

# **2013 White Paper on Small and Medium Enterprises in Taiwan**



**Small and Medium Enterprise Administration**

**Ministry of Economic Affairs**

**October 2013**

# **2013 White Paper on Small and Medium Enterprises in Taiwan**

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# Foreword

Along with the sluggish global economic recovery and clear slowdown of the economic growth in China, the most important trading partner of Taiwan, Taiwan's economic growth rate fell significantly from 4.07% in 2011 to 1.32% in 2012. As for the performance of SMEs in 2012, the number of enterprises was 1,306,729 accounting for 97.67% of the total number of business enterprises in Taiwan. This figure represented an increase of 26,945 enterprises (up 2.11%) compared to 2011, which was the highest level it had ever reached. Moreover, SMEs' sales NT\$11,381.8 billion, up 1.38% from 2011, a better performance than large enterprises (large enterprises' sales down 1.45% from 2011). SME employed totaled 8,484,000 people, accounting for 78.12% of the total employments, was also higher than 2011.

Despite improved global financial conditions and reduced short-term risks after easing of European debt crisis in 2012, the world economy continues to expand at a subdued pace. In 2013, business owners still need to monitor the changing business environment and respond flexibly to the changes. As far as SMEs are concerned, they will not only need to continue focusing on management and rationalizing their operations – so as to improve the efficiency of resource utilization, strengthen their firms' fundamentals, identify opportunities for change and give due attention to branding and innovation – but also, and more importantly, need to keep pace with major trends and new developments.

In order to witness the development of SMEs in Taiwan, the Small and Medium Enterprise Administration, MOEA has published the Chinese and English version White Paper on SMEs in Taiwan on an annual basis since 1992 and 1998 respectively.

In Part One of the 2013 White Paper, an extensive array of statistical figures is provided to describe the development of SMEs from a wide variety of perspectives in 2012, which includes a comparison with their performance in previous years, as well as with the performance of large enterprises.

In Part Two of this White Paper, two special topics are tackled through an in-depth analysis on the special challenges faced by SMEs in recent times. They are “International Cooperation for SMEs to Expand in Emerging Markets” and “Strategies of Trade in Services for SMEs.”

Since the government has been helping SMEs in various ways by ensuring that necessary resources are available and that the overall business environment is conducive to 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., providing SME financing and investment capabilities, assistance in upgrading, transforming and enhancing R&D capabilities, strengthening business start-up capabilities and promoting new

business incubation, revitalizing local economies and promoting the development of new business opportunities and participation in international affairs and other related resources. The Appendix to this White Paper also provides important SME statistics covering the years from 2010 to 2012 for reference purposes.

Providing guidance to support the development of SMEs requires a long-term effort. It is hoped that this 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 and appreciated.

A handwritten signature in black ink, reading "Yun-Lung Yeh". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

**Yun-Lung Yeh**

Director General

Small and Medium Enterprise Administration

Ministry of Economic Affairs

October 2013

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# Summary

A cornerstone of Taiwan's economic edifice, export-oriented SMEs have powered Taiwan through economic take-off and decades of rapid expansion, an envy of the world economic miracle. In recent years, over the course of the global financial crisis and European debt crisis, the outlook for Taiwan's SMEs to obtain growing shares from advanced markets such as Europe, the U.S., and Japan are no longer as promising as in the past. Given the tepid recovery in global economy and trade, stagnant import demands from matured economies, clear slowdown of emerging economies and intensified competition from Japan, South Korea, and Mainland China, how can SMEs adapt and thrive in navigating the challenging environment?

2013 White Paper on Small and Medium Enterprises (SMEs) in Taiwan comprises three parts. Part One presents an overview and discussion of the most recent operational results, developing trends, and strategic directions of SMEs in Taiwan. Part Two provides in-depth discussion of special topics on emerging market opportunities, the trade in service strategy for SMEs, and the importance of international cooperation for SMEs to expand in emerging markets. Part Three reviews various government policy measures related to SMEs and examines their goals, implementation and results.

**Part One** consists of five chapters, covering macroeconomic environment, SMEs' current state and development, and SMEs' strategy and government policy measures in response to the changing economic and business environment.

Taiwan's economic growth rate fell significantly from 4.07% in 2011 to 1.32% in 2012, along with the sluggish global economic recovery and clear slowdown of the economic growth in China, the most important trading partner of Taiwan. Almost all the demand side components of GDP performed poorly compared to previous year, among which the export growth suffered the most to a mere 0.13% in 2012 from 4.45% in 2011.

All major indices show better performance of SMEs in 2012 than those in 2011. In 2012, Taiwan SMEs saw growth over 2011 in terms of sales (including imports and exports), number of paid employees, number of employed persons, and the number of SMEs, which reached a record high at 1,306,729 (up 2.11%), or 97.67% of Taiwan's enterprises.

Amid industrial structure adjustment in Taiwan, SMEs are mostly concentrated in the service sector, with the proportion being slightly over 80%. 56.72% of SMEs are Sole Proprietorships. In terms of the industries, 50.62% of SMEs are in wholesaling and retailing, followed by manufacturing (10.52%) and restaurant industry (9.68%). In regional terms, 46.43% (606,649 SMEs) of all SMEs

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were concentrated in Northern Taiwan.

In terms of market entry and exit, SMEs often display more flexibility than large enterprises. However, there were nearly 48% SMEs had been going concerns over 10 years from 2008 to 2012, and the share of SMEs in existence for over 20 years had been rising consistently, climbing from 20.47% to 22.95% by 2012, showing improved consistency and resilience.

Five Special Municipalities combined represent 67.91% sales and 60.81% employed persons of SMEs, and have 839,267 SMEs, representing 64.23% of all SMEs in Taiwan.

With the serious challenge posed by the European debt crisis, slowdown in China and other emerging markets, the subdued recovery in the U.S. and its anticipated unwinding of monetary policy stimulus leading to sustained capital flow reversals and possible adverse effects on global financial stability, and the global trend of regional economic integration, Taiwan's trade-dependent economy continues to struggle with lackluster growth due to sluggish demand for its exports as well as weak domestic consumption. The government is taking a series of policy measures spanning short-, mid- and long-term to revive the economy, such as "Economic Power-up Plan," "Free Economic Demonstration Zone Plan," and "Cross-Strait Agreement on Trade in Services." Taiwan's SMEs need to craft strategies focused on service exports, strategic alliance, "Hidden Champions" incubation, and brand development.

**Part Two** consists of two chapters, which provide in-depth discussion on emerging market opportunities, the trade in service strategy for SMEs, as well as the importance of forming strategic alliances for SMEs to expand in emerging markets.

In recent years, the outlook for Taiwan's SMEs to further expand in matured markets is not promising. In contrast, during the past two decades, we have seen strong capital inflow toward emerging markets, such as China, ASEAN countries, Russia, and India, that enjoyed unprecedented growth in GDP and foreign exchange reserves. Given sluggish recovery of developed economies and their import demand, emerging markets, albeit slowing down, should be SMEs' next main target for their relative higher growth, favorable demographic and increasing affluence and affordability along with rising middle class.

Most Taiwanese SMEs, before entering into emerging markets, have first-hand experience in advanced countries and built manufacturing capabilities for high-quality products, and thus are well recognized by international peers for good reputation. In emerging market, especially B2B market, building brand image that allows more customers to derived value from "shared brand value-added" is vital. In fact, many Taiwan SMEs are "hidden champions" with brand awareness in advanced markets, and apply this advantage selectively to emerging markets will be critical.

Based on the analysis of global emerging markets and case studies in Chapter 6, Taiwan's SMEs need to diversify their trade markets into emerging markets, form complementary strategic alliance to reduce cost and enhance success rate, and craft strategies more oriented toward driving innovation and expansion through consumer-relevant products and trusted brands to meet the local demand of the surging emerging middle class, with focus on market niche, brand building, core technologies and global perspectives to move upward along the value chain.

The service sector is the main driver of Taiwan's economy and responsible for the bulk of local job creation, with sector output reaching NT\$9.4 trillion (US\$32 billion) and accounting for 68.19% GDP in 2012. The industries employed nearly 6.28 million people or 58.6% of the entire workforce in 2012.

Firms in service industry are dominantly SMEs which normally lack the resource to compete internationally. One of the key elements in developing service exports, especially emerging markets expansion is for SMEs to find right partner to leverage complementary external resources through strategic alliances such as vertical or horizontal integrations, establish niche markets, provide customized services and make decisions with flexibility and swift adaptation.

Based on the analysis of major Asian trading partners' state and trend in service imports as well as global trade in services trend, Taiwan trade in services development should focus on two key sectors: other business services (a.k.a. professional and technology services) and personal, cultural and recreational services.

Government service export policies schemes should be more oriented toward nurturing service talents and facilitating strategic alliances for SMEs, on top of short-term oriented export promotion measures. Strategic directions include: (1) Enhancing strategic alliance incentives – market expansion incentive for SMEs in professional or technology services, reducing uncertainties of government funding assistance and promoting long-term goals, Taiwan tourism market differentiation with a global perspective, and investing in cultural and creative (C&C) industries with long-term commitment; (2) Improving service industry statistics and emerging market business intelligence; (3) Lowering trade tariffs and avoiding non-tariff barriers.

**Part Three** consists of five chapters that review various government policy measures related to SMEs and examine their goals, implementation and results.

Many SMEs in Taiwan possess unique technology and innovative products, but lack the scale, capital, technology, and talents of many large businesses with which they regularly compete. Competition from suppliers in developing Asia, especially Mainland China has been rising, initially in terms of price, later in quality and other aspects over time. Taiwan exporters are therefore

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continually compelled to develop strategies that help them stay ahead of competitors. SMEs must improve the overall quality of their products and services by shifting the whole value chain upward. Among others, this upward shift involves offering better designs and features, building brands, using environmentally friendly materials, improving warehousing and logistics, as well as strengthening marketing and distribution.

Taiwanese government has been working actively to establish effective policy measures to facilitate the development of SMEs and resolve the hurdles facing SMEs. Multiple policy measures were taken by relevant government departments to assist SMEs in funding and credit guarantee, marketing, talent cultivation, technology upgrading and transformation, start-up promotion, incubation and acceleration mechanism, free trade policy, and improved legal and regulatory environment.





# Part One

## Recent Development of SMEs



**Chapter 1 Macroeconomic Environment since 2012**

**Chapter 2 Major Trends in the Development of SMEs**

**Chapter 3 Financial and Funding Analysis of SMEs**

**Chapter 4 SME Human Resources**

**Chapter 5 SME Strategies in Response to Changes in the Business Environment**

*SMEs play a vital role in the course of economic development in Taiwan for decades. To maintain SMEs as a backbone of Taiwan's economy, we need to pay special attention to the current state and developing trends of SMEs as well as the macroeconomic environment. Official data published by central government of R.O.C. are analyzed to facilitate a deep understanding of SMEs. First, four major indicators including number of enterprises, total annual sales, domestic sales, and export sales are examined for observations in terms of scales, industries, and sectors. Second, SMEs' financial structure and source of finance as well as human resources utilization, working conditions, and talent development are analyzed.*

*Given the tepid recovery in global economy and trade, stagnant import demands of matured economies, clear slowdown of emerging economies, and intensified competition from Japan, South Korea, and Mainland China, how can SMEs adapt and thrive in navigating the challenging environment? This will be addressed in Chapter 5.*



# CHAPTER 1

## Macroeconomic Environment since 2012

Over the course of the U.S. subprime crisis, the global financial crisis and European debt crisis during the period of 2007 - 2011, the global economy went through its deepest crisis since the Great Depression of 1929 while economic fundamentals of a large number of countries were severely damaged. Some countries adopted more drastic measures to revitalize the economy with limited effects. Followed by the weak 2011, global economic growth remained subdued at 2.5% in 2012, but weakened quarter by quarter, mainly due to the continued European debt crisis with no sign of real structural reform, the threat of U.S. fiscal cliff, and Japan's increasing trade deficit after the earthquake. Growth in the major emerging economies also decelerated, unable to lift the global economy. Taiwan's export-driven economy is not immune to the global economic weakness, and SMEs, accounting for over 97% of the number of enterprises in Taiwan, also suffered.

This chapter, which is divided into three sections, examines the impact of the changes that have been taking place in the economic environment on Taiwan's SMEs. Section I presents an overview of the major changes in the international business environment; Section II analyzes the business environment in Taiwan; Section III examines the state of development of SMEs in selected nations.

### I Changes in the International Business Environment

#### 1. 2012 Global Economic Growth Remained Subdued

Four years after the eruption of the global financial crisis, the world economy is still struggling to recover. During 2012, global economic growth has weakened further. A growing number of developed economies in EU have fallen into a double-dip recession. Growth in the major developing countries and economies in transition has also decelerated notably, reflecting both external vulnerabilities and domestic challenges.

According to data compiled by Global Insight Inc. in July 2013, in 2012 the global economy grew by 2.7%, lower than 3.0% posted in 2011. However, spillover effects from possible intensification of the euro area crisis have been largely mitigated and contained in EU. The U.S. grew slowly, mainly supported by housing recovery and the new round of quantitative easing, while Japan rebounded mainly driven by reconstruction works and recovery from the earthquake-related disasters of 2011. The overall picture was one uneven sluggish economic recovery in the developed nations, with growth rate down to 1.2% from 1.5% in 2011, contrasting with slow but decent growth in the Asian emerging economies at 4.8% down from the 6.2% in 2011, but still significantly better than the advanced economies. However, growth slowed noticeably during 2012 in a number of large

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developing economies, such as Brazil, China and India, which all enjoyed a long period of rapid growth prior to the global financial crisis and managed to recover quickly at a robust pace in 2010. For example, growth in China dropped from a peak of 10.4% in 2010 to 9.2% in 2011 and further down to 7.9% (Table 1-1-1).

**Table 1-1-1 Economic Growth Rates of Selected Nations, 2008 - 2013**

Unit: %

Country/Region	2008	2009	2010	2011	2012	2013(f)
World	1.6	-2.0	4.4	3.0	2.7	3.1
Taiwan	0.7	-1.8	10.7	4.0	3.1	2.4
U.S.A.	-0.3	-3.5	3.0	1.7	2.1	1.8
Canada	0.7	-2.8	3.2	2.4	2.0	1.8
Japan	-1.0	-5.5	4.4	-0.7	2.4	1.6
Germany	1.1	-5.1	3.7	3.0	1.0	0.5
France	-0.1	-3.1	1.7	1.7	0.0	-0.5
U.K.	-1.1	-4.4	2.1	0.7	0.1	1.0
Italy	-1.2	-5.5	1.8	0.5	-1.9	-2.0
Singapore	1.7	-1.0	14.8	4.9	2.6	2.2
South Korea	2.3	0.3	6.3	3.6	2.6	2.0
Hong Kong	2.3	-2.6	7.1	5.0	3.0	3.3
China	9.6	9.2	10.4	9.2	7.9	7.8
Thailand	2.5	-2.3	7.8	0.1	5.0	4.4
Malaysia	5.1	-1.6	7.2	5.1	4.4	4.8
Philippines	4.2	1.1	7.6	3.7	5.2	6.6
Indonesia	6.0	4.6	6.1	6.6	5.9	6.1
India	4.9	7.1	9.6	6.9	6.6	5.8
Brazil	5.2	-0.3	7.5	2.7	2.5	2.6
Russia	5.2	-7.8	4.3	4.3	3.5	3.7
Vietnam	6.2	5.3	6.9	5.9	5.4	5.2

Notes: 1. 2013 forecasts are based on Global Insight data.

2. The IMF forecast a global economic growth rate of 3.1% in 2013.

Source: Directorate-General of Budget, Accounting and Statistics (DGBAS), Executive Yuan, Quarterly National Economic Trends; Council for Economic Planning and Development (CEPD), International Economic Indicators; individual nations' monthly economic indicator reports.

## 2. European Union (EU) Economy Deteriorated Further

Weaknesses in the major developed economies were at the root of continued global economic woes in 2012. Most of them, but particularly those in EU, hit hard by European debt crisis in 2010 and 2011, were dragged into a downward spiral as high unemployment, continued deleveraging by firms and households, continued banking fragility, heightened sovereign risks, fiscal tightening, and slower growth viciously feed into one another. Several European economies are already in recession. In Germany, EU's most important economic force, slowed to a tepid 0.9% growth, significantly below 3.0% in 2011 and 4.3% in 2010. UK and France's economies were stagnating while Italy's GDP was down 2.4%. Economic growth in the new EU members also decelerated during 2012, with some,

including the Czech Republic, Hungary and Slovenia, falling back into recession.

The whole EU region was in recession during 2012, down 0.3%. The European Central Bank (ECB) is assumed to cut the minimum bid and marginal lending facility rates by another 25 basis points, leaving the deposit rate at 0%. Its impacts on economy are remained to be seen.

