteria with loose requirements for objects of assistance and guidance.

Article 3

The term "competent authority" used in this Act shall be the Ministry of Economic Affairs at the central government level, the provincial (municipal) government at the province (municipality) level, and the county (city) government at the county (city) level.

Where any of the matters set forth in this Act involves the functional duties of an authority in charge of a particular enterprise, the competent authority referred to in this Act shall handle such matters in coordination with the said authority in charge of such enterprise.

For enforcement of this Act, government at various levels shall set up or designate a government agency to provide assistance and guidance.

Article 4

For achieving the objectives of this Act, the competent authority concerned shall take appropriate assisting or encouraging measures in respect of the following:

1. Market research and development,
2. Furtherance of rationalization of business operations,
3. Promotion of mutual cooperation,
4. Acquisition and securing of production factors and technology,
5. Education and training of competent personnel, and
6. Other matters relating to the establishment or sound development of small and medium enterprises.

In formulating the policy, acts and regulations, and measures in the preceding paragraph, the competent authority concerned shall aim the contents at the furtherance of improvement and development of the business operations of small-scaled enterprises without unfair treatment in respect of financial and taxation systems and other related matters.

The central competent authority shall publish a white paper, at the end of each fiscal year, on small and medium enterprises given the enforcement status, the review results and the prospective development of the provisions of the preceding two paragraphs.

Article 5

For furthering small and medium enterprises to conduct market research and development activities, the assistance and guidance provided by the competent authority to small and medium enterprises shall be emphasized on the provision of information services, the creation of exclusive brands for their own products, arrangement of marketing channels and/or development of potential market.

Article 6

For furthering small and medium enterprises to rationalize their business operations, the assistance and guidance provided by the competent authority shall be emphasized on the following:

1. Research and development and development of new products,
2. Modernization and renovation of production facilities and improvement of production technology,

3. Improvement of the methods of operational management,
4. Expansion of market and acquisition of necessary information,
5. Conversion and adjustment of the field of business, and
6. Acquisition of resources and technical know-how for business operation.

Article 7

For encouraging mutual cooperation between small and medium enterprises, the assistance and guidance to be provided by the competent authority shall be emphasized on the following:

1. Verticle amalgamation of businesses of the trade and establishment and promotion of the satellite-factory system,
2. Horizontal amalgamation of businesses of the trade and establishment and promotion of joint production and marketing system,
3. Mutual fund or cooperative enterprise,
4. Technical cooperation and development of common technology,
5. Procurement of common equipment, and
6. Establishmant of strategic marketing points.

Article 8

For assisting small and medium enterprises to acquire and secure production resources and technology, the assistance and guidance to be provided by the competent authority shall be emphasized on the following:

1. Formation and accumulation of capital,
2. Capital accommodation,
3. Acquisition of land, plant building, equipment, business site and business information,
4. Personnel training and upgrading of labor productivity,
5. Securing the sources of agricultural and industrial raw materials and technical know-how,
6. Assisting small and medium enterprises to obtain fund from capital market, and
7. Upgrading of the level of services and technical skill.

Article 9

The central competent authority shall set up small and medium enterprise development fund, with the use thereof to be confined to the following:

1. To finance the operating expenses required for carrying out assistance plans,
2. To take part in investment and development projects or provide financing assistance and guaranty jointly with financial institutions under the condition that such financial institutions or credit guarantee institutions can not provide financing or guaranty under normal terms and conditions,

3. To make investment in small and medium enterprise development companies, or to take part in investment in small and medium enterprise with small and medium enterprises development companies, financial institutions and identified investment institutions.
4. To provide financial support to the juridical persons institutions that are incorporated to conduct the activities specified in Article 4 , and
5. Other purposes relating to the furtherance of sound development of small and medium enterprises and as specified in this Act.

For the income-expenditures, safeguarding and utilization of the small and medium enterprise development fund, a small and medium enterprise development fund management committee shall be formed, with its organization structure and the regulations for income and expenditure, safeguarding and utilization of the fund to be stipulated by the Executive Yuan.

Article 10

The small and medium enterprise development fund shall be derived from the following sources:

1. Appropriation from the annual budget programmed by the central government,
2. Appropriation from other special-case funds,
3. Donation from individuals or public and private business organizations or groups,
4. Interests accrued on the fund, and
5. Other associated income.

The donation referred to in item 3 the preceding paragraph may, when certified by the competent authority, be deductible from the total income of the current year, free from any restriction on the amount, in accordance with the Income Tax Act.

Article 11

The provincial (municipal) and the county (city) competent authority (henceforth referred to as “local competent authority”) may, taking into account of the specific development requirements of small and medium enterprises, under its jurisdiction, draw up assistance plan and formulate budget, and shall be responsible for the execution.

To carry out the assistance plan referred to in the preceding paragraph, the local competent authority may apply to the small and medium enterprise development fund for subsidy or assist the small and medium enterprises to obtain capital accommodation under special projects.

Article 12

The competent authority may, taking into account of actual requirements, cooperate with or consign to public and/or private research and service institutions, financial institutions, credit guarantee institutions, trade promotion institutions, industrial and/ or commercial organizations or other agencies for execution of the assistance activities under this Act; and shall set up separate assistance systems in connection with respectively the operations including financial

accommodation, operational management, production technology, research and development information management, industrial safety, pollution control, marketing, mutual cooperation, and quality reinforcement, etc.

The regulations governing establishment up and supervision of the assistance systems shall be drawn up by the central competent authority and submitted to the Executive Yuan for approval.

Article 12-1

In enacting or adjusting acts related to small and medium enterprises, governments at various levels shall review the operation scales or characteristics of small and medium enterprises to facilitate observance by small and medium enterprises.

The central competent authority shall periodically review the acts related to small and medium enterprises on term, and judge the adapt ability of small and medium enterprises, and the influence to small and medium enterprises, and take a review report to the Legislative Yuan yearly.

Chapter 2 Financing Facilities and Guaranty

Article 13

In order to meet the capital requirements for small and medium enterprises, the central competent authority shall coordinate with financial institutions and credit guarantee institutions to enhance their respective functions of providing financing and guaranty to small and medium enterprises.

In order to meet the capital requirements for small and medium credit guarantee institutions, the central competent authority shall allocate budget for donation to such credit guarantee institutions for the maintenance of their guarantee capacity. Financial institutions which contract with such credit guarantee institutions shall also cooperate with the donation whereas and the central competent authority may also solicit donation from private businesses.

The total amount of donation from various financial institutions mentioned in the preceding paragraph, taking into account the actual requirements, may be adjusted upward annually until reaching 35% of the total donation amount and be determined by the central competent authority according to the safekeeping amount, overdue ratio, substitute pay off amount, credit remainder, net value, profit and loss status, and the donated amount.

The central competent authority shall actively help small and medium enterprises get the loan from banks, and report the review results of each fiscal year to the Legislative Yuan.

Article 14

All banks throughout the Republic of China shall, within the scope of their respective business, elevate the ratio of financing facilities provided to small and medium enterprises and shall set up

small and medium enterprises assistance center in order to enhance the provision of relevant services.

Article 15

The competent authority shall coordinate various agencies to make ample budget available for providing special loans to small and medium enterprises, and instruct sponsoring banks to provide special or emergency financing facilities or to extend loans to meet with the requirements of enterprises implementing business converting projects or adapting to the change of economic situation; and to elevate, when necessary, the ceiling of such financing, loans and guaranty.

Article 16

The term "special financing" used in the preceding Article shall refer to the financing provided to small and medium enterprises carrying out any of the following projects:

1. Operational project for reinforcement of competitiveness;
2. Research and development, pollution control or market expansion project;
3. Project for creation of new product(s) or upgrading the quality of product(s);
4. Factory relocation project which must be carried out so as to meet with the requirements of environment protection, urban planning, or road construction or other infrastructural projects sponsored by the government;
5. Any other special projects as approved by the competent authority.

Article 17

The term "emergency financing facilities" as used in Article 15 shall refer to the following financing provided to small and medium enterprises:

1. Loan provided as revolving fund in support of production and sales during the period of significant economic crisis;
2. Loan required for recovery of significant natural disaster; or
3. Other loan as required to cope with emergency events.

Article 18

The term "loans to meet with the requirements of enterprises implementing business converting projects or adapting to the change economic situation" used in Article 15 shall refer to any of the following loans extended to small and medium enterprises:

1. Loan provided as revolving fund in support of production and sales during the period of economic recession;
2. Loan required for procurement of replacement or additional machinery and equipment in the course of business conversion; or
3. Loan required for procurement of automation equipment for improvement of productivity.