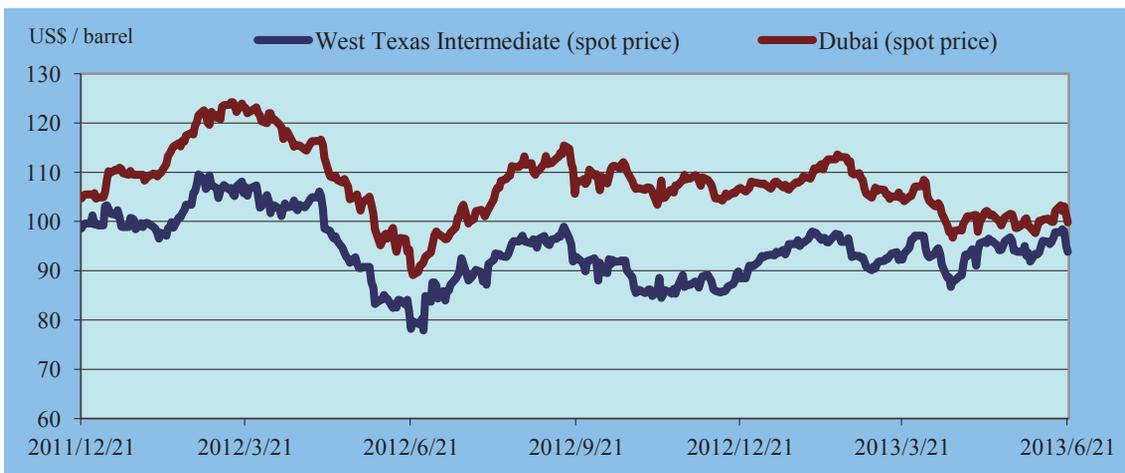
### 3. Rising International Oil Prices

The price of oil fluctuated during 2012 (Figure 1-1-1); weaker global demand tended to push prices down while heightened geopolitical risks in several oil-producing countries put upward pressure on prices. 2012 average price of West Texas Intermediate crude oil (WTI) was \$ 94.37 per barrel slightly below \$ 95.08 per barrel in 2011; average price of Brent crude oil (Brent) was \$ 111.77 per barrel, closed to \$ 111.33 per barrel in 2011.

Global oil demand decelerated somewhat to 0.9% in 2012. Global supply was affected by sanctions imposed by the EU and the United States on Syrian and Iranian oil exports. This was compensated to a large extent, however, by the preventive increase in oil production in Saudi Arabia, higher-than-expected output in North America, Latin America and the Russian Federation. Yet, spare capacity dropped to 2.8 million barrels per day (mbd), down from an average of about 4 mbd during 2006-2011.

In the outlook, world oil demand is expected to remain subdued during 2013 and 2014. Supply is expected to further expand in several oil-producing areas, including North America, the Russian Federation and Brazil, partially offset by declines in the North Sea and Central Asia. Saudi Arabia is expected to lower production, thereby increasing spare capacity. Continued geopolitical tensions in the Middle East will likely continue to put a risk premium on prices, however.

**Figure 1-1-1 Trends in International Oil Prices**



Note: The values given are the West Texas Intermediate and Dubai spot prices for the date in question.  
Source: Bureau of Energy, Ministry of Economic Affairs (MOEA), Oil Information System.

## II Changes in the Economic Environment in Taiwan

Taiwan’s economic growth rate fell significantly from 4.07% in 2011 to 1.32% in 2012, along with the sluggish global economic recovery and clear slowdown of the economic growth in China, the most important trading partner of Taiwan. Almost all the demand side components of GDP performed poorly compared to previous year, among which the export growth suffered the most to a mere 0.13% from 4.45% in 2011, with the contribution to economic growth reduced by 3.21 percentage points. Key macroeconomic indicators for Taiwan in 2012 are discussed below.

### 1. Economy Rebounded in the 2<sup>nd</sup> Half of 2012

The Council for Economic Planning and Development (CEPD) uses “traffic light” symbols to represent the state of health of the economy. First eight months of 2012 were given a “blue light,” indicating that the economy was in a slump, followed by a slightly better “yellow-blue light” for the last four months of the year due to improving stock market index, industrial production index, employment (non-agricultural sector), and wholesaling, retailing and restaurant industry sales index. The overall growth performance score of 22 in December was on top of the “yellow-blue light” range, that likely turn to the “green light,” denoting steady growth into 2013. There are still too many uncertainties affecting the climate indicator to move upward, given a feebly recovering global economy (Figure 1-2-1).

**Figure 1-2-1 Economic Indicator Signals for Taiwan in 2012**

Item		Month											
		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Comprehensive Evaluation	Light												
	Comprehensive Index Score	13	15	14	14	15	15	16	15	20	19	21	22
M1B money supply													
Direct and indirect financing													
Stock market index													
Industrial production index													
Employment (non-agricultural sector)													
Value of exports (as reported by the Customs)													
Value of machinery and electromechanical equipment imports													
Manufacturing industry sales													
Wholesaling, retailing and restaurant industry sales index													

Notes: 1. indicates a “red light”; indicates a “yellow-red light”; indicates a “green light”; indicates a “yellow-blue light”; indicates a “blue light.”  
 2. The overall growth performance scores corresponding to each light are as follows: 45 – 38 = red light; 37 – 32 = yellow-red light; 31 – 23 = green light; 22 – 17 = yellow-blue light; 16 – 9 = blue light..  
 3. With the exception of stock prices, all of the items making up the growth performance index are seasonally adjusted. Please note that the items used in each year’s index do not necessarily correspond exactly to those used in previous years; care should therefore be exercised when interpreting the scores.

Source: Council for Economic Planning and Development, Executive Yuan, Economic Indicators for Taiwan, May, 2013.

## 2. A Gradual Rise in Consumer Prices

2012 consumer price index (CPI) rose mildly by 1.93%, which was lower than South Korea (2.2%), Singapore (4.6%) and Hong Kong (4.1%). The main drivers were food, up 4.16% (including vegetable up 20%) due to weather and low comparison base, and a 9.82% rising costs of electricity and gasoline after oil and electricity price freeze was lifted.

Wholesale price (WPI) fell 1.16 %, partly driven by lower import prices due to the appreciation of the New Taiwan Dollar and subdued growth of the global economy (Table 1-2-1).

**Table 1-2-1 Key Indicators for the Taiwanese Economy, 2006 - 2012**

Unit: %

Indicator Year	Economic Growth Rate	Wholesale Price Index	Consumer Price Index	Tax Revenue	Money Supply		Exchange Rate (NT\$ to the US\$)	Labor Force Participation Rate	Unemploy- ment Rate
					M1B	M2			
2006	5.44	5.63	0.60	2.13	5.30	6.18	32.53	57.92	3.91
2007	5.98	6.47	1.80	8.31	6.44	4.16	32.84	58.25	3.91
2008	0.73	5.14	3.52	1.53	-2.94	2.71	31.52	58.28	4.14
2009	-1.81	-8.73	-0.86	-13.07	16.54	7.45	33.05	57.90	5.85
2010	10.76	5.46	0.96	6.01	14.93	4.53	31.64	58.07	5.21
2011	4.03	4.32	1.42	8.78	7.16	5.83	29.46	58.17	4.39
2012	1.32	-1.16	1.93	1.82	3.45	4.17	29.61	58.35	4.24

Note: With the exception of the labor force participation rate, unemployment rate and exchange rate (which are all whole-year averages), all indicators are expressed as annual growth rates.

Sources: 1. DGBAS, Executive Yuan, Quarterly National Economic Trends (Feb. 2013); DGBAS, Monthly Bulletin of Manpower Statistics (Feb. 2013).  
2. Central Bank, Financial Statistics Monthly.

## 3. Private Investment Rebound in Q4 2012

Along with significant slowdown of domestic growth and sluggish global economic recovery, domestic investment fell 4.19% in 2012, followed by a 3.10% drop in 2011. Private, public, and government investment fell 2.11%, 8.27%, and 12.51% respectively. In Q4, private investment was the only bright spot with a 6.18% rebound, leading to a 2.07% pickup of total investment, offsetting a double digits drop in government investment (-10.65%). However, machinery and equipment investment declined by 2.94%, with excess capacity and falling capital equipment imports offsetting rising capital expenditures of semiconductor industry. Transportation investment surged by 25.53% driven by heavy investment in aircraft and other transportation equipment. Construction investment also increased significantly by 11.93%.

## 4. Foreign Trade in Recession

With continued slowdown in economic growth domestically and internationally in 2012, Taiwan's total foreign trade suffered a mild recession 2nd time in four years, down 3.06% to US\$571.7 billion. Exports fell 2.30% to US\$301.2 billion, while imports fell 3.90% to US\$270.5 billion. Trade surplus

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increased by 14.55% to \$ 30.7 billion.

Taiwan's exports to China (including Hong Kong) decreased by 4.3% in 2012 compared to 2011; China accounted for 39.4% of Taiwan's total exports. Direct exports to China (i.e., without transshipment in Hong Kong or elsewhere) accounted for 26.8% of total exports, and fell 3.8%. Exports to the six ASEAN member nations rose by 9.8% in 2012, and accounted for 18.5% of Taiwan's total exports (Table 1-2-2).

**Table 1-2-2 Taiwan's Foreign Trade Performance, 2006 - 2012**

Units: US\$ billions; %

Year \ Indicator	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
2006	426.7	11.99	224.0	12.89	202.7	11.00	21.3	34.78
2007	465.9	9.19	246.7	10.12	219.3	8.17	27.4	28.64
2008	496.1	6.47	255.6	3.63	240.4	9.67	15.2	-44.65
2009	378.0	-23.79	203.7	-20.32	174.4	-27.48	29.3	93.03
2010	525.8	39.09	274.6	34.82	251.2	44.08	23.4	-20.47
2011	589.7	12.14	308.3	12.26	281.4	12.02	26.8	14.79
2012	571.7	-3.06	301.2	-2.30	270.5	-3.90	30.7	14.50

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: Bureau of Foreign Trade, MOEA, Foreign Trade Statistics (Feb. 2013).

In 2012, we saw a decrease in imports from majority of Taiwan's main import sources. Imports from Japan continued to account for the largest share of Taiwan's total imports, at 17.6%, although in absolute terms imports from Japan decreased by only 8.8% compared to 2011. Direct imports from Mainland China accounted for 15.1% of Taiwan's total imports, down 6.2%, while direct imports from HK surged by 58.7% (Table 1-2-3).

**Table 1-2-3 Taiwan's Trade with Its Main Trading Partners in 2012**

Units: US\$ billions; %

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	301,111	100.0	-2.3	270,727	100.0	-3.8	30,384	13.3
China (including Hong Kong)	118,666	39.4	-4.3	43,569	16.1	-3.8	75,097	-4.7
China	80,729	26.8	-3.8	40,910	15.1	-6.2	39,819	-1.3
Hong Kong	37,937	12.6	-5.7	2,659	1.0	58.7	35,278	-8.2
U.S.A.	32,981	11	-9.3	23,605	8.7	-8.4	9,376	-11.6
Japan	18,877	6.3	3.6	47,583	17.6	-8.8	-28,707	-15.5
Singapore	11,845	3.9	-4.3	15,075	5.6	-15.6	-3,230	-41.1
South Korea	20,091	6.7	19	8,106	3.0	1.9	11,985	34.3
European Union	55,716	18.5	9.8	31,424	11.6	-3.7	24,293	34.2
ASEAN (Six Other Member Nations)	28,768	9.6	-7.8	28,272	10.4	-4.4	495	-69.4
Other	14,167	4.6	-23.11	73,093	27.0	4.0	-58,926	13.6

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 2012 (published on Jan. 9, 2013).

## 5. Slowly Improving Job Market

Unemployment rate dropped slightly in 2012 to 4.24% from 4.39% in 2011, the third consecutive annual decline; labor force participation rate reached 58.35%, the highest since 1996. Employment grew 1.41%, a total of 10.931 million in Dec. 2012. However, youth (age 15-24) unemployment rate was stubbornly high at 12.66%, mainly due to early stage adaptation and relatively high turnover rate.

## 6. Real Wage Stagnation

In 2012, the average monthly income for employees in the manufacturing and service sectors in Taiwan was NT\$45,888, up a mere 0.3% compared to 2011, showing stagnation, though at a historic high. Regular monthly earnings (excluding bonuses, etc.) averaged NT\$37,346, representing a 1.28% increase on 2011. After allowing for inflation, real growth in monthly income and regular monthly income in 2012 fell 1.60% and 0.64% respectively. In 2012 service sector accounted for 58.60% of total employment; industries hired 36.23%; agriculture hiring was down to 5.01%.

### III Important Developments Related to SMEs in Japan, China and South Korea

This section examines the state of development of SMEs in selected nations in light of the transformation of the global business environment.

#### 1. SMEs in Japan

An SME in Japan defined under its “SME Basic Law” Article 2 is an enterprise or an individual with total capital under 300 million Yen and employees under 300. According to the data presented in “The 2012 White Paper on Small and Medium Enterprises in Japan”, in 2012 there were approximately 4,201,000 SMEs in Japan (excluding primary industrial sectors), accounting for 99.7% of the 4,213,000 business enterprises in the country. SMEs employed 28.34 million people in 2012, representing 66.0% of all employed people in Japan.

Overall the whole-year performance was lackluster. In 2012, business conditions improved slightly in first two quarters, but worsened in Q3, and then picked up in Q4. Manufacturing industry as a whole didn’t perform well either, with slightly recovery in Q1, followed by worsened Q2 and Q3, and a breakeven Q4.

In Q1, business conditions improved in seven categories, such as transportation machinery, food manufacturing, and chemical industry, while business conditions worsened in other seven categories, such as furniture, iron and steel, non-ferrous metals, and the ceramic, stone and clay manufacturing industry; in Q2, seven categories, such as furniture, chemical, and the ceramic, stone and clay manufacturing industry improved, while other seven categories, such as machinery tools, iron and steel, non-ferrous metals, and paper products worsened; In Q3, three categories, such as food manufacturing, furniture, and wood products improved, while other 11 categories, such as transportation machinery, chemical, and the machinery tools worsened; In Q4, seven categories, such as paper products, chemical, and ceramic, stone and clay products manufacturing industry improved, while other seven categories, such as machinery tools, iron and steel, and non-ferrous metals, and furniture deteriorated.

In the non-manufacturing sector, firms that felt business conditions had improved were slightly more than those that felt business conditions had worsened. In Q1, construction improved while wholesale, retail, and services worsened; In Q2, construction, wholesale, retail, and services altogether improved; In Q3, construction, wholesale, retail, and services altogether worsened; In Q4, wholesale, retail, and services improved while construction worsened.

Overall, in terms of funding, the whole-year performance gap was small. Q1 improved, followed by worsened Q2, and slightly improved Q3 and Q4. Similar performances were seen in both long term and short term funding.

SMEs’ source of funding comes from either internal funding or external financing. External financing comes from government agencies, financial institutions, and society. As more SMEs enter

the Asian and other emerging markets for fast growth, Japan Finance Corporation, Central Bank and other public institutions all have stepped up financing for SMEs' overseas expansion. In 2011, Japan Finance Corporation's funding for SMEs amounted to 39.5 billion Yen, 3.3 times that in 2010. In April 2012, the new international business department was established to strengthen the support of SMEs' overseas production and sales.

On the other hand, the Japanese government established direct financing market for SMEs through public offering of stocks and bonds, including a secondary market, where SMEs could access capital through listing even though they are still in red. SMEs can also raise capital by issuing corporate bond with credit guarantee extended by Credit Guarantee Association. Japanese government is expected to set up a "Local Industrial Development Fund and Conference" in July 2013 to regulate SMEs' direct financing, and promote funding diversification.

## 2. SMEs in China

The actual number of SMEs in China, by definition, is the sum of the number of actually existing business enterprises and the number of actually existing small private businesses. In 2012, the Chinese government does not compile data regarding the number of SMEs in China. It is estimated that 99% of enterprises in China are SMEs. Therefore, the "Blue Book of Small and Medium Enterprises in China" used the above definition as proxies to gauge the overall trend in the number of SMEs.

As of the end of 2011, there were 12,531,200 actually existing business enterprises, and 37,564,700 (up 3.46% from 2010) actually existing small private businesses, for a total of 50,095,900, a proxy of actual number of SMEs in China. The 12,531,200 actually existing business enterprises represented an increase of 10.26% from 2010. The total consisted of 2,408,000 domestic enterprises, down 2.29% from 2010, 9,676,800 private enterprises, up 14.45%, and 446,500 foreign-invested enterprises, up 0.28%.

In 2012, we saw widespread closures among SMEs, suffering painful cost inflation, credit tightening, and slowing economic growth. In Q1 2011, small and medium-sized enterprises development index (SME index) was 104.1, down 2.2 percentage points from Q4 2010, due to rising raw material, energy and labor costs resulting in low profitability and investment incentive. However, a reading above 100 represented expansion sequentially. In Q2 2011, the index was 100.2, down 3.9 percentage points from Q1, on the verge of contraction. The index had been down from 108.9 in Q3 2010 all the way to 97.2 in Q3 2011, a 3.0 percentage points drop sequentially, the first time below 100 under slow growth, inflation, and tightened monetary policy. In Q4 2011, the index dropped further to 93.5, a 3.7 percentage points down sequentially.

SMEs' lack of access to funding and short term financing has long been the bottleneck to their growth, and in some cases, the cause of failure. Chinese policymakers has announced multiple measures to make it easier to meet the productive private sector's credit needs, such as to boost bank lending to SMEs, remove floor on lending rates, allow the creation of small loan companies (SLCs,

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privately funded entities not regulated by the China Banking Regulatory Commission, or CBRC), strengthen credit guarantee industry, etc. Measures including the notice on supporting commercial banks to further improve financing for SMEs by China Banking Regulatory Commission (CBRC) in July 2011, the opinion on strengthening credit guarantee to SMEs by Ministry of Finance and Ministry of Industry and Information Technology of China in 2010, and recent regulation on credit guarantee industry.

Yet policy makers will have to go further if they want to address the fact that a large proportion of the economy's financing activity happens through shadow banking (illegal and unregulated lending practices through financing companies, trusts, etc.) at much higher cost instead of through banks. This is mainly a phenomenon involving SMEs, which account for 80% of China's jobs and 60% of its GDP and yet struggle to secure bank loans. A recent study commissioned by the State Council estimates that 62% SMEs have no lending relationships at all with banks. In an effort to get banks to lower their lending rates and boost lending generally, the central bank removed its floor on lending rates. But the practical effect, if any, will largely be to reduce the borrowing costs of state-owned enterprises with implicit government support. It won't lead to an increase in bank lending to SMEs or reduce their reliance on the shadow banking system, because it doesn't change the basic incentives for banks.

The shadow banking issue illustrates the extent of the challenges Chinese policy makers will face in reforming the financial system to help the private sector, especially SMEs. But these challenges are not insurmountable. In cases such as small-loan companies, policy makers already have the tools it needs. As reform continues, authorities should look for opportunities to expand programs that already are working such as SLCs, while undertaking new or further liberalizations in credit guarantee, IPO market for SMEs, SLCs' capital-raising leave and so on.

### 3. SMEs in South Korea

An SME in South Korea defined by The Small and Medium Business Administration (SMBA) is an enterprise with total capital under 8 billion Won or employees under 300. According to the National Statistic Office, as of 2010, there were 3,122,332 SMEs in South Korea, accounting for 99.9% of the 3,125,457 all enterprises in the country. SMEs employed 14.14 million people in 2010, representing 86.8% of all employed people, and contributed output of 555 trillion Won, accounting for 47.6% of the national manufacturing output (1,167 trillion Won).

In 1960s, based on National Statistical Office, the Korean government is committed to the development of chemical and heavy machinery industry, fueling the rising of large-scale enterprises, which contributed more to economic growth than SMEs did in terms of employment, production and the value-added. However, during the 1980s, the government was aimed at supporting the development of SMEs, which contributed 81.9% of total employment. Amid 1997-98 currency-banking crisis in Korea, SMEs' contribution to employment fell, but their production and value-added contribution for the first time surpassed that of large enterprises. In 2000s, SMEs contributed

47.8%, and 50.8% to production and the value-added respectively.

In 2012, Korean SMEs suffered severe blow of funding shortage and liquidity problems amid weak demand from developed markets and tight financing environment. A conservative banking culture made obtaining financing in South Korea far more difficult, leading to widespread SMEs bankruptcy.

Although the global success of chaebol (a typical business conglomerate structure in South Korea) such as Samsung and Hyundai has boosted South Korea's standing abroad, at home their economic dominance has prompted concerns that they have developed a near-monopoly on the country's most talented workers and capital, while restricting the prospects of the small companies that supply and compete with them.

The need for a more dynamic small-business sector became one of the dominant themes in presidential election. President Park Geun Hye promised to pare back the dominance of the chaebol. Policymakers have announced multiple entrepreneurial programs including overall business environment, marketing, information technology, innovation and development, financing, and so on to foster the development of SMEs. For companies three years old or younger, President Park is expanding tax breaks for angel investors and establishing a government-run Future Creation Fund, which, along with private contributions, will hold 200 billion won of seed money. She plans tax incentives to sellers or buyers of companies that are four to nine years old and a similar 300 billion won fund. For firms 10 to 15 years old, Park is proposing a stock market called the Korea New Exchange (Konex) for capital raising. It would supplement the Kosdaq, Korea's version of the tech-heavy Nasdaq. The central bank is increasing to US\$1 billion (over 1.1 trillion Won), the funding for a scheme that subsidizes bank loans to smaller companies. 2011 SME production index and inventory index improved from 2010, but the Overall Business Sentiment index declined (Table 1-3-1).

**Table 1-3-1 SME Development in South Korea**

Business index \ Year	2008	2009	2010	2011 (Jan -Jul)
Production Index (2005=100)	104.5	102.9	117.5	123.2
Inventory Index (2005=100)	120.0	115.0	121.0	128.9
Business Survey Index, BSI	58.6	86.0	90.4	87.1

Source: Korean Small and Medium Business Administration.



# CHAPTER 2

## Major Trends in the Development of SMEs

This chapter will examine the main indicators to understand SMEs development in Taiwan in 2012. There are four major indices, number of enterprises total annual sales, domestic sales, and export sales, for observations in terms of scales, industries and sectors, as well as a year-by-year comparison. Statistics on number of enterprises and total annual sales in this chapter are from Ministry of Finance Tax Data Center, while statistics on employed persons (not in tax data set) comes from Directorate-General of Budget, Accounting and Statistics (DGBAS), Monthly Bulletin of Manpower Statistics. When it comes to SME scale defined by annual sales or capital, one needs to pay attention that in good time, an SME could become a large enterprise with its annual sales across over NT\$100 million, while a large enterprise could fall into SME category in bad time with sales down under NT\$100 million.

This chapter is divided into five sections. Section I deals with the general business environment of SMEs; Section II shows the distribution of the number of enterprises and total annual sales in different regions in terms of sectors by cities; Section III focuses on the current situation of female enterprises based on the four indices mentioned in Section I; Section IV covers business environment of the manufacturing industry based on the survey results from the Department of Statistics, Ministry of Economic Affairs; Section V is for the analysis of SME R&D funding and costs.

### I General SME Business Environment

All major indices show better performance of SMEs in 2012 than those in 2011.

#### **1. 97.67% of Taiwan's Enterprises are SMEs in 2012, a Record High**

As of 2012, there were a total of 1,337,890 business enterprises in Taiwan, of which 1,306,729 were SMEs, accounting for 97.67% of the total number of business enterprises in Taiwan, a record high. This figure represented an increase of 26,945 enterprises or up 2.11% compared to 2011. The number of large enterprises was 31,161 enterprises, up 0.50% from 2011, accounting for 2.33% of the total number of business enterprises (Table 2-1-1).

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**Table 2-1-1 The Number of Enterprises in Taiwan, Their Annual Sales, the Number of Employed Persons and the Number of Paid Employees in 2011 and 2012**

Units: enterprises; NTS millions; thousand persons; %

Enterprise Size Indicator	All Enterprises		SMEs		Large Enterprises	
	201 1	201 2	201 1	201 2	201 1	201 2
<b>No. of enterprises</b>	1,310,791	1,337,890	1,279,784	1,306,729	31,007	31,161
Share of total	100.00	100.00	97.63	97.67	2.37	2.33
Annual growth rate	2.60	2.07	2.55	2.11	4.80	0.50
<b>Total annual sales</b>	37,881,681	37,649,075	11,226,933	11,381,770	26,654,748	26,267,306
Share of total	100.00	100.00	29.64	30.23	70.36	69.77
Annual growth rate	4.53	-0.61	4.84	1.38	4.40	-1.45
<b>Domestic sales</b>	27,754,779	27,797,659	9,576,948	9,633,690	18,177,832	18,163,970
Share of total	100.00	100.00	34.51	34.66	65.49	65.34
Annual growth rate	5.87	0.15	5.37	0.59	6.13	-0.08
<b>Export sales</b>	10,126,901	9,851,416	1,649,985	1,748,080	8,476,916	8,103,336
Share of total	100.00	100.00	16.29	17.74	83.71	82.26
Annual growth rate	1.03	-2.72	1.85	5.95	0.87	-4.41
<b>No. of employed persons</b>	10,709	10,860	8,337	8,484	1,334	1,349
Share of total	100.00	100.00	77.85	78.12	12.46	12.42
Annual growth rate	2.06	1.41	1.78	1.76	6.50	1.10
<b>No. of paid employees</b>	8,328	8,495	5,958	6,122	1,332	1,346
Share of total	100.00	100.00	71.54	72.06	15.99	15.85
Annual growth rate	2.77	2.01	2.64	2.74	6.58	1.07

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 1,027,000 government employees, accounting for 9.46% of all employed persons and 12.09% of all paid employees.

Sources: 1. Ministry of Finance Tax Data Center, VAT Data for 2011, 2012.

2. DGBAS, Monthly Bulletin of Manpower Statistics, 2011, 2012.

Numbers of SMEs by sectors have been quite stable. SMEs are mostly concentrated in the service sector, with the proportion being slightly over 80% (80.02% to 80.33% range), and the industrial sector accounts for about 19% in 2012 (Table 2-1-2).

**Table 2-1-2 The Shares of All SMEs in Taiwan by Sector, 2007–2012**

Units: enterprises; %

Sector/Industry \ Year	2007	2008	2009	2010	2011	2012
All SMEs	1,237,270	1,234,749	1,232,025	1,247,998	1,279,784	1,306,729
Agricultural sector	0.87	0.89	0.90	0.91	0.90	0.90
Industrial sector	18.79	18.83	18.75	18.67	19.01	19.07
Service sector	80.33	80.28	80.24	80.42	80.09	80.02
Total sales	10,481,910	10,462,696	9,189,463	10,709,005	11,226,933	11,381,770
Agricultural sector	0.15	0.16	0.18	0.17	0.16	0.18
Industrial sector	50.04	50.09	45.85	49.41	50.13	50.13
Service sector	49.81	49.75	53.96	50.42	49.70	49.69
Domestic sales	8,842,983	8,817,989	7,873,111	9,088,972	9,567,948	9,633,690
Agricultural sector	0.16	0.16	0.19	0.18	0.17	0.19
Industrial sector	46.14	46.05	42.35	45.47	46.28	45.65
Service sector	53.71	53.79	57.46	54.36	53.55	54.16
Export sales	1,638,927	1,644,707	1,316,352	1,620,033	1,649,985	1,748,080
Agricultural sector	0.11	0.11	0.15	0.14	0.12	0.10
Industrial sector	71.09	71.77	66.82	71.52	72.50	74.82
Service sector	28.79	28.12	33.03	28.34	27.38	25.08

Source: Ministry of Finance Tax Data Center, VAT Data for 2007–2012.

In 2012 in terms of the industries, 50.60% of SMEs are in wholesaling and retailing, a total of 661,201 in 2012, followed by manufacturing with 10.52% of SMEs, a total of 137,436, and 3rd in hotel and restaurant industry with 9.68% of SMEs (Figure 2-1-1).

**Figure 2-1-1 The Industry Distribution of No. of Enterprises in SME, 2011-12**

Source: Ministry of Finance Tax Data Center, VAT Data for 2012.

### 2. A Slight Increase in Total Sales of SMEs Compared to 2011, with Rising Domestic Share to 85%

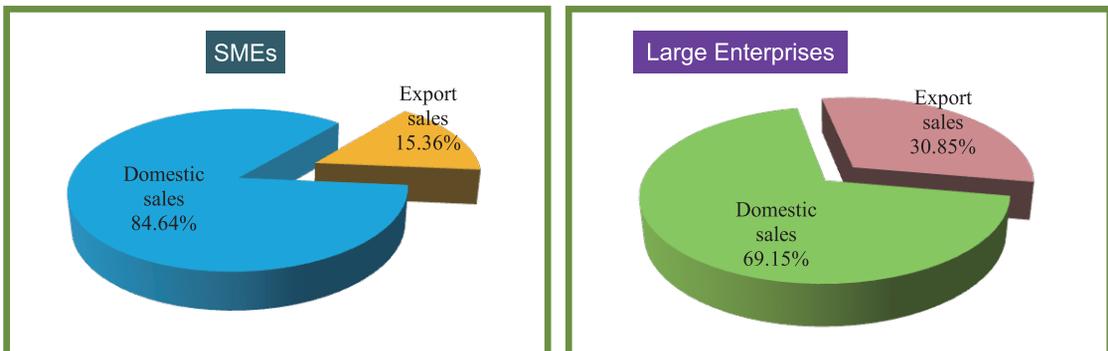
In 2012, the total sales of all business enterprises in Taiwan came to NT\$37,649.1 billion. SMEs' sales totaled NT\$11,381.8 billion, up 1.38% from 2011, accounting for 30.23% of total sales; large enterprises posted total sales of NT\$26,267.3 billion, down 1.45% from 2011, accounting for 69.77% of total sales (Table 2-1-1).

In 2012, the total domestic sales of all business enterprises came to NT\$27,797.7 billion. SMEs' domestic sales totaled NT\$9,633.7 billion, up 0.59% from 2011, accounting for 34.66% of total domestic sales; large enterprises posted total domestic sales of NT\$18,164.0 billion, down 0.08% from 2012 (Table 2-1-1).

In 2012, the total exports of all business enterprises came to NT\$9,851.4 billion. SMEs' exports totaled NT\$1,748.1 billion, up 5.95% from 2011, accounting for 17.74% of total exports; large enterprises posted total exports of NT\$8,103.3 billion, down 4.41% from 2011, accounting for 82.26% of total exports (Table 2-1-1). SMEs' domestic sales accounted for 84.64%, a rising share of the total sales in 2012. SMEs' share of exports was down to 15.36% vs. 30.85% of large enterprises. Obviously, large enterprises played a major role in exports, both in absolute amount and in relative contribution (Figure 2-1-2).

The changes in the export contribution rate and export-orientedness of SMEs are generally attributed to the transformation in the structure of Taiwan's industries. Traditional export-oriented SMEs have powered Taiwan through economic take-off and decades of rapid expansion. However, the comparative advantage that labor-intensive SMEs used to enjoy as low cost producers in export has been gradually migrated to larger enterprises in high tech and high-value-added industries. More SMEs have become satellite firms of large enterprises. SMEs have thus continued to make a major contribution to Taiwan's export; it is simply that there has been a shift away from direct exports by SMEs themselves towards indirect exports through large enterprises, with SMEs playing a role as suppliers.

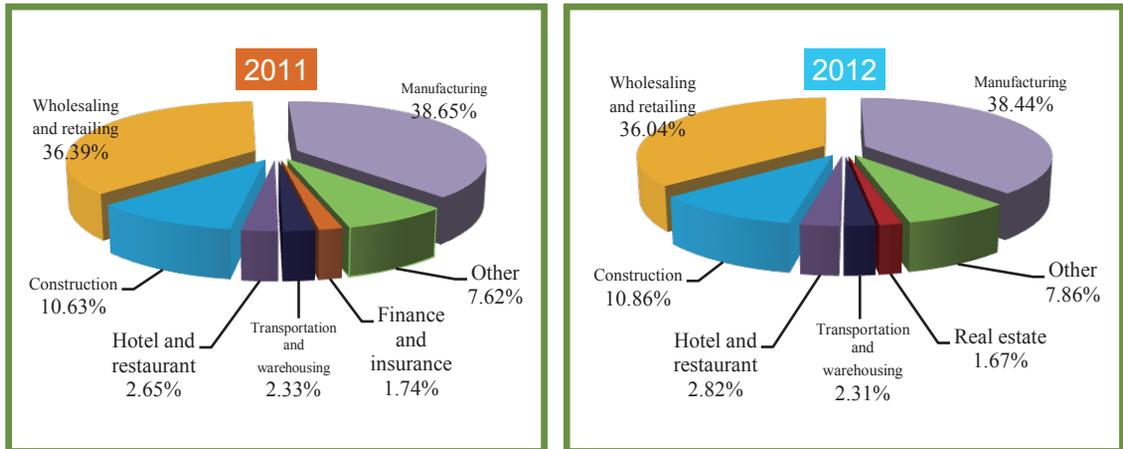
**Figure 2-1-2 The Shares of Domestic and Export Sales in Total Sales by Enterprise Size in 2012**



Source: Ministry of Finance Tax Data Center, VAT Data for 2012.

In terms of the sales by industries, manufacturing, and wholesaling and retailing commanded the largest shares to NT\$4,375.5 million (38.44%) and NT\$4,102.4 million (36.04%) respectively, followed by construction NT\$1,235.5 million (10.86%) as a distant 3rd (Figure 2-1-3). Compared to 2011, shares of the top three industries above were quite stable with variances below 0.35%.

**Figure 2-1-3 The Industry Distribution of Sales in SMEs, 2011-12**



Source: Ministry of Finance Tax Data Center, VAT Data for 2011, 2012.

### 3. Increased SMEs' Share of Exports and Export Orientation of SMEs

Total SME exports in 2012 amounted to NT\$1,748.1 billion, representing an SME export contribution rate of 17.74% (of total exports), up 1.45 percentage points from 2011, the highest in 6 years. SME export contribution rate hit bottom in 2010 at 16.16% and rebounded significantly in 2012 (Table 2-1-3).

SMEs' export orientation index (SME export sales' share of the SMEs' total sales) in 2012 was 15.36%, up 0.66 percentage point from 2011, the highest in 4 years (Table 2-1-3).

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**Table 2-1-3 The Number of SMEs and Annual Sales of SMEs, 2007–2012**

Units: enterprises; NT\$ millions; %

Sector/Industry \ Year	2007	2008	2009	2010	2011	2012
<b>No. of SMEs</b>	1,237,270	1,234,749	1,232,025	1,247,998	1,279,784	1,306,729
Ratio	97.63	97.70	97.91	97.68	97.63	97.67
Annual growth rate	-0.55	-0.20	-0.22	1.30	2.55	2.11
<b>SME sales</b>	10,481,910	10,462,696	9,189,463	10,709,005	11,226,933	11,381,770
Ratio	28.34	29.69	30.65	29.55	29.64	30.23
Annual growth rate	2.35	-0.18	-12.17	16.54	4.84	1.38
<b>SME Domestic sales</b>	8,842,983	8,817,989	7,873,111	9,088,972	9,567,948	9,633,690
Ratio	32.49	34.23	35.50	34.67	34.51	34.66
Annual growth rate	1.89	-0.28	-10.72	15.44	5.37	0.59
<b>SME Export sales</b>	1,638,927	1,644,707	1,316,352	1,620,033	1,649,985	1,748,080
Ratio (export contribution)	17.06	17.36	16.87	16.16	16.29	17.74
Export propensity	15.64	15.72	14.32	15.13	14.70	15.36
Annual growth rate	4.91	0.35	-19.96	23.01	1.85	5.95

Note: 1. The ratio indicates SMEs' share in total enterprises; the annual growth rate is the current year rate of change.