Article 19

Funds appropriated from the small and medium enterprise development fund for participate in the loans or guaranties sponsored by financial institutions or credit guarantee institutions in accordance with the preceding three Articles; the ratio of such appropriations may be determined by the competent authority in accordance with the actual requirements.

With regard to the bad debts resulted from causes which are not attributable to the intentional act, gross negligence or malpractice of the personnel handing the relevant matters set forth in the preceding paragraph, they shall be fully indemnified from damage liabilities and exmpt from disciplinary measures, according to the provisions of item 1,Article 77 of the Audit Act.

Article 20

The competent authority concerned may coordinate the financial institutions and/or credit guarantee enterprises to give priority to small and medium enterprises, which have sound management, financial and accounting systems and have paid up all taxes due, in providing financing facilities and guaranties.

Article 21

Where the operation of a small or medium enterprise is affected or it has to move to another place in order to meet with the requirements of environmental protection, urban planning, or road construction or other projects sponsored by the government, the competent authority shall assist it to apply for operating revolving loan or relocation loan from financial institution, and assist it to acquire the land required for factory relocation, when it is deemed necessary.

Article 22

Where a small or medium enterprise suffers great damages caused by natural disaster, the competent authority shall coordinate the financial authority for tax exemption or reduction or other remedies.

Article 23

In order to prevent small and medium enterprises from involvement in domino effect resulted from the close-down of their respective related enterprises, the competent authority may coordinate and assist industrial associations to establish, either separately or jointly, mutual guaranty fund(s) for prevention of chain close-down of small and medium enterprises so as to provide credit guarantee in respect of special financing facilities for the small and medium enterprises having financial or operational difficulties in such cases.

The small and medium enterprise development fund may, when necessary, contribute to such mutual guaranty fund(s) at the initial stage upon its (their) establishment.

Chapter 3 Operation Management, Market and Product Development

Article 24

The competent authority may establish or assist the private sector to establish a small and medium enterprise guidance and service center, and may cooperate with relevant public and private institutions to provide small and medium enterprises with the following guidance and services:

1. Business operation diagnosis;
2. Improvement of the marketing and production technology, operation management and financial structure of small and medium enterprises;
3. Training of management or technical personnel of small and medium enterprises;
4. Production and market information and consultation services; and
5. Other relevant businesses activities.

Article 24-1

The competent authority may set up funds to assist in the development of local culture industries for local economic prosperity.

Article 25

For improvement of the operating efficiency and reinforcement of the competitiveness of small and medium enterprises, the competent authority may assist small and medium enterprises to jointly engage in activities such as production, marketing, procurement, transportation, cooperation in technology development, and research and development.

Article 26

The central competent authority may work jointly with relevant institutions, universities and colleges in the training of professionals in the fields of operation diagnosis and business administration so as to provide small and medium enterprises with guidance and services.

Article 27

The competent authorities may provide necessary assistance to various industrial associations or industrial and commercial organizations which have a dedicated service unit responsible for providing services to small and medium enterprises.

Article 28

For encouraging small and medium enterprises to manufacture quality and/or high value-added products or service, and to expand export market, the competent authority shall provide, in conjunction with institutions concerned, technical and marketing guidance and assist medium and small enterprises to participate in overseas exhibition, acquire market information, make joint

advertising activities, trademark registration, patent application, or establish joint distribution warehouses abroad.

Where the plan of a small or medium enterprise for manufacturing quality and/or high value-added products or service planning has been evaluated and approved by the competent authority in conjunction with authorities concerned, the said small or medium enterprise may apply to the small and medium enterprise development fund to subsidize the expenses incurred in product and market developments.

Article 29

For upgrading the level of production skill of small and medium enterprises, the competent authority may entrust technical service institutions or retain technical experts to make research and development for new products or to acquire advanced technology for providing relevant guidance and services to various industries.

For transfer of new products or advanced technology, the competent authority may collect reasonable charges for amortization of costs incurred; If necessary, these charges may also be partly subsidized by the small and medium enterprise development fund.

Article 30

In order to assist small and medium enterprises for research and development, the competent authority may cooperate with appropriate technology research institutes in the establishment of institutes or places for exclusive use by small and medium enterprise conducting research , testing and development of technical skill and/or new products.

Small and medium enterprises may apply for use, by paying necessary charges, the equipment and facilities of the institutes or places set forth in the preceding to conduct experiment and research activities.

Article 31

The competent authority may, when it deems necessary, negotiate with public or private enterprises for appointment of their respective technical personnel, and support and assistance system to provide guidance in the fields of production skill or service know-how as required by small and medium enterprises.

Article 32

The central competent authority may establish or assist in the establishment of small and medium enterprise development companies to invest directly or indirectly in the small and medium enterprises having development potential and to provide consulting services and other relevant services in connection with domestic and/or overseas technical cooperation, market and product development or investment.

The central competent authority shall provide assistance to the institutes and juridical persons established for carrying out the activities specified in Article 4 of this Act.

The central competent authority may coordinate with the competent authority in charge of banking business under the Banking Act for approval of the participation of banks in the said small and medium enterprise development company so as to enable them to directly provide services referred to in the preceding paragraph.

The small and medium enterprise development fund may take part in the investment for capital formation of small and medium enterprise development companies.

The regulations governing the establishment and operation of the small and medium enterprise development companies and the standard and proportion of investment made by the small and medium enterprise development fund shall be stipulated by the Executive Yuan.

Chapter 4 Tax Remittance

Article 33

Where an investor provides a parcel of land in an industrial zone as his capital investment in a small or medium enterprise, and the said medium or small enterprise agrees to allow the investor to furnish the stock(s) of the said small or medium enterprise acquired by the said investor as the security for his payment of taxes, then the land value increment tax payable by the said investor may be paid in five equal installments in five consecutive years from the year in which the said parcel of land is committed to the investment.

The land to be invested under the preceding paragraph shall be used only by the said small or medium enterprise for its own. If the land is not used by the said small or medium enterprise for its own or is transferred to any other person, the outstanding land value increment tax shall be paid, in a lump sum, by the investor.

Article 34

Where a small or medium enterprise has moved, on account of any of the following causes, its factory or plant into an industrial zone, an industrial zone under an urban plan, or an industrial land designated in accordance with the act for Encouragement of Investment prior to the enforcement of this Act, the land value increment Tax payable on the sale or transfer of its original factory or plant site (land) shall be levied at the lowest tax rate:

1. Where the original factory land does not meet with the zoning requirements upon implementation of the urban planning or zoning plan;
2. Where the relocation of factory or plant is applied by the said small or medium enterprise and is approved by the competent authority due to the difficulties in making necessary improvement to meet with the requirements for pollution control, public safety or maintenance of natural landscape; and

3. Where the relocation of factory or plant implemented under the initiative assistance of the government.

Where the new factory land of a small or medium enterprise is transferred to another party (or other party) within three years after the factory relocation made under the preceding paragraph, the reduced portion of land value increment tax reduced while assessing such tax on the original factory land sold or transferred prior to the factory relocation shall be assessed supplementarily in accordance with the act.

Article 35

The research and development expenses and/or experiment expenses incurred by a small or medium enterprise in the improvement of production skill and/or development of new products may be deductible from the current year taxable income of the said small or medium enterprise. For any instrument and equipment used for research and development, experiment or quality inspection purposes, if its service life is more than two years, the depreciation thereof may be accelerated by one half (1/2) of the number of years applicable as listed in the table of service life of fixed assets annexed to the Income Tax Act. Balance of service life in a length of less than one year after the depreciation acceleration shall not be taken into account.

Article 36

A small and medium-sized enterprise may retain and withhold from distributing a surplus earning in an amount not exceeding double the amount of its paid-in capital. In case the retained and undistributed earnings exceed the aforesaid limit, any additional surplus earning retained in each year thereafter shall be free from the restriction stipulated in the Income Tax Act after as profit seeking enterprise income tax at the rate of 10% has been surcharged.

The retain and withhold from distributing a surplus earning after 1998 until then, shall obey the Income Tax Acts, and not apply to the preceding paragraph.

Article 36-1

Small and medium enterprises development companies may raise the preparation to investment loss, under 20% of the investment amount, so as to compensate for actual loss. If there is no actual loss situation within 5 years, they shall turn the raising preparation to be the benefit of the 5th year.

When corporations calculate the clearing accounts income due to cancellation, rescission, revocation, merger, or transference with Article 75, of the Income Tax Act, the accumulate remaining amount from the investment loss preparation within the preceding paragraph, shall turn to be the benefit of the same year.