2. Export contribution = (the export value of SMEs / the export value of all enterprises) \* 100%.

3. Export propensity = (the export value of SMEs / the sale value of SMEs) \* 100%.

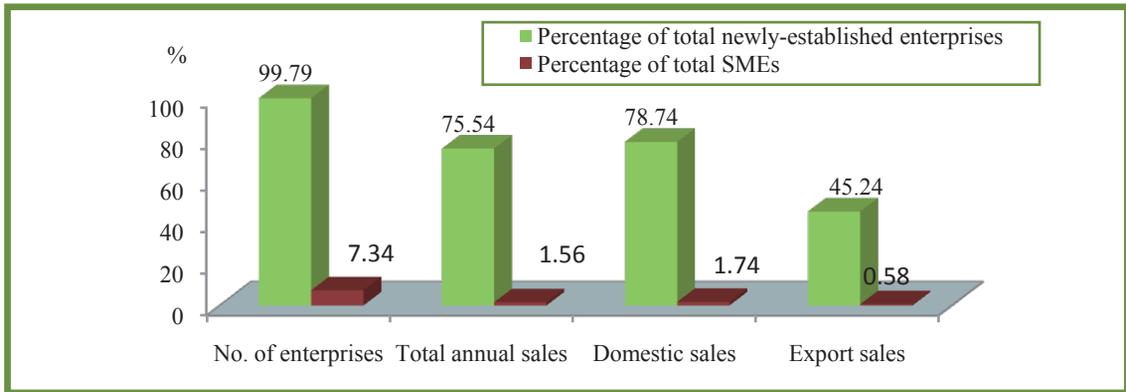
Source: Ministry of Finance Tax Data Center, VAT Data for 2007–2012.

## 4. 99.79% New Enterprises Were SMEs with Dominant Domestic Sale Share

Newly-established enterprises are defined as those that have been in existence for less than one year. In 2012, there were 95,954 newly-established SMEs in Taiwan, representing 99.79% of the total of 96,153 newly-established enterprises. Newly-established SMEs posted total sales of NT\$177.9 billion in 2012, accounting for 75.54% of the total sales of all newly-established enterprises, of which only 5.72% came from exports (Figure 2-1-4; Table 2-1-4).

In terms of the sectors, the service sector accounted for the largest number of newly-established SMEs, 85.19% of all new SMEs in 2012, with sales (such as total annual sales, domestic sales, and export sales) over 50% of all new SMEs' sales (Table 2-1-4).

**Figure 2-1-4 The Number of Newly-Established SMEs and Their Sales Share in 2012**



Source: Ministry of Finance Tax Data Center, VAT Data for 2012.

**Table 2-1-4 The Number of Newly-Established SMEs and Their Sales Performance by Sector in 2012**

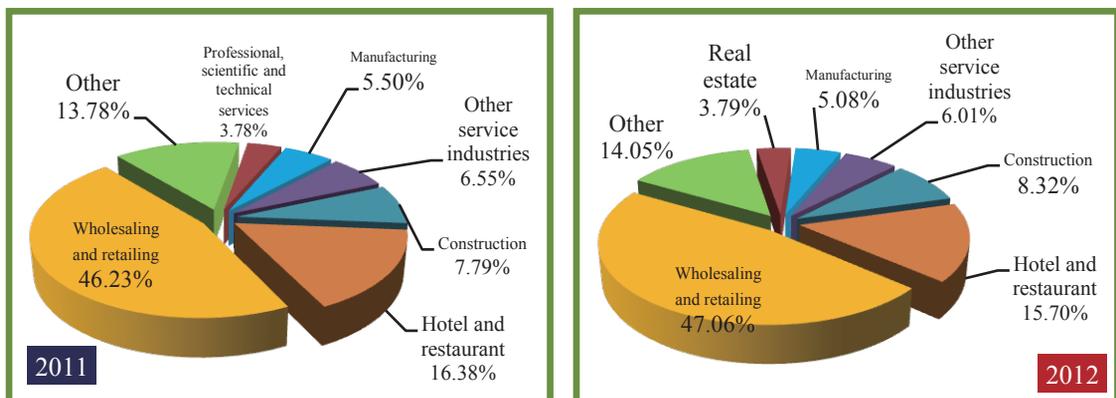
Units: enterprises; NT\$ millions; %

Sector	Indicator	No. of Enterprises	Total Sales		Domestic Sales	Export Sales			
			Share of Total	Share of Total		Share of Total	Share of Total		
<b>All sectors</b>		95,954	100.00	177,861	100.00	167,679	100.00	10,183	100.00
Agricultural sector		702	0.73	456	0.26	438	0.26	17	0.17
Industrial sector		13,513	14.08	46,363	26.07	41,793	24.92	4,570	44.88
Service sector		81,739	85.19	131,042	73.68	125,448	74.81	5,595	54.94

Source: Ministry of Finance Tax Data Center, VAT Data for 2012.

In terms of the industries, over 47% of all newly-established SMEs were in wholesaling and retailing, hotel and restaurant, and construction (Figure 2-1-5).

**Figure 2-1-5 The Industry Distribution of No. of Enterprises in Newly-Established SMEs, 2011-12**



Source: Ministry of Finance Tax Data Center, VAT Data for 2011, 2012.

### 5. Share of Taiwan's SMEs in Existence for over 20 Years Had Been Rising Consistently

As of 2012, 7.34% of SMEs had been in existence for less than one year. 69.41% of SMEs had been operating for over 5 years, and 47.88% for over 10 years. The corresponding shares for large enterprises were 0.64%, 89.34% and 71.77%, respectively. These figures show that, in terms of market entry and exit, SMEs display more flexibility than large enterprises. However there were nearly 48% SMEs had been going concerns over 10 years (Table 2-1-5).

An examination of the changes in the percentage of SMEs that had been in business for a particular length of time shows that, from 2008 to 2012, the share of SMEs in existence for over 20 years had been rising consistently, climbing from 20.47% to 22.95% by 2012 (Table 2-1-5).

**Table 2-1-5 The Share of All SMEs Held by SMEs of Particular Ages, 2008–2012**

Units: enterprises; %

Age \ Year	2008	2009	2010	2011	2012	
					SMEs	Large Enterprises
<b>Total no. of SMEs</b>	1,234,749	1,232,025	1,247,998	1,279,784	1,306,729	31,161
Less than 1 Year	6.99	7.19	7.50	7.78	7.34	0.64
1 – 2 Years	7.25	6.76	6.95	7.20	7.44	1.99
2 – 3 Years	7.34	6.16	5.75	5.88	6.15	2.43
3 – 4 Years	7.08	6.45	5.38	5.04	5.14	2.89
4 – 5 Years	5.61	6.33	5.75	4.79	4.51	2.71
5 – 10 Years	20.64	21.01	21.95	22.30	21.53	17.57
10 – 20 Years	24.63	25.10	25.33	25.05	24.93	34.01
Over 20 Years	20.47	21.02	21.39	21.96	22.95	37.76

Source: Ministry of Finance Tax Data Center, VAT data for 2008-2012.

### 6. Over Half of Taiwan's SMEs Are Sole Proprietorships

Sole proprietorships constituted the largest group of SMEs, with 734,434 firms or 56.20% of the total, followed by limited corporations, with 373,964 firms (28.62% of the total), and corporations limited, with 111,014 firms (8.50%). These three types accounted for a combined total of 93.32% of all SMEs in Taiwan (Table 2-1-6).

**Table 2-1-6 Business Enterprises in Taiwan by Form of Organization, 2011–2012**

Units: enterprises; %

Form of Organization \ Year	2011				2012			
	SMEs	Share of Total	Large Enterprises	Share of Total	SMEs	Share of Total	Large Enterprises	Share of Total
<b>Total</b>	1,279,784	100.00	31,007	100.00	1,306,729	100.00	31,161	100.00
Corporation limited by shares	109,465	8.55	17,340	55.92	111,014	8.50	17,362	55.72
Limited corporation	362,162	28.30	7,238	23.34	373,964	28.62	7,186	23.06
Unlimited corporation	50	0.00	2	0.01	58	0.00	2	0.01
Unlimited corporation with limited liability shareholders	10	0.00	1	0.00	17	0.00	1	0.00
Partnership	21,948	1.71	86	0.28	23,176	1.77	102	0.33
Sole proprietorship	725,885	56.72	175	0.56	734,434	56.20	162	0.52
Foreign company	3,164	0.25	715	2.31	3,402	0.26	725	2.33
Representative office of foreign company	93	0.01	19	0.06	100	0.01	16	0.05
Branch office	30,854	2.41	2,988	9.64	31,882	2.44	3,094	9.93
Other	26,153	2.04	2,443	7.88	28,682	2.19	2,511	8.06

Source: Ministry of Finance Tax Data Center, VAT Data for 2011, 2012.

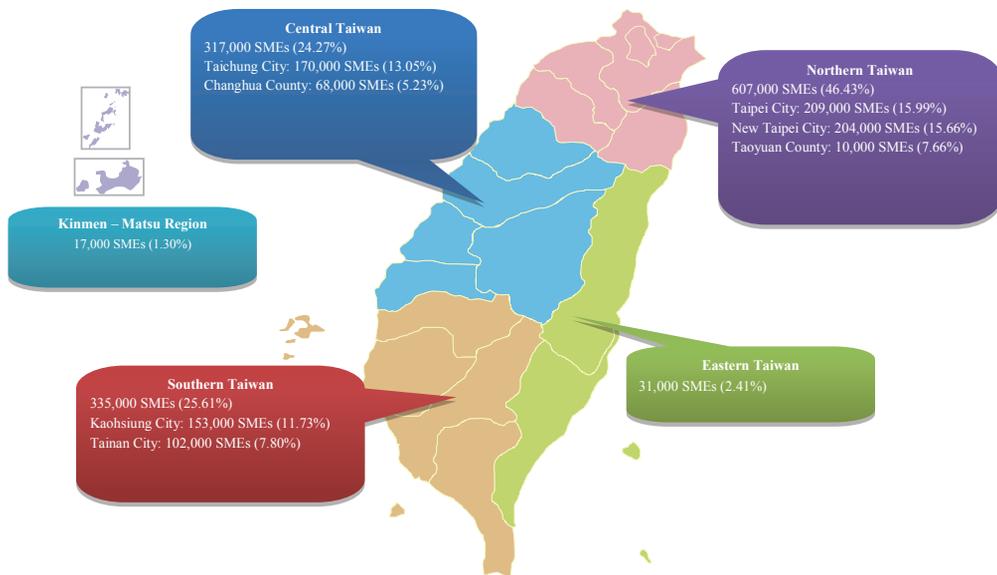
## II SMEs and the Regional Development

### 1. Taiwan's SMEs Are Heavily Concentrated in Northern Taiwan

In regional terms, in 2012, 46.43% (606,649 SMEs) of all SMEs were concentrated in Northern Taiwan; 24.27% were located in Central Taiwan and 25.61% in Southern Taiwan (Figure 2-2-1).

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**Figure 2-2-1 The Distribution of SMEs by Region, and the Counties/Cities with the Largest Shares of SMEs, in 2012**



Note: Northern Taiwan includes Taipei City, New Taipei City, Keelung City, Ilan County, Taoyuan County, Hsinchu City, and Hsinchu County. Central Taiwan includes Miaoli County, Taichung City, Changhua County, Nantou County and Yunlin County. Southern Taiwan includes Chiayi City, Chiayi County, Tainan City, Kaohsiung City, 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 2012.

## 2. Taiwan's Five Special Municipalities Are the Top 5 with the Largest Number of SMEs; Taipei City Remained as No.1

As can be seen from the data presented in Table 2-2-1, of the five special municipalities, Taipei City had the largest number of SMEs with 208,934 or 15.99% of all SMEs, followed by 204,638 or 15.66% in 2nd ranked New Taipei City, 170,565 or 13.05% in 3rd ranked Taichung City, 153,266 or 11.73% in 4th ranked Kaohsiung City, and 101,864 or 7.80% in 5th ranked Tainan City. Five special municipalities combined had 839,267 SMEs, representing 64.23% of all SMEs in Taiwan. Compared to 2011, all five special municipalities reported rising numbers of SMEs, with Taichung City growing the fastest among the five municipalities at the rate of 2.51%, followed by New Taipei City (1.60%), Tainan City (1.47%), Taipei City (1.45%), and Kaohsiung City (1.44%).

**Table 2-2-1 The Number of SMEs in Taiwan's Five Special Municipalities in 2012**

Units: enterprises; %

Municipality Enterprise Size	Total	Combined Total for the Five Municipalities	Taipei City	New Taipei City	Taichung City	Tainan City	Kaohsiung City
All enterprises	1,337,890	862,585	219,035	209,426	174,042	103,689	156,393
SMEs	1,306,729	839,267	208,934	204,638	170,565	101,864	153,266
Share of total	100.00	64.23	15.99	15.66	13.05	7.80	11.73
Annual growth rate	2.11	1.70	1.45	1.60	2.51	1.47	1.44
Large enterprises	31,161	23,318	10,101	4,788	3,477	1,825	3,127

Source: Ministry of Finance Tax Data Center, VAT Data for 2012.

Examination of the distribution of SMEs among the five special municipalities by industry sector shows that, Kaohsiung City had the largest share of agriculture (including arable and pastoral farming, forestry and fisheries) SMEs while Taipei City had the largest share of service SMEs. Combined, number of SMEs declined in agriculture but rose in industry and service sectors in 2012 (Table 2-2-2).

**Table 2-2-2 The Number of SMEs in Taiwan's Five Special Municipalities by Sector in 2012**

Units: enterprises; %

Municipality Industry Sector	Total	Combined Total for the Five Municipalities	Taipei City	New Taipei City	Taichung City	Tainan City	Kaohsiung City
SMEs	1,306,729	839,267	208,934	204,638	170,565	101,864	153,266
Agricultural Sector	11,817	6,279	323	1,032	361	310	4,253
Share of total	100.00	53.14	2.73	8.73	3.05	2.62	35.99
Annual growth rate	2.14	-3.07	13.33	-20.00	12.11	3.68	-0.68
Industrial Sector	249,216	156,631	17,712	52,448	44,142	19,109	23,220
Share of total	100.00	62.85	7.11	21.05	17.71	7.67	9.32
Annual growth rate	2.46	2.39	2.65	3.09	1.85	1.55	2.35
Service Sector	1,045,696	676,357	190,899	151,158	126,062	82,445	125,793
Share of total	100.00	64.68	18.26	14.46	12.06	7.88	12.03
Annual growth rate	2.02	1.59	1.32	1.28	2.71	1.45	1.34

Source: Ministry of Finance Tax Data Center, VAT Data for 2012.

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### 3. SME Sales by City: New Taipei City on Top

Examination of SME sales in 2012 by city shows that the largest share of overall SME sales was held by those SMEs located in New Taipei City with 16.38% of total sales, followed by Taipei City in the second place with 16.09%, Taichung City (13.82%), Kaohsiung City (11.19%), and Tainan City (10.43%). SMEs in five special municipalities combined had 68% of total sales. Compared to 2011, SME sales in Tainan City rose sharply by 15.07%, while SME sales in New Taipei City and Taichung City declined mildly in 2012 (Table 2-2-3).

**Table 2-2-3 Enterprise Sales of Taiwan's Five Special Municipalities in 2012**

Units: NT\$ millions; %

Municipality Enterprise Size	Total	Combined Total for the Five Municipalities	Taipei City	New Taipei City	Taichung City	Tainan City	Kaohsiung City
All enterprises	37,649,075	26,366,883	11,982,143	4,145,061	3,556,637	2,586,964	4,096,078
SMEs	11,381,770	7,729,424	1,831,630	1,864,643	1,572,794	1,186,776	1,273,581
Share of total	100.00	67.91	16.09	16.38	13.82	10.43	11.19
Annual growth rate	1.38	1.75	0.20	-0.52	-1.90	15.07	1.13
Large enterprises	26,267,306	18,637,460	10,150,513	2,280,418	1,983,843	1,400,189	2,822,497

Source: Ministry of Finance Tax Data Center, VAT data for 2012.

Analysis of SME sales by industry sector and region shows that SME sales from industry rose sharply by 22.81% in Tainan City, but declined in Kaohsiung City, New Taipei City and Taichung City in 2012. SME sales from service saw increase from 2011 in all cities except Taipei City with slight drop (Table 2-2-4).

**Table 2-2-4 SME Sales of Taiwan's Five Special Municipalities by Sector in 2012**

Units: NT\$ millions; %

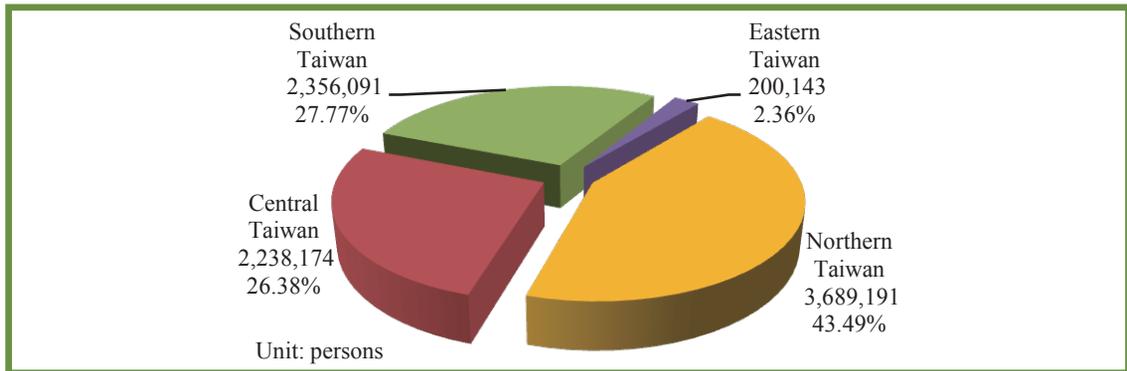
Municipality Industry Sector	Total	Combined Total for the Five Municipalities	Taipei City	New Taipei City	Taichung City	Tainan City	Kaohsiung City
SMEs	11,381,770	7,729,424	1,831,630	1,864,643	1,572,794	1,186,776	1,273,581
Agricultural Sector	19,966	11,729	1,670	1,175	1,171	1,413	6,300
Share of total	100.00	58.74	8.36	5.88	5.86	7.08	31.56
Annual growth rate	0.01	0.02	0.03	0.01	0.01	0.00	0.03
Industrial Sector	5,705,751	3,637,570	445,034	918,610	854,302	809,056	610,569
Share of total	100.00	63.75	7.80	16.10	14.97	14.18	10.70
Annual growth rate	1.37	2.65	1.92	-2.07	-4.90	22.81	-0.21
Service Sector	5,656,052	4,080,124	1,384,926	944,858	717,322	376,307	656,711
Share of total	100.00	72.14	24.49	16.71	12.68	6.65	11.61
Annual growth rate	1.36	0.93	-0.38	1.01	1.89	1.40	2.34

Source: Ministry of Finance Tax Data Center, VAT data for 2012.

## 4. SME Employment by Five Special Municipalities and Regions

As can be seen from the 2012 data presented in Figure 2-2-2, of the four regions, Northern region had the largest number of people employed by SMEs (3,689,191 or 43.49%), followed by Southern region (27.77%), and Central region (26.38%) and Eastern region (2.36%).

**Figure 2-2-2 The Regional Distribution of SME Employment in 2012**



Source: Ministry of Finance Tax Data Center, VAT Data for 2012.

Of the five special municipalities, New Taipei City had the largest number of people employed by SMEs in 2012 (1,566,416 or 18.46%), followed by Taichung City (12.31%), and Kaohsiung City (11.54%). Five special municipalities are the Top 5 cities with combined employment over 60% of all people employed by SMEs. SME employment in New Taipei City rose the fastest at 2.28%, followed by Taichung City at 2.04% (Table 2-2-5).

**Table 2-2-5 The Number of People Employed in Taiwan's Five Special Municipalities, 2012**

Units: persons; %

Municipality	Total	Combined Total for the Five Municipalities	Taipei City	New Taipei City	Taichung City	Tainan City	Kaohsiung City
Enterprise Size							
All enterprises	10,859,924	6,578,083	1,223,537	1,891,883	1,265,303	913,019	1,284,341
SMEs	8,483,599	5,158,853	855,175	1,566,416	1,044,475	713,811	978,977
Share of total	100.00	60.81	10.08	18.46	12.31	8.41	11.54
Annual growth rate	1.76	1.87	1.70	2.28	2.04	1.55	1.45
Large enterprises	1,348,837	790,395	215,833	161,957	118,620	118,573	175,412
Government Employees	1,027,488	628,835	152,529	163,511	102,208	80,635	129,952

Note: Share in the table represents the percentage of municipality SMEs in all SMEs.  
Source: Ministry of Finance Tax Data Center, VAT data for 2012.

## III Female-Owned SMEs

Based on data from Ministry of Finance Tax Data Center, the gender of a person is determined by the first digit of her (his) identity card number. Therefore, 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. It follows that the total number of SMEs in Section I may not match the sum of female-owned SMEs and male-owned SEMs.

### 1. Female-Owned Enterprises Account for over 30% of All Business Enterprises in Taiwan

In 2012, there were 1,326,766 business enterprises in Taiwan for which the sex of the business owner could be determined. Of these, 479,803 (36.16% of the total) were owned by women. Female-owned enterprises increased by 11,250 or 2.40% from 2011. 98.84% (474,237) of female-owned enterprises were SMEs (Table 2-3-1).

**Table 2-3-1 Number of Enterprises and Sales Performance in 2012 – by Sex of Business Owner**

Units: enterprises; NT\$ millions; %

Enterprise Size Indicator	All Enterprises	SMEs	Large Enterprises
<b>No. of enterprises</b>	1,326,766	1,297,573	29,193
Female-owned enterprises	479,803	474,237	5,566
Share of total 1	100.00	98.84	1.16
Share of total 2	36.16	36.55	19.07
Male-owned enterprises	846,963	823,336	23,627
<b>Total sales</b>	33,784,736	10,991,814	22,792,921
Female-owned enterprises	5,033,775	2,619,714	2,414,062
Share of total 1	100.00	52.04	47.96
Share of total 2	14.90	23.83	10.59
Male-owned enterprises	28,750,960	8,372,101	20,378,860
<b>Domestic sales</b>	25,568,713	9,398,408	16,170,305
Female-owned enterprises	4,191,330	2,365,181	1,826,149
Share of total 1	100.00	56.43	43.57
Share of total 2	16.39	25.17	11.29
Male-owned enterprises	21,377,383	7,033,227	14,344,156
<b>Export sales</b>	8,216,023	1,593,407	6,622,616
Female-owned enterprises	842,445	254,533	587,913
Share of total 1	100.00	30.21	69.79
Share of total 2	10.25	15.97	8.88
Male-owned enterprises	7,373,578	1,338,874	6,034,704

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.

3. Ratio 1 in the table represents the percentages of SMEs and large enterprises in all female-owned enterprises; ratio 2 represents the percentage of female-owned enterprises in all enterprises.

Source: Ministry of Finance Tax Data Center, VAT Data for 2012.

## 2. 46% of Female-Owned Enterprises Have Been in Existence for over 10 Years

As of 2012, 7.66% of female-owned enterprises in Taiwan had been in existence for less than one year, slightly higher compared to 6.84% for male-owned enterprises. 45.57% of female-owned enterprises had been in existence for over 10 years, lower than 50.25% for male-owned enterprises (Table 2-3-2).

**Table 2-3-2 Enterprise Age Structure in 2012 – by Sex of Enterprise Owner**

Units: enterprises; %

Sex of Owner 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
<b>Total</b>	1,326,766	100.00	479,803	100.00	846,963	100.00
Less than 1 year	94,692	7.14	36,730	7.66	57,962	6.84
1 – 2 years	96,693	7.29	38,090	7.94	58,603	6.92
2 – 3 years	80,157	6.04	30,605	6.38	49,552	5.85
3 – 4 years	67,345	5.08	26,272	5.48	41,073	4.85
4 – 5 years	59,112	4.46	22,658	4.72	36,454	4.30
5 – 10 years	284,448	21.44	106,790	22.26	177,658	20.98
10 – 20 years	333,903	25.17	116,280	24.23	217,623	25.69
20 years or more	310,416	23.40	102,378	21.34	208,038	24.56

Notes and Source: See Table 2-3-1.

## 3. 63% of Female-Owned Enterprises Are Sole Proprietorships

Sole proprietorships were the most common form of organization for both female-owned enterprises (62.91%) and male-owned enterprises (51.03%), followed by limited corporations at 26.28% and 29.77% respectively (Table 2-3-3).

**Table 2-3-3 Number of Enterprises – by Form of Enterprises and Sex of Business Owner in 2012**

Units: enterprises; %

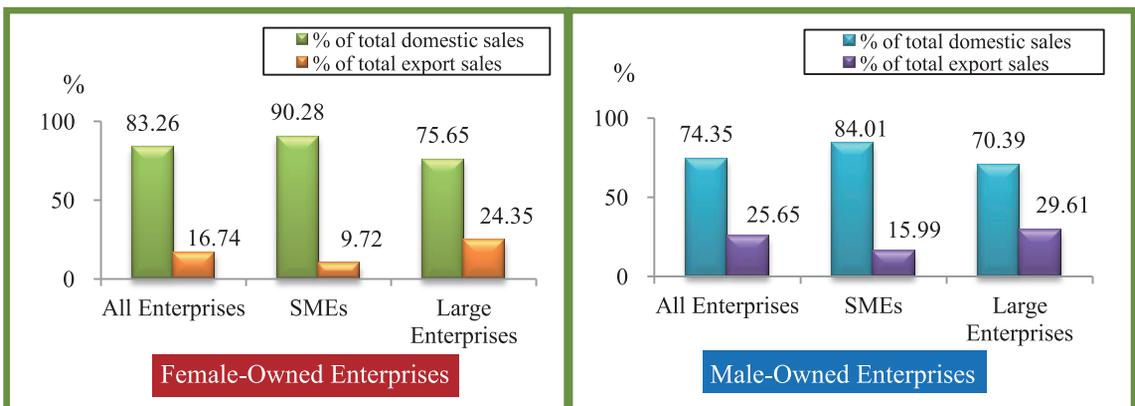
Sex of Owner Indicator	All Enterprises		Female-Owned Enterprises		Male-Owned Enterprises	
	No. of Enterprises	Share of Total	No. of Enterprises	Share of Total	No. of Enterprises	Share of Total
<b>Total</b>	1,326,766	100.00	479,803	100.00	846,963	100.00
Corporation limited by shares	124,923	9.42	30,368	6.33	94,555	11.16
Limited corporation	378,261	28.51	126,104	26.28	252,157	29.77
Unlimited corporation	60	0.00	21	0.00	39	0.00
Unlimited corporation with limited liability shareholders	18	0.00	3	0.00	15	0.00
Partnership	23,255	1.75	8,067	1.68	15,188	1.79
Sole proprietorship	734,059	55.33	301,851	62.91	432,208	51.03
Foreign company	2,259	0.17	783	0.16	1,476	0.17
Representative office of foreign company	64	0.00	15	0.00	49	0.01
Branch office	33,662	2.54	5,770	1.20	27,892	3.29
Other	30,205	2.28	6,821	1.42	23,384	2.76

Notes and Source: See Table 2-3-1.

#### 4. Female-Owned Enterprises Are More Oriented toward the Domestic Market

In 2012, domestic sales accounted for a dominant 90.28% of the total sales of female-owned SMEs, with export sales accounting for only 9.72% (giving a disparity of 80.56 percentage points). For male-owned SMEs, export sales accounted for 15.99% and domestic sales accounted for 74.29%, giving a disparity of 60.02 percentage points (Figure 2-3-1).

Figure 2-3-1 Domestic Sales and Export Sales Performance in 2012 – by Sex of Business Owner

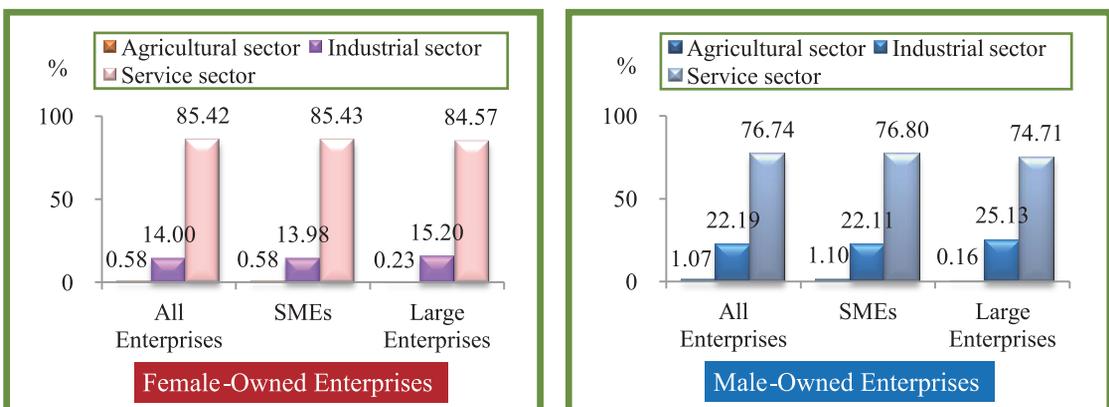


Notes and Source: See Table 2-3-1.

#### 5. Female-Owned Enterprises Are Heavily Concentrated in the Service Sector

The service sector accounts for the largest share of the total number of female-owned enterprises at 85%, compared to 77% share of male-owned enterprises (Figure 2-3-2).

Figure 2-3-2 Enterprises Performance Indicators in 2012 – by Sector and Sex of Enterprise Owner



Notes and Source: See Table 2-3-1.

The wholesaling and retailing industry accounted for the largest share of the total number of female-owned enterprises, and also for the largest share of female-owned enterprises in total sales, domestic sales and export sales, at 52.92%, 50.94%, 48.11%, and 65.01% respectively.

## IV Business Environment of SME in Manufacturing Sector

To provide a clear picture of the current state of Taiwan's manufacturing sector, its export performance, development of self-owned brands, and the impact of trade liberalization, this section presents data from the Survey of Manufacturing Industry Operations report published by the Department of Statistics, Ministry of Economic Affairs, in October 2012. The effective sample size in this survey was 3,070 enterprises with a questionnaire return rate of 94.04%. Large enterprises are defined as firms with at least 200 employees, medium enterprises are firms with at least 100 but less than 200 employees, and small enterprises are firms with less than 100 employees.

### 1. Business Status of and Outlook for Manufacturing Sector

#### (1) 26% of Firms Expecting Earnings to Rise in 2012

Global economic growth remained subdued in 2012 due to the continued European debt crisis with no sign of real structural reform, still weak U.S. recovery, and a significant decline in Mainland China's growth rate. Enterprises have been relatively pessimistic in their earnings growth. The number of firms expecting earnings to rise accounted for 25.74%, firms expecting earnings to fall accounted for 44.02%, and firms expecting earnings to remain the same accounted for 30.24%. The larger the size, the higher the percentage of enterprises expecting earnings to rise; the Outlook Index of all enterprises was 40.86%<sup>1</sup>. Large enterprises were less pessimistic with outlook reading of 48.11% than medium (41.23%) and small ones (34.09%) (Table 2-4-1).

**Table 2-4-1 Percentage of Manufacturing Firms Expecting Earnings to Rise, and Percentage Expecting Earnings to Decline in 2012**

Unit: %

Item	All Enterprises	Large Enterprises	Medium-sized Enterprises	Small Enterprises
<b>Total</b>	100.00	100.00	100.00	100.00
Firms expecting earnings to rise	25.74	35.17	25.66	17.21
Firms expecting no change in earnings	30.24	25.87	31.13	33.75
Firms expecting earnings to fall	44.02	38.95	43.21	49.04
Outlook Index	40.86	48.11	41.23	34.09

Note: Outlook Index = percentage of firms expecting earnings to rise + 0.5×percentage of firms expecting earnings to fall.

Source: Department of Statistics, Ministry of Economic Affairs, Survey of Manufacturing Industry Operations 2012.

<sup>1</sup> Outlook Index= Percentage of firms expecting earnings to rise + 0.5 (percentage of firms expecting earnings to remain the same)

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### (2) The No.1 Reason Given for Expecting to See an Increase in Earnings Was “Increased Market Demand”

Main reasons given by manufacturing firms for anticipating an increase in earnings in 2012 were, in order of importance: “increased market demand” (25.64% of all enterprises, a 7.24 percentage points lower than 2011), followed by “new product launch” (19.35% of all enterprises, a 4.42 percentage points higher than 2011), and “increased production capacity”. The No. 1 and No.2 reasons were “increased market demand” and “new product launch” for all firms, regardless of the size (Table 2-4-2).

**Table 2-4-2 Reasons Given for Anticipating Higher Earnings in 2011 and 2012 (Weighted)**

Unit: %

Item	All Enterprises		Large Enterprises		Medium-sized Enterprises		Small Enterprises	
	201 1	201 2	201 1	201 2	201 1	201 2	201 1	201 2
Increased market demand	32.88	25.64	32.09	26.93	29.13	22.20	35.54	25.92
New product launch	14.93	19.35	16.68	20.45	14.98	17.16	13.03	19.00
Improved marketing methods	10.91	10.62	12.21	11.19	12.29	12.47	8.87	8.03
Increased production capacity	10.52	6.09	11.97	5.09	10.43	5.38	9.02	8.58
Higher prices	8.18	8.02	7.82	7.35	10.43	9.04	7.47	8.49
Lower administrative and sales costs	4.23	5.74	3.96	4.90	3.82	6.86	4.71	6.46
Improved yield rate	3.40	3.61	2.87	3.17	2.38	3.89	4.46	4.24
Reduced materials costs	4.19	6.98	3.44	7.20	3.82	7.44	5.16	6.18
Expanded distribution channels	4.37	5.37	3.02	5.38	5.27	6.29	5.36	4.61
Own brand development	3.97	3.59	3.35	3.22	4.96	4.12	4.16	3.87
Exchange rate fluctuations	1.20	2.67	1.18	2.50	0.93	3.20	1.35	2.58
Other	1.22	2.33	1.41	2.64	1.55	1.95	0.85	2.03

Note: This table uses weighted ratios, whereby the importance attached to each reason is divided by the total value for all respondents; a score of 3 indicates that the highest level of importance is attached to the reason, 2 denotes less importance, and 1 denotes the lowest level of importance.