Chapter 5 Public Procurement Projects or Public Works

Article 37

Governments at various levels and government-owned enterprises shall assist small and medium enterprises to acquire business opportunities in making public announcements for procurement projects or construction of public works.

Article 38

For making public announcement for procurement projects, construction of public works or for entrustment of research and development tasks, government at various levels and government-owned enterprises shall, based on actual requirements, establish qualification requirement and registration system in respect of small and medium enterprises eligible for acting as a supplier or bidder.

Chapter 6 Supplementary Provisions

Article 39

The Executive Yuan may form a Small and Medium Enterprise Policy Deliberation Committee to be in charge of planning and reviewing the small and medium enterprise development policy. The organizational rules shall be stipulated by the Executive Yuan.

Article 40

This Statute shall come into force from the date of promulgation.

Appendix B

Standards for Identifying Small and Medium Enterprises

Approved by Executive Yuan Order Tai (80) Jing #33054 on October 19, 1991. Promulgated by Ministry of Economic Affairs Order Jing (80) Chi Tzu #059364 on November 25, 1991.

Revision approved by Executive Yuan Order Tai (84) Jing #32284 on September 4, 1995. Revision promulgated by Ministry of Economic Affairs Order Jing (84) Chi Tzu #84029087 on September 27, 1995.

Revision approved by Executive Yuan Order Tai (89) Jing #10056 on April 8, 2000. Revision promulgated by Ministry of Economic Affairs Order Jing (89) Chi Tzu #89340202 on May 3, 2000.

Revision approved by Executive Yuan Order Yuan Tai Jing #0940022741 on June 14, 2005. Revision promulgated by Ministry of Economic Affairs Order Jing Chi Tzu #09400561550 on July 5, 2005.

Revision approved by Executive Yuan Order Yuan Tai Jing #0980048943 on August 17, 2009. Revision promulgated by Ministry of Economic Affairs Order Jing Chi Tzu #09800639470 on September 2, 2009.

Article 1

The Standards have been drawn up in accordance with the provisions of Paragraph 2, Article 2 of the Small and Medium-sized Enterprise Development Statute (hereinafter referred to as the "Statute").

Article 2

The term "SME" as used in the Standards shall mean an enterprise which has completed company registration or business registration in accordance with the requirements of the laws, and which conforms to the following standards:

1. The enterprise is an enterprise in the manufacturing, construction, mining or quarrying industry with paid-in capital of NT\$80 million or less.
2. The enterprise is an enterprise in the industry other than any of those mentioned in the Sub-paragraph immediately above and had its sales revenue of NT\$100 million or less in the previous year.

For the purpose of business guidance, each of the government agencies may, in relation to such specific business matters, base their standards for identifying a SME on the number of regular employees as noted below, in which case the restrictions noted in the previous Paragraph shall not apply:

1. The enterprise is an enterprise in the manufacturing, construction, mining or quarrying industry and the number of its regular employees is less than 200.
2. The enterprise is an enterprise in the industry other than any of those mentioned in the Sub-paragraph immediately above and the number of its regular employees is less than 100.

Article 3

The term "small-scale enterprise" as used in Paragraph 2, Article 4 of the Statute shall mean a SME with less than 5 regular employees.

Article 4

The term "sales revenue" as used in the Standards shall be determined based on the figure as approved by the tax authorities in the year immediately prior to the year of determination. If the approval has not been given by the tax authorities, the determination shall be made in accordance with the following provisions:

1. Sales revenue shall be based on the operating revenue noted on the income tax declaration form for the most recent year bearing the "Documents Received" seal of the tax authorities.
2. If the enterprise is unable to obtain the document referred to in the Sub-paragraph immediately above, Sales revenue shall be based on the sales value noted on the sales and tax declaration form for the full year of the most recent year, with commissioned sales and non-operating income deducted.
3. In the case of sale representatives required to pay business tax by the tax authorities according to the laws, sales revenue shall be presumed to be NT\$80 million or less.

If the enterprise was established in the previous year and less than one year has elapsed since business registration, or if business registration took place in the current year, sales revenue for the full year shall be calculated on the basis of the conversion from the figure already declared for each period.

Article 5

The "number of regular employee" as used in the Standards shall be based on the average monthly number of insured persons for whom labor insurance registration has been made with the Labor Insurance agency for the Taiwan and Fukien Region in the most recent 12 months.

Article 6

An enterprises shall be deemed to be a SME if any of the following is applicable:

1. In the case of a SME which has received guidance for expansion, where after expansion the size of the enterprise exceeds the standards listed in Article 2, such enterprise shall continue to be deemed to be a SME for two years immediately after the date of expansion.
2. In the case of a SME which has received guidance for merger, where after the merger the size of the enterprise exceeds the standards listed in Article 2, such enterprise shall continue to be deemed to be a SME for three years immediately after the date of the merger.
3. Where a guidance agency, guidance system or relevant agency undertakes the provision of collective guidance for SMEs in a given industry, if some of the enterprises exceed the standards listed in Article 2, and if the guidance agency, guidance system or relevant agency determines that there is good reason for providing joint guidance, such enterprises shall be deemed to be SMEs during the period of collective guidance.

Article 7

These Standards shall come into effect on the date of promulgation.

Appendix C

SME Statistics by Industry

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Table C-1 Number of Enterprises by Industry, 2007-2009

Units: Number of enterprises; %

Industry	Size	Total		SMEs		Large enterprises	
			Share		Share		Share
Total	2007	1,266,664	100.00	1,237,270	97.68	29,394	2.32
	2008	1,263,846	100.00	1,234,749	97.70	29,097	2.30
	2009	1,258,260	100.00	1,232,025	97.91	26,235	2.09
Agriculture, Forestry, Fishing and Animal Husbandry	2007	10,816	100.00	10,784	99.70	32	0.30
	2008	11,004	100.00	10,974	99.73	30	0.27
	2009	11,169	100.00	11,129	99.64	40	0.36
Mining and Quarrying	2007	1,509	100.00	1,485	98.41	24	1.59
	2008	1,479	100.00	1,455	98.38	24	1.62
	2009	1,424	100.00	1,403	98.53	21	1.47
Manufacturing	2007	137,961	100.00	133,312	96.63	4,649	3.37
	2008	136,568	100.00	131,829	96.53	4,739	3.47
	2009	134,881	100.00	130,017	96.39	4,864	3.61
Electricity and Gas Supply	2007	368	100.00	248	67.39	120	32.61
	2008	388	100.00	266	68.56	122	31.44
	2009	396	100.00	278	70.20	118	29.80
Water Supply and Remediation Services	2007	6,625	100.00	6,342	95.73	283	4.27
	2008	6,985	100.00	6,691	95.79	294	4.21
	2009	7,019	100.00	6,785	96.67	234	3.33
Construction	2007	92,426	100.00	91,150	98.62	1,276	1.38
	2008	93,508	100.00	92,272	98.68	1,236	1.32
	2009	93,735	100.00	92,507	98.69	1,228	1.31
Wholesale and Retail Trade	2007	670,031	100.00	654,091	97.62	15,940	2.38
	2008	664,222	100.00	648,376	97.61	15,846	2.39
	2009	656,076	100.00	642,235	97.89	13,841	2.11
Transportation and Storage	2007	31,802	100.00	30,807	96.87	995	3.13
	2008	31,563	100.00	30,586	96.90	977	3.10
	2009	31,154	100.00	30,329	97.35	825	2.65
Accommodation and Food Services	2007	109,052	100.00	108,801	99.77	251	0.23
	2008	110,435	100.00	110,182	99.77	253	0.23
	2009	113,703	100.00	113,447	99.77	256	0.23

Table C-1 Number of Enterprises by Industry, 2007-2009 (continued)

Units: Number of enterprises; %

Industry	Size	Total		SMEs		Large enterprises	
			Share		Share		Share
Information and Communication	2007	15,948	100.00	15,282	95.82	666	4.18
	2008	15,906	100.00	15,253	95.89	653	4.11
	2009	15,985	100.00	15,360	96.09	625	3.91
Finance and Insurance	2007	16,364	100.00	13,597	83.09	2,767	16.91
	2008	16,227	100.00	13,646	84.09	2,581	15.91
	2009	16,058	100.00	14,102	87.82	1,956	12.18
Real Estate	2007	19,870	100.00	18,683	94.03	1,187	5.97
	2008	20,799	100.00	19,638	94.42	1,161	5.58
	2009	21,214	100.00	20,092	94.71	1,122	5.29
Professional, Scientific and Technical Services	2007	35,834	100.00	35,191	98.21	643	1.79
	2008	35,908	100.00	35,301	98.31	607	1.69
	2009	35,966	100.00	35,397	98.42	569	1.58
Support Services	2007	26,491	100.00	26,211	98.94	280	1.06
	2008	27,110	100.00	26,822	98.94	288	1.06
	2009	27,423	100.00	27,147	98.99	276	1.01
Education	2007	514	100.00	508	98.83	6	1.17
	2008	667	100.00	662	99.25	5	0.75
	2009	933	100.00	927	99.36	6	0.64
Human Health and Social Work Services	2007	310	100.00	304	98.06	6	1.94
	2008	329	100.00	323	98.18	6	1.82
	2009	352	100.00	344	97.73	8	2.27
Arts, Entertainment and Recreation	2007	23,203	100.00	23,108	99.59	95	0.41
	2008	23,055	100.00	22,955	99.57	100	0.43
	2009	22,578	100.00	22,487	99.60	91	0.40
Other Services	2007	67,540	100.00	67,366	99.74	174	0.26
	2008	67,693	100.00	67,518	99.74	175	0.26
	2009	68,194	100.00	68,039	99.77	155	0.23

Note: 1. The industries are classified according to the 8th revision of Industry Classification Standard.

2. For the purposes of this table, SMEs are defined as enterprises in the manufacturing, construction and mining and quarrying industries with paid-in capital of NT\$80 million or less, and enterprises in other industries which posted annual sales revenue of NT\$100 million or less in the previous fiscal year.

Source: Ministry of Finance Tax Data Center, VAT data, 2007-2009.

Table C-2 Total Sales Value by Industry, 2007-2009

Units: NT millions; %

Industry	Size	Total		SMEs		Large enterprises	
		Total	Share	SMEs	Share	enterprises	Share
Total	2007	35,886,186	100.00	10,481,910	29.21	25,404,276	70.79
	2008	35,239,137	100.00	10,462,696	29.69	24,776,441	70.31
	2009	29,981,803	100.00	9,189,463	30.65	20,792,340	69.35
Agriculture, Forestry, Fishing and Animal Husbandry	2007	31,648	100.00	15,587	49.25	16,062	50.75
	2008	30,574	100.00	16,284	53.26	14,290	46.74
	2009	32,436	100.00	16,825	51.87	15,611	48.13
Mining and Quarrying	2007	53,058	100.00	44,446	83.77	8,612	16.23
	2008	53,342	100.00	43,907	82.31	9,435	17.69
	2009	43,951	100.00	35,034	79.71	8,916	20.29
Manufacturing	2007	13,327,698	100.00	4,024,135	30.19	9,303,562	69.81
	2008	13,267,949	100.00	4,000,466	30.15	9,267,483	69.85
	2009	10,456,268	100.00	3,131,140	29.95	7,325,128	70.05
Electricity and Gas Supply	2007	591,154	100.00	3,354	0.57	587,800	99.43
	2008	655,982	100.00	3,763	0.57	652,219	99.43
	2009	671,938	100.00	3,889	0.58	668,050	99.42
Water Supply and Remediation Services	2007	163,806	100.00	52,687	32.16	111,119	67.84
	2008	167,426	100.00	53,898	32.19	113,529	67.81
	2009	139,577	100.00	48,887	35.03	90,690	64.97
Construction	2007	1,791,864	100.00	1,120,687	62.54	671,178	37.46
	2008	1,870,473	100.00	1,139,154	60.90	731,319	39.10
	2009	1,772,663	100.00	994,645	56.11	778,017	43.89
Wholesale and Retail Trade	2007	12,613,353	100.00	3,906,720	30.97	8,706,633	69.03
	2008	12,385,623	100.00	3,885,387	31.37	8,500,236	68.63
	2009	10,938,212	100.00	3,654,849	33.41	7,283,363	66.59
Transportation and Storage	2007	989,690	100.00	243,675	24.62	746,015	75.38
	2008	1,003,499	100.00	245,586	24.47	757,913	75.53
	2009	884,290	100.00	229,935	26.00	654,355	74.00
Accommodation and Food Services	2007	321,276	100.00	226,581	70.53	94,695	29.47
	2008	327,241	100.00	235,287	71.90	91,954	28.10
	2009	324,152	100.00	243,558	75.14	80,594	24.86

Table C-2 Total Sales Value by Industry, 2007-2009 (continued)

Units: NT millions; %

Industry	Size	Total		SMEs		Large enterprises	
		Total	Share	SMEs	Share	enterprises	Share
Information and Communication	2007	774,345	100.00	93,927	12.13	680,418	87.87
	2008	780,113	100.00	94,771	12.15	685,342	87.85
	2009	780,409	100.00	90,962	11.66	689,448	88.34
Finance and Insurance	2007	3,380,015	100.00	184,428	5.46	3,195,587	94.54
	2008	2,839,933	100.00	176,238	6.21	2,663,695	93.79
	2009	2,140,811	100.00	192,787	9.01	1,948,023	90.99
Real Estate	2007	774,671	100.00	148,186	19.13	626,485	80.87
	2008	798,123	100.00	147,218	18.45	650,905	81.55
	2009	745,093	100.00	143,520	19.26	601,574	80.74
Professional, Scientific and Technical Services	2007	590,300	100.00	169,642	28.74	420,658	71.26
	2008	570,004	100.00	170,083	29.84	399,921	70.16
	2009	556,988	100.00	156,592	28.11	400,396	71.89
Support Services	2007	240,586	100.00	103,855	43.17	136,731	56.83
	2008	241,561	100.00	106,387	44.04	135,174	55.96
	2009	246,748	100.00	102,544	41.56	144,204	58.44
Education	2007	4,305	100.00	2,577	59.86	1,728	40.14
	2008	5,175	100.00	3,410	65.89	1,765	34.11
	2009	6,241	100.00	4,186	67.06	2,056	32.94
Human Health and Social Work Services	2007	2,729	100.00	1,461	53.53	1,268	46.47
	2008	2,849	100.00	1,561	54.79	1,288	45.21
	2009	3,749	100.00	1,653	44.10	2,096	55.90
Arts, Entertainment and Recreation	2007	71,525	100.00	43,410	60.69	28,115	39.31
	2008	71,371	100.00	42,741	59.89	28,630	40.11
	2009	75,548	100.00	42,642	56.44	32,906	43.56
Other Services	2007	164,162	100.00	96,552	58.82	67,610	41.18
	2008	167,899	100.00	96,555	57.51	71,344	42.49
	2009	162,729	100.00	95,815	58.88	66,914	41.12

Note: 1. The industries are classified according to the 8th revision of Industry Classification Standard.

2. For the purposes of this table, SMEs are defined as enterprises in the manufacturing, construction and mining and quarrying industries with paid-in capital of NT\$80 million or less, and enterprises in other industries which posted annual sales revenue of NT\$100 million or less in the previous fiscal year.

Source: Ministry of Finance Tax Data Center, VAT data, 2007-2009.

Table C-3 Domestic Sales Value by Industry, 2007-2009

Units: NT millions; %

Industry	Size	Total		SMEs		Large enterprises	
		Total	Share	SMEs	Share	Large enterprises	Share
Total	2007	26,277,862	100.00	8,842,983	33.65	17,434,879	66.35
	2008	25,762,915	100.00	8,817,989	34.23	16,944,927	65.77
	2009	22,179,910	100.00	7,873,111	35.50	14,306,799	64.50
Agriculture, Forestry, Fishing and Animal Husbandry	2007	28,402	100.00	13,711	48.28	14,691	51.72
	2008	27,187	100.00	14,407	52.99	12,780	47.01
	2009	28,241	100.00	14,856	52.60	13,385	47.40
Mining and Quarrying	2007	52,263	100.00	44,067	84.32	8,196	15.68
	2008	52,674	100.00	43,613	82.80	9,061	17.20
	2009	43,520	100.00	34,796	79.95	8,724	20.05
Manufacturing	2007	7,074,196	100.00	2,873,824	40.62	4,200,372	59.38
	2008	7,040,619	100.00	2,835,244	40.27	4,205,374	59.73
	2009	5,540,738	100.00	2,263,079	40.84	3,277,659	59.16
Electricity and Gas Supply	2007	577,154	100.00	3,297	0.57	573,857	99.43
	2008	640,473	100.00	3,666	0.57	636,807	99.43
	2009	658,770	100.00	3,784	0.57	654,986	99.43
Water Supply and Remediation Services	2007	155,255	100.00	51,239	33.00	104,017	67.00
	2008	160,513	100.00	51,772	32.25	108,742	67.75
	2009	134,125	100.00	47,338	35.29	86,787	64.71
Construction	2007	1,763,161	100.00	1,107,703	62.82	655,458	37.18
	2008	1,831,773	100.00	1,126,498	61.50	705,275	38.50
	2009	1,635,776	100.00	984,966	60.21	650,810	39.79
Wholesale and Retail Trade	2007	9,855,285	100.00	3,457,108	35.08	6,398,177	64.92
	2008	9,717,270	100.00	3,446,768	35.47	6,270,502	64.53
	2009	8,646,425	100.00	3,243,563	37.51	5,402,862	62.49
Transportation and Storage	2007	654,868	100.00	236,403	36.10	418,465	63.90
	2008	698,547	100.00	236,540	33.86	462,008	66.14
	2009	662,590	100.00	220,630	33.30	441,959	66.70
Accommodation and Food Services	2007	318,729	100.00	226,075	70.93	92,654	29.07
	2008	325,483	100.00	235,152	72.25	90,331	27.75
	2009	322,875	100.00	243,448	75.40	79,427	24.60