Source: Department of Statistics, Ministry of Economic Affairs, Survey of Manufacturing Industry Operations 2012.

### (3) The No.1 Reason Given for Anticipating a Decline in Profits Was “Declining Market Demand”

The five main reasons given by manufacturing firms for anticipating that earnings would have fallen in 2012 were, in order: “declining market demand,” “rising raw materials prices,” “falling product prices,” “new competitors,” and “exchange rate fluctuations,” at 39.75%, 21.78%, 16.00%, 5.88%, and 5.38% respectively. The No.1 reason was “declining market demand” shared by 39.75% of all enterprises, a 13.41 percentage points higher than 2011, reflecting a weak global recovery (Table 2-4-3).

23.32% small enterprises worried about “rising raw materials prices” the most, compared to their medium and large peers, while more large enterprises worried about “falling product prices”.

Compared to 2011, the share of firms reporting “increased materials costs” as the No. 1 reason for expecting lower earnings was materially lower, while the share of firms reporting “declining market demand” as No. 1 reason for expecting lower earnings were significantly higher, regardless of the size of firms.

**Table 2-4-3 Reasons Given for Anticipating Lower Earnings in 2012 than in 2011 (Weighted)**

Unit: %

Item	All Enterprises		Large Enterprises		Medium-sized Enterprises		Small Enterprises	
	201 1	201 2	201 1	201 2	201 1	201 2	201 1	201 2
Rising raw materials prices	26.34	39.75	23.85	40.03	22.13	39.60	28.68	39.61
Declining market demand	30.01	21.78	27.00	19.93	29.78	21.35	31.46	23.32
Falling product prices	13.32	16.00	16.66	17.84	14.04	16.05	11.57	14.65
Increased administrative and sales costs	11.79	5.38	15.56	4.95	14.61	6.13	9.25	5.35
New competitors	5.29	5.88	5.21	5.46	5.73	6.75	5.20	5.78
Exchange rate fluctuations	5.01	3.64	4.39	3.41	5.28	3.17	5.23	4.01
High product substitutability	2.07	1.47	1.51	1.41	2.47	1.52	2.22	1.49
Shrinking distribution channels	1.14	1.11	0.27	0.85	0.79	0.90	1.65	1.40
Wear and tear on equipment, leading to reduced production capacity	1.40	1.08	1.23	0.98	1.24	1.24	1.52	1.09
Products no longer marketable	1.11	1.31	0.96	1.66	1.46	0.48	1.08	1.43
Other	2.52	2.60	3.36	3.46	2.47	2.82	2.15	1.87

Notes and Source: See Table 2-4-2.

#### **(4) Regarding Their Future Business Strategy for Their Taiwan Operations, Most Enterprises Reported Planning to Maintain Their Current Scale of Operations**

The survey results in 2012 showed that, regarding their business strategy for Taiwan operations, over 15% of manufacturing firms were planning to expand their scale of operations; larger firms were more likely (21.92%) to expand, significantly higher than medium firms (15.56%) and small firms (8.86%), which suggested that SMEs were adopting a more conservative strategy compared to their larger peers (Table 2-4-4).

Overall speaking, firms were more conservative in expansion in 2012 as compared to 2011 regardless of the size.

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**Table 2-4-4 Future Business Strategy regarding Business Operations in Taiwan, 2013**

Unit: %

Item	Enterprises / Year		All Enterprises		Large Enterprises		Medium-sized Enterprises		Small Enterprises	
	201 1	201 2	201 1	201 2	201 1	201 2	201 1	201 2	201 1	201 2
Planning to expand scale of operations	18.05	15.17	32.21	21.92	20.04	15.56	10.33	8.86		
Planning to maintain current scale of operations	78.43	81.02	66.71	76.34	78.17	80.46	84.44	85.55		
Planning to reduce scale of operations	3.52	3.81	1.08	1.75	1.78	3.97	5.23	5.60		

Source: Department of Statistics, Ministry of Economic Affairs, Survey of Manufacturing Industry Operations 2012.

## 2. Developing Export Markets

### (1) The Main Problems Experienced in Export Markets Were Intense Competition from Other Companies in the Same Industry and Exchange Rate Fluctuations

The factors that firms reported as constituting two most serious problems in export markets in 2012 were intense competition from other companies in the same industry (39.96%), and excessive exchange rate fluctuations (22.42%), followed by unfair tariffs, shortage of export sales development talent, inadequate marketing channels, and lack of access to market information. Compared to 2011, share of firms reporting excessive exchange rate fluctuations as being the major problem was 9.72 percentage points lower, while share of firms reporting unfair tariffs was 2.25 percentage points higher in 2012. Large firms saw more intense competition from other companies in the same industry, but less impact from unfair tariffs compared to SMEs (Table 2-4-5).

**Table 2-4-5 Problems Experienced by Manufacturing Firms in the Most Important Export Market in 2011 and 2012 (Weighted)**

Unit: %

Item	All Enterprises		Large Enterprises		Medium-sized Enterprises		Small Enterprises	
	2011	2012	2011	2012	2011	2012	2011	2012
Intense competition from other companies in the same industry	38.27	39.96	39.11	41.49	35.43	37.43	38.76	39.82
Excessive exchange rate	32.14	22.42	31.83	21.52	33.26	24.69	31.93	22.09
Inadequate marketing channels	4.56	6.81	5.41	7.36	4.72	7.35	3.78	6.00
Shortage of export sales development talent	5.62	6.65	4.97	6.03	5.84	6.56	6.08	7.29
Unfair tariffs	5.90	6.44	5.79	6.41	6.62	5.93	5.69	6.74
Lack of access to market information	4.14	4.86	4.16	4.87	4.35	5.26	4.04	4.63
Excessively strict environmental requirements	2.04	2.59	1.58	2.52	2.83	2.31	2.08	2.80
Product piracy	1.72	2.28	1.23	1.94	1.39	2.12	2.27	2.67
Cash-flow problems	1.51	1.30	1.14	1.17	1.48	1.27	1.82	1.43
Rigorous and/or time-consuming inspection and quarantine procedures	1.28	2.29	1.16	2.45	1.85	1.93	1.15	2.32
Protectionist sentiment	1.27	1.74	1.99	2.03	0.74	1.74	0.91	1.47
Other	1.54	2.67	1.63	2.19	1.48	3.39	1.49	2.74

Notes and Source: See Table 2-4-2.

## (2) China Is the Largest Export Market

The survey results showed that, in 2012, China was the main export market for over 28% of firms in the manufacturing sector, followed by North America (21.05%), Europe (15.05%), ASEAN (11.79%), Japan (11.18%), and South Korea (3.13%). Regardless of enterprise size, the export market that manufacturing firms were the most intent on developing in 2012 was China, followed by North America and Europe (Table 2-4-6).

**Table 2-4-6 The Main Export Markets for Manufacturing Firms in 2011 and 2012 (Weighted)**

Unit: %

Item	All Enterprises		Large Enterprises		Medium-sized Enterprises		Small Enterprises	
	2011	2012	2011	2012	2011	2012	2011	2012
China (inc. Hong Kong)	25.27	27.93	28.50	28.31	25.49	25.61	23.06	28.83
North America (U.S.A., Canada and Mexico)	16.37	21.05	21.65	23.04	18.47	22.19	12.18	18.37
Europe	11.95	15.05	13.51	14.63	14.51	17.54	10.06	14.12
ASEAN	9.65	11.79	10.82	10.59	10.72	10.92	8.52	13.50
Japan	9.48	11.18	10.82	11.40	12.37	11.95	7.62	10.51
Central and South America	2.46	3.13	3.51	3.63	2.44	2.70	1.78	2.85
India	1.98	2.62	2.09	2.39	2.44	2.67	1.75	2.83
Middle East	1.48	2.17	1.27	1.89	1.70	1.64	1.54	2.74
New Zealand and Australia	1.60	1.85	1.40	1.66	2.31	2.27	1.48	1.82
South Korea	1.40	1.47	1.22	1.00	1.00	1.40	1.66	1.99
Other	1.48	1.76	1.93	1.45	1.35	1.12	1.22	2.44

Notes and Source: See Table 2-4-2.

## (3) Chinese Firms Are Taiwanese Manufacturing Firms' Main Competitors in Overseas Markets

Regarding competition in export markets in 2012, 27.46% of all firms reported that Chinese firms had emerged as their single biggest source of competition, replacing other Taiwanese manufacturing firms (24.71%, a close 2nd place), which ranked No.1 in 2011, followed by Taiwanese-invested overseas firms (13.96%), Japanese firms (9.56%), South Korean firms (9.01%), and U.S. firms (6.54%) (Table 2-4-7).

Small enterprises were significantly more likely than medium-sized and large enterprises to report experiencing intense competition from Chinese companies, other Taiwanese companies, and Taiwanese-invested overseas firms. Only for large enterprises, the main sources of competition were only Taiwanese companies. Relatively, medium firms faced more competition from U.S. and European companies; large firms faced more competition from Japanese and South Korean firm (Table 2-4-7).

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**Table 2-4-7 Sources of Competition in Export Markets (Weighted)**

Unit: %

Item	All Enterprises		Large Enterprises		Medium-sized Enterprises		Small Enterprises	
	2011	2012	2011	2012	2011	2012	2011	2012
Chinese firms	26.43	27.46	22.35	24.12	25.64	27.13	30.33	30.96
Other Taiwanese firms	27.14	24.71	24.98	24.20	24.26	23.23	30.27	26.00
Taiwanese-invested overseas firms	15.41	13.96	12.84	11.89	16.04	13.88	17.40	16.06
Japanese firms	9.71	9.56	12.60	11.80	11.47	9.68	6.43	7.26
South Korean firms	8.54	9.01	11.42	11.60	7.97	7.60	6.26	7.18
U.S. firms	5.56	6.54	7.47	7.82	6.30	7.90	3.58	4.55
European firms	3.81	4.95	4.34	5.19	4.82	6.68	2.91	3.79
ASEAN member state firms	2.75	2.65	3.30	2.43	2.71	3.17	2.30	2.59
Other	0.65	1.16	0.72	0.94	0.79	0.73	0.53	1.60

Notes and Source: See Table 2-4-2.

### (4) Three Key Factors Affecting Competitive Advantage in the Marketplace Is “Superior Product Quality,” “Company Reputation,” and “Existing Customer Base”

The survey results in 2012 showed that Taiwanese manufacturing firms felt the main factor affecting competitive advantage to be “superior product quality” (28.10% of firms, 3.58 percentage points higher than 2011), followed by “company reputation” (13.90%), and “existing customer base” (10.33%) (Table 2-4-8), reflecting, apart from quality and reputation, the importance of keeping current customers and the increasing difficulty to develop new customers under intensified completion (Table 2-4-8).

**Table 2-4-8 Key Factors Determining Competitiveness in the Marketplace (Weighted)**

Unit: %

Item	All Enterprises		Large Enterprises		Medium-sized Enterprises		Small Enterprises	
	2011	2012	2011	2012	2011	2012	2011	2012
Superior product quality	24.52	28.10	22.56	27.71	24.89	28.56	25.51	28.23
Company reputation	15.84	13.90	14.01	12.65	16.25	13.82	16.75	15.12
Constant market share	-	10.33	-	9.62	-	9.94	-	11.20
Product distinctiveness	9.40	10.00	9.63	9.00	10.11	10.37	9.07	10.73
New product development capability	6.06	7.42	9.50	9.65	6.30	7.13	4.07	5.46
Speed of delivery	8.08	6.92	5.80	6.03	6.22	6.90	9.92	7.76
Pricing strategy	6.31	5.21	5.17	5.02	5.32	4.66	7.23	5.67
Superior after-sales service	9.67	4.58	8.83	4.19	8.02	4.57	16.63	4.94
Superior capabilities of controlling market information	3.13	4.15	4.37	4.70	3.81	4.74	2.23	3.33
Production efficiency	7.57	3.98	8.18	4.48	7.08	3.97	7.38	3.51
Extensive marketing channels	4.54	2.66	6.06	3.30	5.20	2.76	3.50	2.00
Superior managerial capabilities	4.18	2.42	5.46	3.40	6.22	2.24	2.86	1.60
Others	0.67	0.35	0.41	0.24	0.57	0.34	0.85	0.45

Note: The symbol “-” indicates that the data is not available.  
Source: See Table 2-4-2.

Large enterprises were more likely than SMEs to give “new product development capability,” “production efficiency,” “extensive marketing channels” and “superior managerial capabilities” as key factors affecting competitiveness. Medium enterprises were more likely to focus on “superior product quality” and “superior capabilities of controlling market information.” Small enterprises were more likely to address “company reputation,” “existing customer base,” “product distinctiveness,” “pricing strategy” and “superior after-sales service.”

Compared to 2011, firms paid more attention to “superior product quality,” “product distinctiveness,” “new product development capability” and “superior capabilities of controlling market information” in 2012.

### 3. The Impact of Trade Liberalization

#### (1) ECFA and Other Potential FTAs Have a Positive Impact on Manufacturing Industry's Domestic Investment

Taiwan's economy is highly dependent on exports. Facing the global trend of regional economic integration, Taiwan should take advantage of ECFA and other potential FTAs as soon as possible to lower trade tariffs and avoid non-tariff barriers, strengthen export markets and help stimulate domestic investment and employment.

The 2012 survey results showed that the Outlook Index of ECFA and other potential FTAs on domestic investment of Taiwan's manufacturing firms was 8.21% and 11.01% respectively, a positive impact on rising domestic investment (Table 2-4-9).

**Table 2-4-9 The Impact of ECFA and Other Potential FTAs on Domestic Investment**

Unit: %

Item	2012	Large Enterprises	Medium-sized Enterprises	Small Enterprises
<b>The impact of ECFA</b>				
Total	100.00	100.00	100.00	100.00
Positive impact	10.50	13.54	10.76	7.60
No impact	87.22	84.53	87.09	89.72
Negative impact	2.29	1.93	2.15	2.67
Outlook Index	8.21	11.61	8.61	4.93
<b>The impact of other potential FTAs</b>				
Total	100.00	100.00	100.00	100.00
Positive impact	12.12	15.29	14.07	8.27
No impact	86.77	83.79	84.93	90.39
Negative impact	1.11	0.92	0.99	1.34
Outlook Index	11.01	14.37	13.08	6.93

Note: Outlook Index = Percentage of firms expecting earnings to rise – Percentage of firms expecting earnings to fall.  
Source: See Table 2-4-2.

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Regardless of size, firms indicated positive outlook for impact of ECFA and other potential FTAs. Large enterprises showed more pronouncedly positive Outlook Index values.

### (2) The FTAs Signed between the EU and S. Korea and between the U.S. and S. Korea Were Expected to Have Negative Impact on Sales and Investment of Taiwan Firms

The FTA signed between the European Union and South Korea (one of Taiwan's main competitors in terms of foreign trade) came into effect in July 2011, while the FTA signed between South Korea and the U.S. came into effect on January 1, 2012. These FTAs have resulted in intensified competitive pressure on Taiwanese firms.

The government is actively promoting Taiwan and Europe Economic Cooperation Agreement (ECA) and the Taiwan-US FTA, to continue to strengthen export markets, branding and industry upgrading, eliminate trade and investment barriers, and build international trade talent.

Survey results indicate that 14.37% of firms felt that the coming into effect of the FTAs between the EU and South Korea and between the U.S. and South Korea had a negative impact on sales, far higher than the share of firms that reported positive impact (3.29%). It is clear the threat that South Korean competition poses to Taiwanese products in the European and U.S. markets is becoming increasingly severe (Table 2-4-10).

**Table 2-4-10 The Impact of FTAs Signed between the EU and S. Korea, and between the U.S. and S. Korea on Investments**

Unit: %

Item	2012	Large Enterprises	Medium-sized Enterprises	Small Enterprises
<b>Sales</b>				
Total	100.00	100.00	100.00	100.00
Positive impact	3.29	3.13	4.47	2.84
No impact	82.33	80.66	80.30	84.88
Negative impact	14.37	16.21	15.23	12.28
Outlook Index	-11.08	-13.08	-10.76	-9.44
<b>The scale of domestic investment</b>				
Total	100.00	100.00	100.00	100.00
Positive impact	1.49	1.29	2.32	1.25
No impact	93.11	92.82	92.55	93.65
Negative impact	5.40	5.89	5.13	5.10
Outlook Index	-3.91	-4.60	-2.81	-3.85
<b>The scale of foreign investment</b>				
Total	100.00	100.00	100.00	100.00
Positive impact	2.08	2.85	1.66	1.59
No impact	93.66	92.91	94.04	94.15
Negative impact	4.26	4.24	4.30	4.26
Outlook Index	-2.18	-1.39	-2.64	-2.67

Notes and Source: See Table 2-4-2.

The Outlook Indices of sales, domestic investment and foreign investment for all enterprise size classes were negative. Large enterprises were far more negative on sales and domestic investment with Outlook Indices of -13.08% and -4.60%, while SMEs were more negative on foreign investment with Outlook Indices of about -2.7%.