Table C-3 Domestic Sales Value by Industry, 2007-2009 (continued)

Units: NT millions; %

Industry	Size	Total		SMEs		Large enterprises	
		Total	Share	SMEs	Share	Large enterprises	Share
Information and Communication	2007	687,217	100.00	87,580	12.74	599,638	87.26
	2008	692,135	100.00	88,584	12.80	603,551	87.20
	2009	697,871	100.00	84,549	12.12	613,322	87.88
Finance and Insurance	2007	3,377,713	100.00	183,720	5.44	3,193,993	94.56
	2008	2,836,069	100.00	175,663	6.19	2,660,406	93.81
	2009	2,136,177	100.00	192,353	9.00	1,943,824	91.00
Real Estate	2007	771,388	100.00	147,901	19.17	623,487	80.83
	2008	793,730	100.00	146,860	18.50	646,871	81.50
	2009	736,622	100.00	143,797	19.52	592,825	80.48
Professional, Scientific and Technical Services	2007	494,767	100.00	163,804	33.11	330,963	66.89
	2008	474,061	100.00	164,207	34.64	309,854	65.36
	2009	451,111	100.00	150,464	33.35	300,647	66.65
Support Services	2007	232,084	100.00	102,950	44.36	129,134	55.64
	2008	235,661	100.00	105,330	44.70	130,331	55.30
	2009	243,319	100.00	101,656	41.78	141,663	58.22
Education	2007	4,219	100.00	2,577	61.08	1,642	38.92
	2008	5,049	100.00	3,394	67.22	1,655	32.78
	2009	6,154	100.00	4,171	67.78	1,983	32.22
Human Health and Social Work Services	2007	2,667	100.00	1,428	53.53	1,239	46.47
	2008	2,693	100.00	1,540	57.20	1,152	42.80
	2009	3,414	100.00	1,557	45.60	1,857	54.40
Arts, Entertainment and Recreation	2007	71,347	100.00	43,312	60.71	28,036	39.29
	2008	71,176	100.00	42,640	59.91	28,536	40.09
	2009	75,433	100.00	42,538	56.39	32,895	43.61
Other Services	2007	157,147	100.00	96,285	61.27	60,862	38.73
	2008	157,802	100.00	96,110	60.91	61,692	39.09
	2009	156,751	100.00	95,566	60.97	61,185	39.03

Note: 1. The industries are classified according to the 8th revision of Industry Classification Standard.

2. For the purposes of this table, SMEs are defined as enterprises in the manufacturing, construction and mining and quarrying industries with paid-in capital of NT\$80 million or less, and enterprises in other industries which posted annual sales revenue of NT\$100 million or less in the previous fiscal year.

Source: Ministry of Finance Tax Data Center, VAT data, 2007-2009.

Table C-4 Export Sales Value by Industry, 2007-2009

Units: NT millions; %

Industry	Size	Total		SMEs		Large enterprises	
		Total	Share	SMEs	Share	Large enterprises	Share
Total	2007	9,608,324	100.00	1,638,927	17.06	7,969,397	82.94
	2008	9,476,222	100.00	1,644,707	17.36	7,831,515	82.64
	2009	7,801,893	100.00	1,316,352	16.87	6,485,541	83.13
Agriculture, Forestry, Fishing and Animal Husbandry	2007	3,247	100.00	1,876	57.77	1,371	42.23
	2008	3,387	100.00	1,876	55.39	1,511	44.61
	2009	4,195	100.00	1,969	46.94	2,225	53.06
Mining and Quarrying	2007	796	100.00	379	47.69	416	52.31
	2008	668	100.00	294	44.03	374	55.97
	2009	431	100.00	238	55.36	192	44.64
Manufacturing	2007	6,253,502	100.00	1,150,311	18.39	5,103,191	81.61
	2008	6,227,331	100.00	1,165,222	18.71	5,062,109	81.29
	2009	4,915,530	100.00	868,061	17.66	4,047,470	82.34
Electricity and Gas Supply	2007	14,000	100.00	57	0.41	13,944	99.59
	2008	15,509	100.00	97	0.63	15,412	99.37
	2009	13,168	100.00	105	0.79	13,064	99.21
Water Supply and Remediation Services	2007	8,551	100.00	1,449	16.94	7,103	83.06
	2008	6,913	100.00	2,126	30.75	4,787	69.25
	2009	5,452	100.00	1,549	28.42	3,903	71.58
Construction	2007	28,703	100.00	12,983	45.23	15,720	54.77
	2008	38,700	100.00	12,656	32.70	26,044	67.30
	2009	136,887	100.00	9,679	7.07	127,208	92.93
Wholesale and Retail Trade	2007	2,758,068	100.00	449,612	16.30	2,308,456	83.70
	2008	2,668,353	100.00	438,619	16.44	2,229,734	83.56
	2009	2,291,787	100.00	411,286	17.95	1,880,501	82.05
Transportation and Storage	2007	334,822	100.00	7,271	2.17	327,550	97.83
	2008	304,951	100.00	9,046	2.97	295,905	97.03
	2009	221,700	100.00	9,305	4.20	212,395	95.80
Accommodation and Food Services	2007	2,547	100.00	506	19.88	2,041	80.12
	2008	1,758	100.00	135	7.69	1,623	92.31
	2009	1,277	100.00	110	8.58	1,167	91.42

Table C-4 Export Sales Value by Industry, 2007-2009 (continued)

Units: NT millions; %

Industry	Size	Total		SMEs		Large enterprises	
		Total	Share	SMEs	Share	Large enterprises	Share
Information and Communication	2007	87,128	100.00	6,347	7.29	80,780	92.71
	2008	87,979	100.00	6,187	7.03	81,791	92.97
	2009	82,539	100.00	6,413	7.77	76,125	92.23
Finance and Insurance	2007	2,301	100.00	708	30.76	1,593	69.24
	2008	3,864	100.00	575	14.88	3,290	85.12
	2009	4,634	100.00	434	9.37	4,200	90.63
Real Estate	2007	3,283	100.00	285	8.67	2,998	91.33
	2008	4,393	100.00	358	8.16	4,034	91.84
	2009	8,471	100.00	-277	-	8,748	-
Professional, Scientific and Technical Services	2007	95,533	100.00	5,839	6.11	89,695	93.89
	2008	95,943	100.00	5,876	6.12	90,067	93.88
	2009	105,877	100.00	6,128	5.79	99,749	94.21
Support Services	2007	8,503	100.00	906	10.65	7,597	89.35
	2008	5,901	100.00	1,057	17.92	4,843	82.08
	2009	3,429	100.00	888	25.90	2,541	74.10
Education	2007	86	100.00	0	0.41	86	99.59
	2008	125	100.00	16	12.37	110	87.63
	2009	87	100.00	14	16.43	73	83.57
Human Health and Social Work Services	2007	62	100.00	33	53.44	29	46.56
	2008	157	100.00	21	13.31	136	86.69
	2009	335	100.00	96	28.78	239	71.22
Arts, Entertainment and Recreation	2007	177	100.00	98	55.30	79	44.70
	2008	195	100.00	101	51.77	94	48.23
	2009	115	100.00	104	90.22	11	9.78
Other Services	2007	7,015	100.00	267	3.81	6,748	96.19
	2008	10,096	100.00	445	4.41	9,651	95.59
	2009	5,977	100.00	248	4.16	5,729	95.84

Note: 1. The industries are classified according to the 8th revision of Industry Classification Standard.

2. For the purposes of this table, SMEs are defined as enterprises in the manufacturing, construction and mining and quarrying industries with paid-in capital of NT\$80 million or less, and enterprises in other industries which posted annual sales revenue of NT\$100 million or less in the previous fiscal year.