### (3) In Response to Intensified Competition from S. Korea, Manufacturing Firms Focus on Cost Efficiency, Quality Enhancement, and New Export Markets Development

18.86% of manufacturing firms focused on new export markets development as the main strategic move in response to heightened competition from South Korea, followed by cost efficiency (14.60%), and quality enhancement (14.21%). 16.39% of manufacturing firms chose to stay put, of which more small firms chose not to change current strategic focus (18.15%) (Table 2-4-11).

**Table 2-4-11 The Impact of FTAs Signed between the EU and S. Korea, and between the U.S. and S. Korea on Business Operation (Weighted)**

Unit: %

Item	2012	Large Enterprises	Medium-sized Enterprises	Small Enterprises
Developing new export markets	18.52	18.17	20.32	17.91
No action taken	16.39	15.52	14.57	18.15
Reducing operating costs	14.60	15.52	14.31	13.87
Enhancing product quality	14.21	12.94	13.59	15.74
Developing new product	13.15	13.47	14.21	12.29
Product differentiation	6.08	7.28	5.55	5.24
Master the core technology	4.85	5.78	5.02	3.88
Enhancing marketing and services	4.45	5.05	4.96	3.64
Business diversification	4.04	3.23	4.00	4.81
Price Reduction	2.24	1.47	2.23	2.98
Increasing the investment in S. Korea, EU and U.S.	1.19	1.27	1.05	1.19
Others	0.29	0.31	0.20	0.31

Notes and Source: See Table 2-4-2.

Regardless of size, more firms focus on new export markets development as the main strategic move. Besides, medium and large firms were more oriented towards cost efficiency (14.31% and 15.52%), while small firms were more oriented towards quality enhancement (15.74%).

### (4) In Response to the Impact of Regional Economic Integration, the Types of Assistance Expected from the Government Are “Assistance in Developing Markets” and “Improving the Investment Environment in Taiwan”

17.95% of firms hoped that, in response to the impact of regional economic integration, the government would focus on “assistance in developing new markets,” followed by “improving the investment environment in Taiwan” (17.11%), “incentives for innovation and R&D” (10.77%), and so on (Table 2-4-12).

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Large enterprises were most eager for the government to take action in “improving the investment environment in Taiwan” (17.27%) to attract capital inflow and intensification of domestic development, while SMEs were most eager for the government to take action in “assistance in developing markets” to promote exports.

**Table 2-4-12 Areas Where Manufacturing Firms Hope the Government Will Take Action in Response to the Impact of East Asian Regional Economic Integration (Weighted)**

Unit: %

Item	2012	Large Enterprises	Medium-sized Enterprises	Small Enterprises
Assistance in developing new markets	17.95	15.32	19.02	19.91
Improving the investment environment in Taiwan	17.11	17.27	15.33	17.9
Assistance for innovation and R&D	10.77	12.04	10.22	9.83
Speeding up the cultivation of the talent industry needs	7.82	8.73	7.34	7.20
Speeding up the negotiation of FTAs with ASEAN member states	7.25	8.50	7.76	5.78
Negotiating the reduction of tariff barriers with key trading partners	7.05	7.68	7.55	6.18
Industry upgrading guidance	6.77	6.34	6.66	7.25
Trade finance deals	5.07	3.67	5.50	6.18
Export rebate	4.63	3.84	4.99	5.19
Relaxing restrictions on overseas investment	4.14	4.70	3.18	4.11
Speeding up trade in goods negotiation followed by ECFA	4.06	5.07	4.70	2.76
Support for affected industries	3.49	3.72	3.21	3.42
Incentives for brand establishment	2.37	2.17	2.85	2.30
Others	1.52	0.94	1.69	1.99

Notes and Source: See Table 2-4-2.

## V R&D Inputs of SMEs

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 clear understanding of the R&D inputs of the overseas operations of Taiwanese business enterprises, we will also analyze the original data from the “2012 Survey of the Operational Status of Taiwanese-Invested Businesses Operating Overseas”, implemented by the Investment Commission, Ministry of Economic Affairs, to provide a comprehensive picture.

### 1. National and Business Sector R&D Expenditure

#### (1) National R&D Expenditure

According to the data presented in the 2012 edition of “Taiwan's Indicators of Science and Technology”, in 2011 total R&D expenditure in Taiwan came to NT\$413,293 million, rising 4.64%

from 2010. 72.7% of this spending was in the business sector; 15.1% was undertaken by government; 11.9% 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 2-5-1).

**Table 2-5-1 R&D Expenditure by Sector, 2007-2011**

Unit: NT\$ millions

Item	2007	2008	2009	2010	2011
<b>All sectors</b>	331,386	351,405	367,174	394,960	413,293
Business sector	229,126	248,363	257,405	282,546	300,358
Public sector	60,643	58,928	61,587	63,020	62,546
Higher education sector	40,400	42,905	46,823	47,970	48,978
Non-profit sector	1,218	1,209	1,359	1,424	1,410

Source: National Science Council, Executive Yuan, Indicators of Science and Technology, 2012.

## (2) R&D Spending in the Business Sector

Within the business sector, manufacturing industry accounted for the largest share of overall R&D spending in 2011, approximately NT\$279,000 million, representing 92.89% of all business sector R&D expenditure. The share held by the service sector was 6.84%; the combined total for all other industries (including electric power and gas, water supply, pollution prevention and construction) was just 0.27%. As a rule, manufacturing firms (and particularly those in hi-tech industries) have to invest far more in R&D to remain competitive than firms in the service sector or other industries.

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\$229,126 million in 2007 to NT\$300,358 million in 2011 (an annual growth rate of 6.22%). The business sector's share of overall national R&D expenditure had also increased over the same period, from 69.1% to 72.7%. Among all sectors, the growth in business sector R&D expenditure was the highest.

Total R&D expenditure by SMEs (defined as enterprises with fewer than 200 employees) had risen for three years in a row from 2008 to 2010, with a growth rate of 17.17% in 2008, 2.05% in 2009 and 4.46% in 2010. However, it was down 6.19% in 2011. R&D spending by large enterprises had risen consistently from 2008 to 2011, with a growth rate of 6.68% in 2008, 3.98% in 2009, 10.89% in 2010, and 8.78% in 2011. The growth rates of R&D expenditure of large firms in recent three years (2009-2011) were significantly higher than the corresponding growth rates of SMEs (Table 2-5-2).

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**Table 2-5-2 Business Sector R&D Expenditure by Enterprise Size, 2007–2011**

Unit: NT\$ millions

Item	2007	2008	2009	2010	2011
<b>Total</b>	229,126	248,363	257,405	282,546	300,358
SME sub-total	37,437	43,864	44,764	46,759	43,865
0 - 99 employees	19,140	23,200	23,600	23,115	23,431
100 - 199 employees	18,297	20,664	21,164	23,644	20,434
Large enterprises sub-total	191,690	204,498	212,640	235,787	256,493
200 – 499 employees	31,614	36,039	35,401	38,530	40,889
500 or more employees	160,076	168,459	177,239	197,257	215,604

Source: National Science Council, Executive Yuan, Indicators of Science and Technology, 2012.

## 2. R&D Expenditure by Taiwanese Enterprises' Overseas Operations

### (1) R&D Expenditure by the Parent Companies of Taiwanese-Invested Enterprises Operating Overseas

Table 2-5-3 is based on the original data from the “2012 Survey of the Operational Status of Taiwanese-Invested Businesses Operating Overseas” undertaken by the Investment Commission, Ministry of Economic Affairs. 2010 average R&D expenditure by large enterprises with overseas operations was NT\$291.52 million, 6.17 times the average R&D spending of SMEs (NT\$47.2 million); 2011 average R&D expenditure by large enterprises with overseas operations was NT\$438.98 million, 3.22 times the average R&D spending of SMEs (NT\$136.23 million). Overall, the average large and SME R&D expenditure had grown significantly, with average SME R&D expenditure rising even faster (Table 2-5-3).

**Table 2-5-3 R&D Expenditure by the Parent Companies of Taiwanese-Invested Enterprises Operating Overseas in 2011**

Units: enterprises; NT\$ ten thousand; %

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	531	2,047,741.85	455	43,898.01	2.14
SMEs	243	174,812.29	135	13,623.04	7.79

Note: 1. The number of large enterprises is 445 and no. of SMEs is 135 at the average annual R&D expenditure and average annual R&D expenditure as a % of annual sales revenue.

2. The number of its regular employees in SMEs is less than 200; the number of its regular employees in large enterprises is equal to or more than 200.

Source: Investment Commission, Ministry of Economic Affairs, 2012 Survey of the Operational Status of Taiwanese-invested Businesses Operating Overseas.

## (2) Allocation of R&D Expenditure by the Parent Companies of Taiwanese-Invested Enterprises Operating Overseas

The data can be broken into Taiwan-based and overseas-based R&D spending. From 2010 to 2011, the overseas-based R&D expenditure of large enterprises rose sharply from 3.91% to 18.00%, while the overseas-based R&D expenditure of SMEs remained stable from 13.86% to 13.60%. These data show that Taiwanese enterprises kept their R&D mostly in Taiwan with large firms significantly increasing share of overseas-based R&D, albeit from a low base (Table 2-5-4).

**Table 2-5-4 Domestic Operation and Overseas Operation Shares of the Total R&D Expenditure of Taiwanese Companies Investing Overseas, 2010- 2011**

Unit: %

Enterprise Size	Item	Share of Total Annual Sales Revenue		Share of Total Annual R&D Revenue	
		2010	2011	2010	2011
Large enterprises	Taiwan-based operations	67.54	58.26	96.09	82.00
	Overseas operations	32.46	41.74	3.91	18.00
SMEs	Taiwan-based operations	68.84	67.79	86.14	86.40
	Overseas operations	31.16	32.21	13.86	13.60

Note: 1. The number of large enterprises is 529 and no. of SMEs is 230 at the share of total annual sales revenue.

2. The number of large enterprises is 449 and SMEs is 133 at the share of total annual R&D revenue.

3. The number of its regular employees in SMEs is less than 200; the number of its regular employees in large enterprises is more than 200.

Source: Investment Commission, Ministry of Economic Affairs, 2012 Survey of the Operational Status of Taiwanese-invested Businesses Operating Overseas.



# CHAPTER 3

## Financial and Funding Analysis 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. In Section I and II, we presents an overview of the financial status of Taiwan's SMEs as well as ratio analysis, using business income tax return data for 2011 provided by the Tax Data Center, 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. In Section III, we examine the interaction between SMEs and the banking sector, using survey data from the Financial Supervisory Commission.

### I Overall Financial Analysis of SMEs

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

#### 1. Asset Allocation Analysis

##### (1) Current Assets Rose Substantially While Current Liabilities Remained Stable in 2011, Showing Ample Liquidity Strength

As can be seen from Table 3-1-1, current assets of both large enterprises and SMEs rose substantially in 2011. For large enterprises the share of total assets accounted for by current assets increased by 7.93 percentage points in 2011 (compared to 2010) to 66.50%. For SMEs, this percentage increased by 7.37 percentage points, to 55.80%, showing ample liquidity strength. Cash share of total assets decreased by 1.22 percentage points in 2011 to 22.44% for large enterprises, while it increased by 3.13 percentage points to 20.77% for SMEs, reflecting the fact that SMEs managed liquidity well and were able to respond swiftly to severe macroeconomic challenges over the courses of the global financial crisis and the ensuing European debt crisis, Japan earthquake, and well publicized slowdown of emerging economies including China.

The inventories share of large enterprises' total assets was 8.21%, a full percentage point increase in 2011 compared to a mere 0.02 percentage points increase in 2010, reflecting macroeconomic challenges and tepid demand recovery. For SMEs, inventory share of total assets also rose 0.7 percentage points in 2011 after slight drop in 2010, reflecting similar pattern but showing more flexibility and swift adjustment capability as compared with their larger peers.

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**Table 3-1-1 Consolidated Financial Data for Taiwanese Enterprises, 2009–2011**

Unit: %

Item	Size / Year	SMEs			Large Enterprises		
		2009	2010	2011	2009	2010	2011
<b>Current assets</b>		50.38	48.43	55.80	60.54	58.57	66.50
Cash		20.14	17.64	20.77	23.88	23.66	22.44
Accounts receivable		11.48	11.83	15.74	26.32	26.09	34.38
Inventories		15.57	15.49	16.19	7.19	7.21	8.21
Advance payments		1.34	1.46	1.36	0.45	0.47	0.52
Other current assets		1.85	2.02	1.74	2.70	1.14	0.95
<b>Funds and long-term investments</b>		25.41	27.59	16.49	20.89	23.24	20.21
<b>Fixed assets</b>		21.00	20.75	25.10	14.13	13.91	10.76
Land and buildings		13.52	13.83	16.61	6.21	5.99	5.40
Machinery		6.35	5.69	7.22	7.09	6.82	4.70
Other fixed assets		1.13	1.23	1.28	0.83	1.10	0.67
<b>Intangible and other assets</b>		3.21	3.23	2.61	4.43	4.28	2.53
<b>Total assets = Liabilities + Net worth</b>		100.00	100.00	100.00	100.00	100.00	100.00
<b>Liabilities</b>		55.87	56.47	55.09	73.57	73.83	73.34
<b>Current liabilities</b>		46.94	47.54	47.34	54.07	53.01	64.72
Short-term loans		12.07	12.29	12.66	37.64	35.32	46.03
Accounts payable		12.77	13.44	14.09	8.46	8.48	9.76
Income received in advance		3.91	3.84	4.31	3.99	3.92	4.31
Other current liabilities		18.19	17.96	16.28	3.98	5.29	4.62
<b>Long-term liabilities</b>		7.22	7.39	6.46	9.40	13.04	5.14
Long-term loans repayable		5.10	5.61	6.02	5.65	5.90	3.20
Other long-term liabilities		2.12	1.79	0.45	3.75	7.15	1.95
Other liabilities		1.72	1.54	1.29	10.10	7.77	3.47
<b>Net worth</b>		44.13	43.53	44.91	26.43	26.17	26.66

Source: Ministry of Finance, Business Income Tax Return Data.

### (2) Guarded Optimism from SMEs Reflected in Much Lower Funds and Long-Term Investment Ratios

Long-term investments are investments undertaken by an enterprise for financial or operational reasons, where the investments are held over the long-term in forms of stocks, bonds, and so on, that the enterprise does not intend to convert into cash within one year. As can be seen from Table 3-1-1, for large enterprises, the long-term investments share of total assets declined by 3.03 percentage points in 2011 to 20.21%, combined with reduced share of fixed assets and sharp rise of account receivables, indicating caution and struggle in tough operation environment. For SMEs, long-term investments share dropped sharply by 11.10 percentage points to 16.49%, combined with increased investment in fixed assets and rise of account receivables, indicating guarded optimism in challenging environment.

### **(3) Rising 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 3.15 percentage points in 2011 to 10.76%. For SMEs, the fixed assets share rose by 4.35 percentage points to 25.10%, showing guarded optimism in business while keeping tight liquidity management.

## **2. Analysis of SME Financial Structure**

Examination of the asset allocation of SMEs showed that their current asset ratio rose substantially to 55.80% in 2011. Looking at the SMEs' debt structure as well can give a more comprehensive picture of the SMEs' overall financial status. In 2011, both SMEs' current liability ratio and liability ratio declined slightly to 47.34% and 55.09% respectively, showing financial stability.

### **(1) Slightly Lower Liabilities Ratios Showed Financial Health of SMEs**

As can be seen from Table 3-1-1, in 2011 the SMEs current liability ratio declined by 0.20 percentage points to 47.34%, while the large enterprises current liability ratio rose sharply by 11.71 percentage points to 64.72%. This disparity reflects the financial health of SMEs through swift adjustment and operational flexibility. Large enterprises tend to have difficulty adjusting quickly. A reference point is that majority of successful global firms including manufacturers and even cash rich high-tech ones such as Apple and Microsoft in advanced economies tends to use more long-term liabilities (funding) to (A) take advantage of current record low interest rates through new borrowing and refinance, and (B) reduce liquidity risk and financial volatility.

### **(2) A Decline in the Long-Term Liabilities Ratio**

In 2011, SMEs long-term liabilities ratio declined by 0.93 percentage points to 6.46%, while large enterprises long-term liabilities ratio fell sharply by 7.90 percentage points to 5.14%. Long-term liabilities represent debt that does not have to be repaid within one year, such as bonds payable and long-term bills payable. Most SMEs are family businesses that lack scale, financial transparency, and management skills. Financial institutions are often reluctant to lend to SMEs, hence low long-term liabilities ratio, reflecting inadequate capitalization. A noticeable change was the sharp drop of long-term liabilities ratio in large enterprises that suggested lagging adjustment or a much conservative stance in face of macroeconomic challenges. Overall speaking, in 2011, SMEs' lower liabilities and higher fixed assets investment indicate better financial health and guarded optimism toward slow global recovery, while large enterprises remained cautious.

## **3. Analysis of SMEs' Profit and Loss**

### **(1) Rising Profit with a Declining Operating Cost Ratio**

Regarding operating costs share of net operating income, operating costs of both large enterprises and SMEs declined continuously from 2009 to 2011. In 2011 the large enterprises' operating cost ratio fell by 2.23 percentage points to 87.48%, and the SMEs' operating cost ratio fell by 2.47 percentage points to 78.41%. As a result, both showed rising operating profit margin and net income (Table 3-1-2).