Source: Ministry of Finance Tax Data Center, VAT data, 2007-2009.

Table C-5 Total Employment by Industry, 2007-2009

Units: Thousand persons; %

Industry	Size	Total		SMEs		Large enterprises		Government	
		Total	Share	SMEs	Share	enterprises	Share	ment	Share
Total	2007	10,294	100.00	7,939	77.12	1,424	13.83	932	9.05
	2008	10,403	100.00	7,966	76.58	1,479	14.22	958	9.21
	2009	10,279	100.00	8,066	78.47	1,173	11.41	1,040	10.11
Agriculture, Forestry, Fishing and Animal Husbandry	2007	543	100.00	538	98.99	2	0.30	4	0.71
	2008	535	100.00	529	98.82	1	0.25	5	0.93
	2009	543	100.00	537	98.97	1	0.12	5	0.91
Mining and Quarrying	2007	6	100.00	5	82.40	0	0.42	1	17.18
	2008	6	100.00	5	85.62	0	0.39	1	14.00
	2009	5	100.00	4	85.24	0	0.88	1	13.88
Manufacturing	2007	2,842	100.00	2,180	76.69	634	22.30	29	1.01
	2008	2,886	100.00	2,191	75.93	666	23.07	29	1.00
	2009	2,790	100.00	2,111	75.65	651	23.33	28	1.02
Electricity and Gas Supply	2007	28	100.00	3	9.81	3	9.85	23	80.34
	2008	28	100.00	2	7.54	3	12.34	22	80.12
	2009	29	100.00	3	10.67	2	7.19	24	82.15
Water Supply and Remediation Services	2007	65	100.00	23	34.43	2	2.54	41	63.03
	2008	71	100.00	28	39.62	2	2.91	41	57.47
	2009	73	100.00	27	36.72	0	0.68	46	62.60
Construction	2007	846	100.00	827	97.75	9	1.05	10	1.21
	2008	842	100.00	823	97.73	10	1.14	10	1.13
	2009	788	100.00	769	97.64	8	1.05	10	1.31
Wholesale and Retail Trade	2007	1,782	100.00	1,667	93.54	105	5.90	10	0.56
	2008	1,770	100.00	1,652	93.31	109	6.18	9	0.51
	2009	1,735	100.00	1,669	96.20	55	3.19	11	0.61
Transportation and Storage	2007	415	100.00	281	67.61	80	19.27	55	13.13
	2008	414	100.00	275	66.46	85	20.59	54	12.95
	2009	402	100.00	289	71.83	55	13.68	58	14.49
Accommodation and Food Services	2007	681	100.00	653	95.96	27	3.97	0	0.07
	2008	687	100.00	659	95.95	28	4.01	0	0.05
	2009	693	100.00	677	97.62	16	2.27	1	0.11

Table C-5 Total Employment by Industry, 2007-2009 (continued)

Units: Thousand persons; %

Industry	Size	Total		SMEs		Large enterprises		Government	
		Total	Share	SMEs	Share	Large enterprises	Share	Government	Share
Information and Communication	2007	206	100.00	116	56.20	90	43.43	1	0.37
	2008	203	100.00	119	58.68	83	40.98	1	0.34
	2009	207	100.00	147	71.16	59	28.38	1	0.46
Finance and Insurance	2007	404	100.00	223	55.20	166	41.17	15	3.63
	2008	411	100.00	228	55.50	169	41.09	14	3.41
	2009	413	100.00	310	75.01	86	20.80	17	4.19
Real Estate	2007	74	100.00	66	89.63	6	8.33	2	2.03
	2008	74	100.00	68	92.02	5	6.16	1	1.82
	2009	68	100.00	64	94.35	2	3.27	2	2.38
Professional, Scientific and Technical Services	2007	301	100.00	232	77.05	41	13.61	28	9.35
	2008	317	100.00	238	75.16	49	15.38	30	9.45
	2009	315	100.00	248	78.55	37	11.77	31	9.68
Support Services	2007	215	100.00	182	84.57	32	14.75	1	0.67
	2008	231	100.00	194	84.10	36	15.42	1	0.47
	2009	232	100.00	212	91.55	19	8.14	1	0.31
Public Administration and Defence; Compulsory Social Security	2007	332	100.00	0	0.00	0	0.00	332	100.00
	2008	343	100.00	0	0.00	0	0.00	343	100.00
	2009	382	100.00	1	0.16	0	0.03	381	99.82
Education	2007	588	100.00	210	35.63	85	14.42	294	49.95
	2008	605	100.00	208	34.47	86	14.27	310	51.26
	2009	613	100.00	217	35.38	65	10.62	331	54.00
Human Health and Social Work Services	2007	340	100.00	147	43.10	119	35.14	74	21.77
	2008	355	100.00	157	44.15	124	34.99	74	20.86
	2009	368	100.00	185	50.31	107	29.18	75	20.51
Arts, Entertainment and Recreation	2007	101	100.00	79	78.67	11	10.59	11	10.73
	2008	98	100.00	76	77.96	10	10.57	11	11.47
	2009	96	100.00	76	79.28	5	4.93	15	15.79
Other Services	2007	523	100.00	507	97.11	12	2.39	3	0.50
	2008	528	100.00	513	97.13	13	2.39	3	0.48
	2009	527	100.00	519	98.66	5	0.87	2	0.47

Note: 1. The industries are classified according to the 8th revision of Industry Classification Standard.

2. For the purposes of this Table, SMEs are defined as firms in the manufacturing, construction and mining and quarrying industries with less than 200 regular employees, and firms in other industries with less than 100 regular employees.

Source: Ministry of Finance Tax Data Center, VAT data, 2007-2009.

Table C-6 Number of Paid Employees by Industry, 2007-2009

Units: Thousand persons; %

Industry	Size	Total		SMEs		Large enterprises		Government	
		Total	Share	SMEs	Share	enterprises	Share	ment	Share
Total	2007	7,735	100.00	5,383	69.60	1,420	18.36	932	12.04
	2008	7,902	100.00	5,469	69.21	1,475	18.67	958	12.12
	2009	7,889	100.00	5,679	71.98	1,171	14.84	1,040	13.18
Agriculture, Forestry, Fishing and Animal Husbandry	2007	73	100.00	68	92.52	2	2.23	4	5.25
	2008	81	100.00	75	92.20	1	1.64	5	6.16
	2009	84	100.00	79	93.36	1	0.75	5	5.89
Mining and Quarrying	2007	6	100.00	5	81.03	0	0.45	1	18.52
	2008	5	100.00	4	84.24	0	0.42	1	15.34
	2009	4	100.00	4	84.13	0	0.95	1	14.92
Manufacturing	2007	2,554	100.00	1,893	74.10	633	24.78	29	1.12
	2008	2,600	100.00	1,907	73.34	664	25.55	29	1.11
	2009	2,522	100.00	1,843	73.10	650	25.77	28	1.13
Electricity and Gas Supply	2007	28	100.00	3	9.35	3	9.90	23	80.75
	2008	28	100.00	2	7.47	3	12.35	22	80.18
	2009	29	100.00	3	10.67	2	6.88	24	82.44
Water Supply and Remediation Services	2007	59	100.00	16	27.77	2	2.79	41	69.44
	2008	65	100.00	22	34.37	2	3.16	41	62.47
	2009	66	100.00	20	30.09	0	0.75	46	69.16
Construction	2007	709	100.00	690	97.32	9	1.25	10	1.44
	2008	705	100.00	686	97.30	10	1.35	10	1.35
	2009	658	100.00	640	97.21	8	1.22	10	1.57
Wholesale and Retail Trade	2007	984	100.00	869	88.36	105	10.63	10	1.01
	2008	997	100.00	879	88.19	109	10.91	9	0.90
	2009	1,008	100.00	942	93.47	55	5.48	11	1.05
Transportation and Storage	2007	311	100.00	177	56.87	80	25.61	55	17.52
	2008	314	100.00	175	55.88	85	27.04	54	17.08
	2009	309	100.00	196	63.40	55	17.77	58	18.83
Accommodation and Food Services	2007	366	100.00	339	92.55	27	7.32	0	0.13
	2008	381	100.00	353	92.71	27	7.21	0	0.08
	2009	395	100.00	379	95.83	16	3.97	1	0.20

Table C-6 Number of Paid Employees by Industry, 2007-2009 (continued)

Units: Thousand persons; %

Industry	Size	Total		SMEs		Large enterprises		Govern-ment	
		Total	Share	SMEs	Share	Large enterprises	Share	ment	Share
Information and Communication	2007	193	100.00	102	53.18	89	46.42	1	0.40
	2008	192	100.00	108	56.32	83	43.33	1	0.36
	2009	196	100.00	136	69.58	59	29.94	1	0.48
Finance and Insurance	2007	401	100.00	220	54.82	166	41.52	15	3.66
	2008	407	100.00	224	55.08	169	41.48	14	3.44
	2009	409	100.00	306	74.83	86	20.94	17	4.23
Real Estate	2007	63	100.00	56	88.13	6	9.49	2	2.38
	2008	65	100.00	59	90.91	5	7.00	1	2.09
	2009	60	100.00	56	93.60	2	3.71	2	2.70
Professional, Scientific and Technical Services	2007	222	100.00	153	69.01	41	18.34	28	12.65
	2008	241	100.00	162	67.39	49	20.18	30	12.43
	2009	247	100.00	180	72.66	37	15.01	31	12.33
Support Services	2007	190	100.00	157	82.73	31	16.50	1	0.76
	2008	208	100.00	171	82.51	35	16.96	1	0.53
	2009	210	100.00	191	90.77	19	8.89	1	0.34
Public Administration and Defence; Compulsory Social Security	2007	332	100.00	0	0.00	0	0.00	332	100.00
	2008	343	100.00	0	0.00	0	0.00	343	100.00
	2009	382	100.00	1	0.16	0	0.03	381	99.82
Education	2007	551	100.00	173	31.42	84	15.30	294	53.28
	2008	567	100.00	171	30.15	86	15.21	310	54.63
	2009	582	100.00	186	31.95	65	11.18	331	56.87
Human Health and Social Work Services	2007	304	100.00	110	36.30	119	39.32	74	24.38
	2008	319	100.00	121	37.98	124	38.85	74	23.17
	2009	334	100.00	152	45.35	107	32.09	75	22.56
Arts, Entertainment and Recreation	2007	77	100.00	56	72.11	11	13.85	11	14.03
	2008	75	100.00	54	71.44	10	13.60	11	14.96
	2009	76	100.00	56	74.00	5	6.08	15	19.92
Other Services	2007	311	100.00	296	95.15	12	4.01	3	0.84
	2008	309	100.00	294	95.11	13	4.08	3	0.81
	2009	317	100.00	310	97.77	5	1.45	2	0.78

Note: 1. The industries are classified according to the 8th revision of Industry Classification Standard.

2. For the purposes of this Table, SMEs are defined as firms in the manufacturing, construction and mining and quarrying industries with less than 200 regular employees, and firms in other industries with less than 100 regular employees.

Source: Ministry of Finance Tax Data Center, VAT data, 2007-2009.

Table C-7 Overview of Newly-established Enterprises in 2009 – by Industry

Units: Number of enterprises; NT millions; %

Industry	Size	Total		SMEs		Large enterprises	
			Share		Share		Share
Total	Number of enterprises	88,754	100.00	88,531	99.75	223	0.25
	Sales value	232,822	100.00	157,579	67.68	75,243	32.32
	Domestic value	193,088	100.00	147,318	76.30	45,770	23.70
	Export value	39,734	100.00	10,261	25.82	29,473	74.18
Agriculture, Forestry, Fishing and Animal Husbandry	Number of enterprises	425	100.00	424	99.76	1	0.24
	Sales value	502	100.00	266	52.94	-	47.06
	Domestic value	485	100.00	249	51.31	-	48.69
	Export value	17	100.00	17	100.00	0	0.00
Mining and Quarrying	Number of enterprises	89	100.00	89	100.00	0	0.00
	Sales value	403	100.00	403	100.00	0	0.00
	Domestic value	403	100.00	403	100.00	0	0.00
	Export value	0	100.00	0	0.00	0	0.00
Manufacturing	Number of enterprises	3,804	100.00	3,757	98.76	47	1.24
	Sales value	15,031	100.00	14,515	96.57	516	3.43
	Domestic value	12,699	100.00	12,305	97.13	364	2.87
	Export value	2,362	100.00	2,210	93.56	152	6.44
Electricity and Gas Supply	Number of enterprises	28	100.00	28	100.00	0	0.00
	Sales value	110	100.00	110	100.00	0	0.00
	Domestic value	110	100.00	110	100.00	0	0.00
	Export value	0	100.00	0	0.00	0	0.00
Water Supply and Remediation Services	Number of enterprises	477	100.00	476	99.79	1	0.21
	Sales value	812	100.00	701	86.43	-	13.57
	Domestic value	805	100.00	695	86.32	-	13.68
	Export value	7	100.00	7	100.00	0	0.00
Construction	Number of enterprises	7,123	100.00	7,114	99.87	9	0.13
	Sales value	20,454	100.00	20,148	98.50	306	1.50
	Domestic value	20,285	100.00	20,107	99.12	179	0.88
	Export value	168	100.00	41	24.52	127	75.48
Wholesale and Retail Trade	Number of enterprises	42,181	100.00	42,052	99.69	129	0.31
	Sales value	139,248	100.00	85,547	61.43	53,701	38.57
	Domestic value	106,973	100.00	78,501	73.38	28,471	26.62
	Export value	32,275	100.00	7,045	21.83	25,230	78.17
Transportation and Storage	Number of enterprises	1,175	100.00	1,170	99.57	5	0.43
	Sales value	6,206	100.00	2,990	48.18	3,216	51.82
	Domestic value	2,725	100.00	2,525	92.65	200	7.35
	Export value	3,481	100.00	465	13.36	3,016	86.64
Accommodation and Food Services	Number of enterprises	15,515	100.00	15,513	99.99	2	0.01
	Sales value	14,489	100.00	14,215	98.11	-	1.89
	Domestic value	14,489	100.00	14,215	98.11	-	1.89
	Export value	0	100.00	0	0.00	0	0.00

Table C-7 Overview of Newly-established Enterprises in 2009 – by Industry (continued)

Units: Number of enterprises; NT millions; %

Industry	Size	Total	SMEs		Large enterprises		
			Share	Share	Share	Share	
Information and Communication	Number of enterprises	1,583	100.00	1,581	99.87	2	0.13
	Sales value	3,043	100.00	2,261	74.28	-	25.72
	Domestic value	1,767	100.00	2,019	72.98	-	27.02
	Export value	277	100.00	242	87.28	-	12.72
Finance and Insurance	Number of enterprises	732	100.00	725	99.04	7	0.96
	Sales value	13,295	100.00	1,891	14.22	11,404	85.78
	Domestic value	13,208	100.00	1,855	14.05	11,353	85.98
	Export value	87	100.00	36	41.12	51	58.88
Real Estate	Number of enterprises	2,137	100.00	2,124	99.39	13	0.61
	Sales value	6,375	100.00	3,368	52.84	3,006	47.16
	Domestic value	6,355	100.00	3,348	52.69	3,006	47.31
	Export value	20	100.00	20	100.00	0	0.00
Professional, Scientific and Technical Services	Number of enterprises	3,219	100.00	3,217	99.94	2	0.06
	Sales value	4,862	100.00	4,113	84.59	-	15.41
	Domestic value	4,076	100.00	3,991	97.91	-	2.09
	Export value	786	100.00	122	15.53	-	84.47
Support Services	Number of enterprises	2,371	100.00	2,368	99.87	3	0.13
	Sales value	2,822	100.00	2,154	76.35	667	23.65
	Domestic value	2,567	100.00	2,097	81.69	470	18.31
	Export value	254	100.00	57	22.45	197	77.55
Education	Number of enterprises	279	100.00	279	100.00	0	0.00
	Sales value	490	100.00	490	100.00	0	0.00
	Domestic value	490	100.00	490	100.00	0	0.00
	Export value	0	100.00	0	0.00	0	0.00
Human Health and Social Work Services	Number of enterprises	42	100.00	42	99.92	0	0.00
	Sales value	22	100.00	22	84.93	0	0.00
	Domestic value	22	100.00	22	84.93	0	0.00
	Export value	0	100.00	0	0.00	0	0.00
Arts, Entertainment and Recreation	Number of enterprises	2,436	100.00	2,434	100.00	2	0.08
	Sales value	1,819	100.00	1,545	100.00	-	15.07
	Domestic value	1,819	100.00	1,545	100.00	-	15.07
	Export value	0	100.00	0	0.00	0	0.00
Other Services	Number of enterprises	5,138	100.00	5,138	100.00	0	0.00
	Sales value	2,840	100.00	2,840	100.00	0	0.00
	Domestic value	2,840	100.00	2,840	100.00	0	0.00
	Export value	0	100.00	0	0.00	0	0.00

Note: 1. The industries are classified according to the 8th revision of Industry Classification Standard.

2. For the purposes of this table, SMEs are defined as enterprises in the manufacturing, construction and mining and quarrying industries with paid-in capital of NT\$80 million or less, and enterprises in other industries which posted annual sales revenue of NT\$100 million or less in the previous fiscal year.

Source: Ministry of Finance Tax Data Center, VAT data, 2009.

Table C-8 Female Owned Enterprises in 2009 – Number of Enterprises and Sales Value by Industry

Units: NT\$ millions; %

Industry/Size		Number of Enterprises			Sales Value		
		Total	Women owned Enterprises	Women owned Enterprises' Share	Total	Women owned Enterprises	Women owned Enterprises' Share
Total	Total	1,249,549	444,906	35.61	27,155,844	3,925,083	14.45
	SMEs	1,224,987	440,515	35.96	8,924,391	2,120,369	23.76
	Large enterprises	24,562	4,391	17.88	18,231,453	1,804,714	9.90
Agriculture, Forestry, Fishing and Animal Husbandry	SMEs	11,122	2,468	22.19	16,809	3,421	20.35
	Large enterprises	40	8	20.00	15,611	3,296	21.11
Mining and Quarrying	SMEs	1,401	329	23.48	34,837	4,595	13.19
	Large enterprises	21	1	4.76	8,916	43	0.48
Manufacturing	SMEs	129,447	34,394	26.57	2,988,862	450,100	15.06
	Large enterprises	4,558	436	9.57	6,454,477	204,290	3.17
Electricity and Gas Supply	SMEs	267	53	19.85	3,826	433	11.31
	Large enterprises	115	16	13.91	664,409	42,627	6.42
Water Supply and Remediation Services	SMEs	6,773	2,080	30.71	48,715	14,716	30.21
	Large enterprises	230	44	19.13	89,472	11,107	12.41
Construction	SMEs	92,334	22,933	24.84	96,756	231,584	23.88
	Large enterprises	1,183	227	19.19	739,854	93,835	12.68
Wholesale and Retail Trade	SMEs	638,202	239,059	37.46	3,583,437	1,045,375	29.17
	Large enterprises	12,931	2,758	21.33	6,125,851	1,030,584	16.82
Transportation and Storage	SMEs	30,154	7,492	24.85	227,329	60,443	26.59
	Large enterprises	756	110	14.55	549,613	37,399	6.80
Accommodation and Food Services	SMEs	112,803	54,920	48.69	235,810	86,009	36.47
	Large enterprises	243	44	18.11	68,987	9,692	14.05

Table C-8 Female Owned Enterprises in 2009 – Number of Enterprises and Sales Value by Industry (continued)

Units: NT\$ millions; %

Industry/Size \ Item		Number of Enterprises			Sales Value		
		Total	Women owned Enterprises	Women owned Enterprises' Share	Total	Women owned Enterprises	Women owned Enterprises' Share
Information and Communication	SMEs	15,047	4,568	30.36	86,855	23,546	27.11
	Large enterprises	546	80	14.65	632,260	59,940	9.48
Finance and Insurance	SMEs	13,861	4,266	30.78	190,630	40,388	21.19
	Large enterprises	1,869	281	15.03	1,791,929	156,261	8.72
Real Estate	SMEs	19,981	5,822	29.14	142,755	34,995	24.51
	Large enterprises	1,099	231	21.02	580,458	95,508	16.45
Professional, Scientific and Technical Services	SMEs	34,892	12,272	35.17	151,041	44,742	29.62
	Large enterprises	477	82	17.19	297,613	40,199	13.51
Support Services	SMEs	27,057	10,531	38.92	100,993	32,878	32.55
	Large enterprises	246	44	17.89	117,487	10,973	9.34
Education	SMEs	910	315	34.62	4,166	872	20.93
	Large enterprises	6	0	0.00	2,056	0	0.00
Human Health and Social Work Services	SMEs	340	116	34.12	1,636	554	33.86
	Large enterprises	7	1	14.29	1,988	152	7.65
Arts, Entertainment and Recreation	SMEs	22,445	7,802	34.76	41,698	11,576	27.76
	Large enterprises	89	13	14.61	32,585	2,603	7.99
Other Services	SMEs	67,951	31,095	45.76	95,246	34,143	35.85
	Large enterprises	146	15	10.27	57,893	6,206	10.72

Note: The figure in total do not include those enterprises that owners are legal persons or foreigners for which gender cannot be identified.

Source: Ministry of Finance Tax Data Center, VAT tax data, 2009.

Table C-9 Female Owned Enterprises in 2009 – Domestic Sales Value and Export Sales Value by Industry

Units: NT\$ millions; %

Industry/Size	Item	Domestic Sales			Export Sales		
		Total	Women owned Enterprises	Women owned Enterprises' Share	Total	Women owned Enterprises	Women owned Enterprises' Share
Total	Total	20,518,184	3,271,033	15.94	6,637,660	654,049	9.85
	SMEs	7,710,720	1,898,034	24.62	1,213,671	222,335	18.32
	Large enterprises	12,807,464	1,373,000	10.72	5,423,989	431,714	7.96
Agriculture, Forestry, Fishing and Animal Husbandry	SMEs	14,840	3,004	20.24	1,969	417	21.17
	Large enterprises	13,386	3,078	22.99	2,225	218	9.80
Mining and Quarrying	SMEs	34,750	4,576	13.17	87	20	22.49
	Large enterprises	8,724	43	0.49	192	0	0.00
Manufacturing	SMEs	2,205,709	359,522	16.30	783,153	90,578	11.57
	Large enterprises	3,049,499	123,458	4.05	3,404,977	80,722	2.37
Electricity and Gas Supply	SMEs	3,748	416	11.11	78	17	21.24
	Large enterprises	653,774	42,627	6.52	10,635	0	0.00
Water Supply and Remediation Services	SMEs	47,188	14,301	30.31	1,527	414	27.13
	Large enterprises	85,814	10,591	12.34	3,659	517	14.12
Construction	SMEs	761,930	229,597	23.87	7,816	1,987	25.42
	Large enterprises	613,109	93,629	15.27	126,745	206	0.16
Wholesale and Retail Trade	SMEs	3,185,745	921,880	28.94	397,692	123,495	31.05
	Large enterprises	4,582,626	702,416	15.33	1,543,225	328,168	21.27
Transportation and Storage	SMEs	219,083	58,375	26.65	8,246	2,068	25.08
	Large enterprises	380,329	27,534	7.24	169,284	9,865	5.83
Accommodation and Food Services	SMEs	235,711	85,962	36.47	99	47	46.99
	Large enterprises	67,830	8,579	12.65	1,157	1,113	96.14

Table C-9 Female Owned Enterprises in 2009 – Domestic Sales Value and Export Sales Value by Industry (continued)

Units: NT\$ millions; %

Industry/Size	Item	Domestic Sales			Export Sales		
		Total	Women owned Enterprises	Women owned Enterprises' Share	Total	Women owned Enterprises	Women owned Enterprises' Share
Information and Communication	SMEs	81,028	22,479	27.74	5,827	1,067	18.31
	Large enterprises	561,074	50,858	9.06	71,186	9,082	12.76
Finance and Insurance	SMEs	190,112	40,140	21.11	517	248	47.99
	Large enterprises	1,787,874	156,261	8.74	4,049	0	0.00
Real Estate	SMEs	142,408	34,880	24.49	347	115	33.04
	Large enterprises	574,219	94,814	16.51	6,239	694	11.12
Professional, Scientific and Technical Services	SMEs	145,949	43,406	29.74	5,092	1,336	26.24
	Large enterprises	219,729	39,434	17.95	77,884	765	0.98
Support Services	SMEs	100,234	32,565	32.49	759	312	41.15
	Large enterprises	116,468	10,835	9.30	1,019	138	13.55
Education	SMEs	4,151	860	20.72	14	11	79.33
	Large enterprises	1,983	0	0.00	73	0	0.00
Human Health and Social Work Services	SMEs	1,540	468	30.40	96	86	89.09
	Large enterprises	1,749	151	8.61	239	1	0.62
Arts, Entertainment and Recreation	SMEs	41,594	11,530	27.72	104	46	44.28
	Large enterprises	32,574	2,593	7.96	11	10	88.35
Other Services	SMEs	95,000	34,072	35.87	246	71	28.68
	Large enterprises	56,705	5,990	10.56	1,188	216	18.17

Note: The figure in total do not include those enterprises that owners are legal persons or foreigners for which gender cannot be identified.

Source: Ministry of Finance Tax Data Center, VAT tax data, 2009.

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