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**Table 3-1-2 Profit and Loss of Taiwanese Enterprises, 2009–2011**

Unit: %

Item	Size / Year	SMEs			Large Enterprises		
		2009	2010	2011	2009	2010	2011
Net operating income		100.00	100.00	100.00	100.00	100.00	100.00
Less: Operating costs		80.98	80.88	78.41	91.79	89.71	87.48
Gross operating profit		19.02	19.12	21.59	8.21	10.29	12.52
Less: Operating expenses		18.43	16.97	16.80	6.39	6.40	7.34
Net operating profit		0.59	2.14	4.79	1.82	3.89	5.19
Plus: Non-operating profit		1.86	2.51	1.48	1.90	2.10	1.99
Less: Interest expenses		1.10	0.83	0.37	1.47	1.34	1.43
Less: Other non-operating expenses		0.54	0.45	0.37	0.35	0.29	0.23
Current term profit (loss)		0.81	3.37	5.52	1.90	4.35	5.51

Source: Ministry of Finance, Business Income Tax Return Data.

### (2) Rising Profit with a Decline in the Operating Expense Ratio

The term “operating expenses” is used to refer to expenditure derived from an enterprise’s sales and management activities, including sales, management, and R&D expenses, and so on. A saving of one dollar in operating expenses represents an extra dollar in earnings for the enterprise. In an era of low profit margins for most firms in highly competitive environment globally, regionally and locally, the fastest way for an enterprise to boost its profit margin is to implement cost efficient initiatives. Regardless of size, firms need to constantly think of ways to cut costs and reduce operating expenses. The best firms in history with very long-term success share one constant which is that cutting cost becomes as natural as taking breath. The pronounced disparity between the operating expenses ratio of SMEs and that of large enterprises is mainly due to SMEs’ limited scale to reduce average cost and limited bargaining power to lower input cost as well as funding cost. Therefore, SMEs operation results often are highly sensitive to variable costs.

The SMEs’ operating expenses ratio continued the recent downward trend. In 2011, the ratio was 16.80%, falling slightly by 0.17 percentage points, which combined with lower operating costs (down 2.47 percentage points), resulted in sharp rise in net profit to 5.52%, a 2.15 percentage points improvement. On the contrary, large enterprises’ operating expenses ratio was 7.34%, up 0.94 percentage points in 2011, partly offsetting the benefit of lower operating costs (down 2.23 percentage points), resulting in net profit to 5.51%, a 1.16 percentage points improvement.

### (3) Continuous Rising Profit Showed Obvious Improvement and Resilience

As mentioned above, in 2011, SMEs’ current term profit rose sharply by 2.15 percentage points to 5.52%, and large enterprises’ current term profit increased by 1.16 percentage points to 5.51%. Continuous rising profit showed obvious improvement for both SMEs’ and large enterprises’ performances but especially SMEs’ remarkable resilience and flexibility in coping with highly challenging business environment.

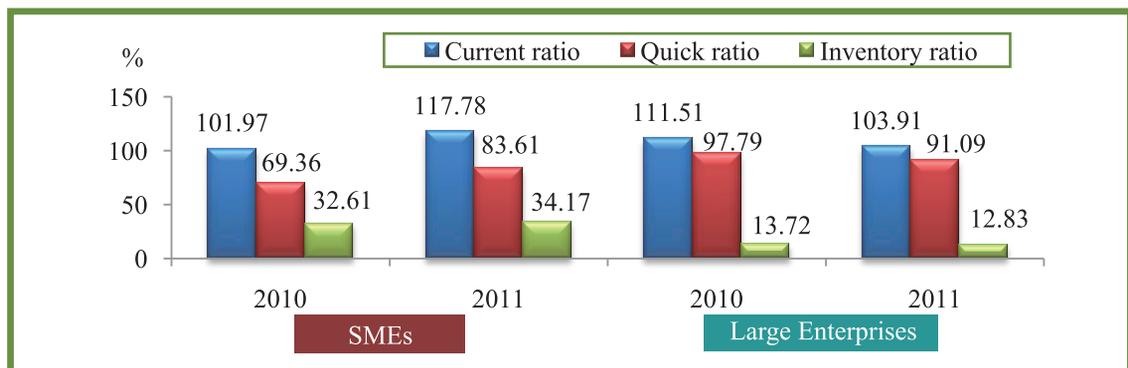
## II Analysis of SMEs' Financial Ratios

### 1. Short-Term Debt Servicing Ability Improved Substantially

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 in current liabilities (exception is that most consumer products companies with great brands and sustainable competitive advantage could maintain much lower current ratio due to superior cash generation capability, hence superior financial efficiency). The reference value for the quick ratio is 100%, indicating that the enterprise has NT\$1 of current assets that can be quickly converted to cash at close to their book values to repay every NT\$1 in current liabilities.

In 2011, large enterprises declined by 7.60 percentage points to 103.91%. The quick ratio fell by 6.70 percentage points to 91.09%, which was lower than the 100% reference value. The inventory ratio declined by 0.89 percentage points to 12.83%. These data show that the large enterprises' short-term repayment ability deteriorated. On the contrary, the current ratio of Taiwan's SMEs stood at 117.78% in 2011, a material increase of 15.81 percentage points from 2010, and the quick ratio also rose sharply by 14.28 percentage points to 83.61%. The inventory ratio rose by 1.56 percentage points to 34.71%. This truly is an encouraging sign as SMEs' financial health improved substantially in both absolute and relative bases under tough environment, though rising inventory level was a concern (Figure 3-2-1).

**Figure 3-2-1 Short-Term Liquidity of Taiwanese Enterprises, 2010 and 2011**



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.

### 2. An Improvement in Enterprises' Long-Term Stability

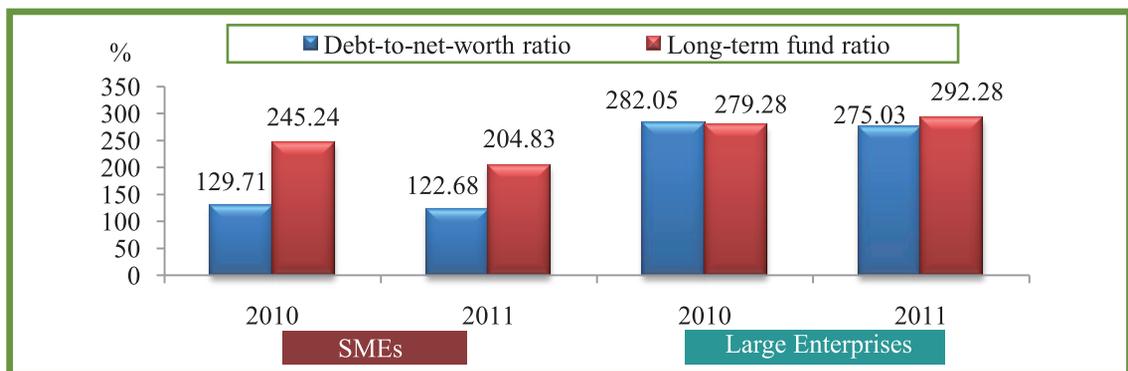
For the debt-to-net-worth ratio, a reference value of 100% is normally used, indicating that the enterprise has NT\$1 of capital available for every NT\$1 of debt. The higher the debt-to-net-worth ratio, the more heavily leveraged the enterprise is.

In 2011, the average debt-to-net-worth ratio of Taiwan's SMEs was 122.68%, down by 7.03 percentage points from 2010. For large enterprises, the debt-to-net-worth ratio in 2010 fell by 7.02 percentage points to 275.03% (Figure 3-2-2). The debt-to-net-worth ratios of both large enterprises and SMEs decreased in 2011, mainly due to the slowly recovered economy and relative conservative financial management. Large enterprises maintained high debt-to-net-worth ratios while SMEs were conservative in terms of the way they used financial leverage.

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 resorting to 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 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 fund 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 2011, the long-term funds ratios of both SMEs and large enterprises remained higher than the reference value of 100%, which is conducive to the maintenance of long-term stability by the enterprise. In 2011, the SMEs' long-term funds ratio fell by 40.41 percentage points to 204.83%, while the large enterprises' long-term funds ratio rose by 13.00 percentage points to 292.28%. 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.

**Figure 3-2-2 Long-Term Stability of Taiwanese Enterprises in 2010 and 2011**



Notes: 1. Debt-to-net-worth ratio = debt ÷ net worth × 100% (reference value = 100; ideally, the ratio should be below the reference value).

2. Long-term funds ratio = (equity + long-term debt) ÷ fixed assets × 100% (reference value = 100; ideally, the ratio should be above the reference value).

Source: Ministry of Finance, Business Income Tax Return Data.

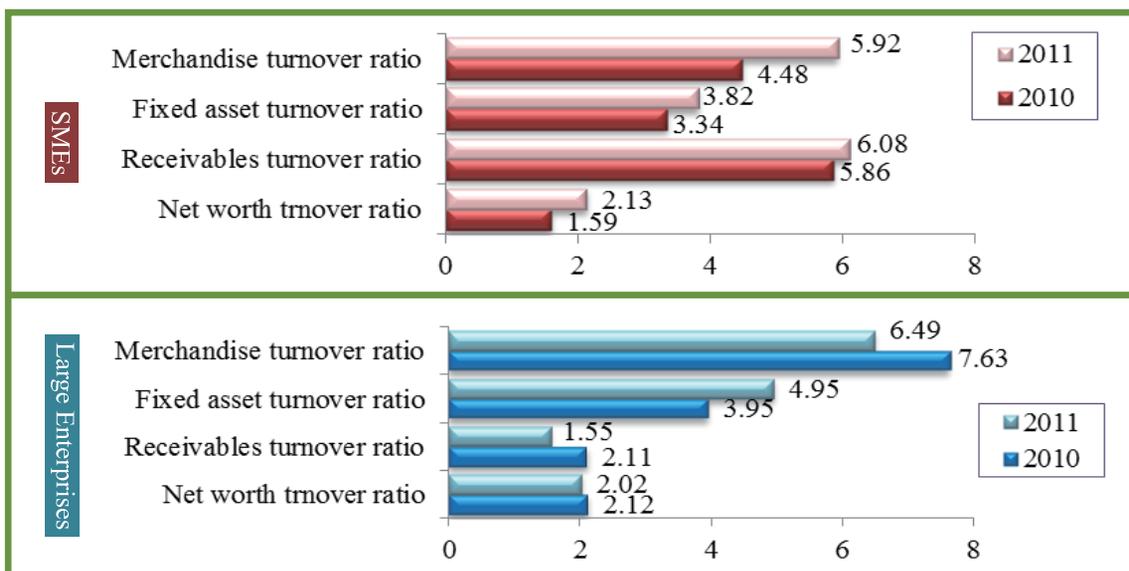
### 3. Continuous Improvement in Operational Efficiency

An enterprise's operational efficiency can be gauged by examining its efficient utilization of merchandise, fixed asset, and capital, as well as efficiency of collections. 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 ratio of net sales to net worth; if this figure is too high, it could imply that the enterprise has insufficient capital and is too aggressive; if it is too low, it may indicate that the firm has too much capital, or that its sales revenue is too low. Other things being equal, a company with a high net worth turnover rate is earning a greater rate of return on its net worth than a company with a low turnover rate.

Examination of the data for 2011 shows that receivables turnover for SMEs rose slightly to 6.08 from 5.86 in 2010, while merchandise turnover rose from 4.48 to 5.92; Receivables turnover for large enterprises was down to 1.55 from 2.11 in 2010, while merchandise turnover also fell from 7.63 to 6.49, suggesting that the SMEs' operating efficiency improved while that of the large enterprises deteriorated in 2011 (Figure 3-2-3).

Examination of the net worth turnover and fixed asset turnover indicators shows that, for SMEs, fixed asset turnover rose from 3.34 in 2010 to 3.82 in 2011, while net worth turnover rose from 1.59 to 2.13. For large enterprises, fixed asset turnover rose from 3.95 in 2010 to 4.95 in 2011, while net worth turnover declined slightly from 2.12 to 2.02. Both the SMEs' and the large enterprises' fixed asset turnover improved in 2011. It is clear that SMEs performed relatively better in net worth efficiency (Figure 3-2-3).

**Figure 3-2-3 Operating Capability of Taiwanese Enterprises in 2010 and 2011**



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.

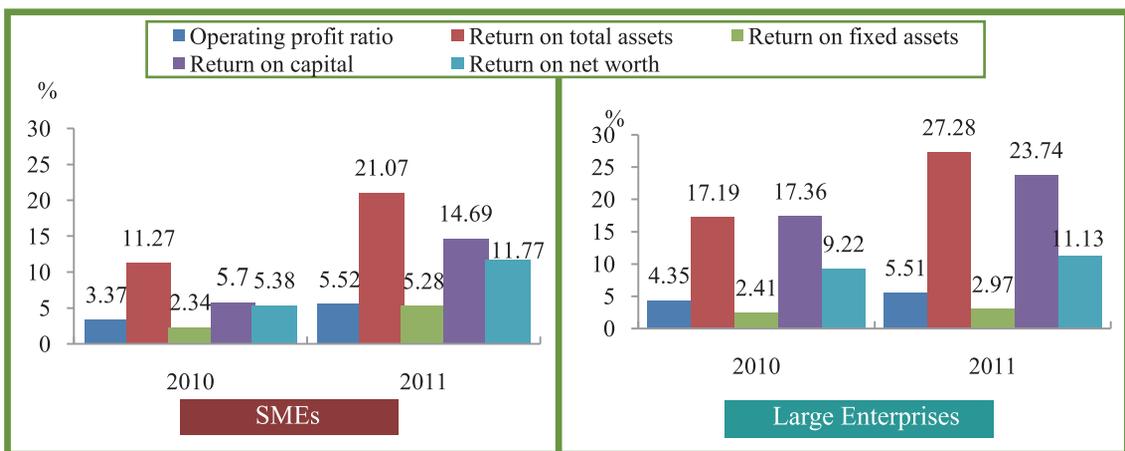
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To summarize, in face of sluggish recovery of global economy in 2011, the operating abilities of large enterprises and SMEs had gradually improved. Overall, SMEs performed better than the large enterprises.

### 4. Significant Increase in Profitability with Better Outlook

2011 saw an impressive improvement in SMEs' earnings performance, reflected in all profitability indicators – including operating profits, the return on total assets, return on fixed assets, return on capital, and return on net worth (Figure 3-2-4). Both SMEs and large enterprises had gradually recovered from the financial crisis and improved their financial performance across the broad indicating a brighter outlook. As can be seen from the comparison of SMEs and large enterprises in terms of their performance, the SMEs performed better than the large enterprises in terms of the operating profits, return on fixed assets, return on capital, and return on net worth, while the large enterprises were better than the SMEs with regard to the return on total assets.

**Figure 3-2-4 Profitability of Taiwanese Enterprises in 2010 and 2011**



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.

## III Financial Institutions and SME Financing

Funding is the lifeline of an enterprise, and this is particularly true for SMEs that typically lack adequate funds. Access to funds and efficient fund management are among the keys to the successful operation of SMEs.

The sources of SME finance are from internal organic growth and/or external funding such as private lending, commercial loans, bond or equity financing, and government programs.

## 1. An Increasing Diversification of Corporate Funding Sources

The trend towards diversification in financial services has been accompanied by a similar broadening of the funding channels available to business enterprises. However, SMEs and their owners tend to have insufficient knowledge of the range of financing tools that are now available, and in many cases they are unable to provide the comprehensive financial statements needed to secure direct financing. As a result, direct financing currently accounts for only a very small percentage of overall SME financing. According to the report “Results of the Survey of Business Funding in the R.O.C.” compiled by Taiwan’s Central Bank, in terms of the structure of their liabilities, large, medium-sized and small enterprises in Taiwan are all heavily reliant on borrowings from financial institutions and commercial credit (i.e., trading liabilities, mainly accounts payable and unearned receipts), accounting for 88% and 98% of the total debt in 2012 for large enterprises and SMEs respectively. Given the increasingly wide range of both direct financing and indirect financing tools that are now available, SMEs need to become more flexible and knowledgeable in their use of funding channels (Table 3-3-1).

**Table 3-3-1 Corporate Liability Structure as of the End of 2012**

Units: NT\$ billions; %

Item	Large Enterprises		Medium-sized Enterprises		Small Enterprises	
	Amount	Share	Amount	Share	Amount	Share
Total liabilities	173,102	100	4,357	100	1,014	100
Borrowings from financial institutions	7,018	40.54	1,972	45.27	449	44.28
Government loans	21	0.12	3	0.08	0	0.01
Borrowings from firms and individuals	271	1.56	43	0.98	14	1.38
Overseas borrowings	97	0.56	5	0.12	2	0.2
Transactions with repurchase clause	-	-	-	-	-	-
Short-term bills	399	2.3	13	0.29	0	0
Domestic corporate bonds	654	3.78	0	0	0	0
Overseas securities	132	0.76	-	-	-	-
Commercial credit (trading liabilities)	8,230	47.54	2,300	52.79	546	53.87
Provisions and other liabilities	489	2.83	21	0.48	3	0.25

Notes: 1. “-” denotes no data available or data uncertain; “0” is used to denote any figure of less than NT\$50 million.

2. Data may not sum to total due to rounding.

Source: Central Bank, Analysis of Direct and Indirect Financing Totals Presented in Results of the Survey of Business Funding for State-owned and Private-sector Enterprises in the R.O.C., Dec. 2012.

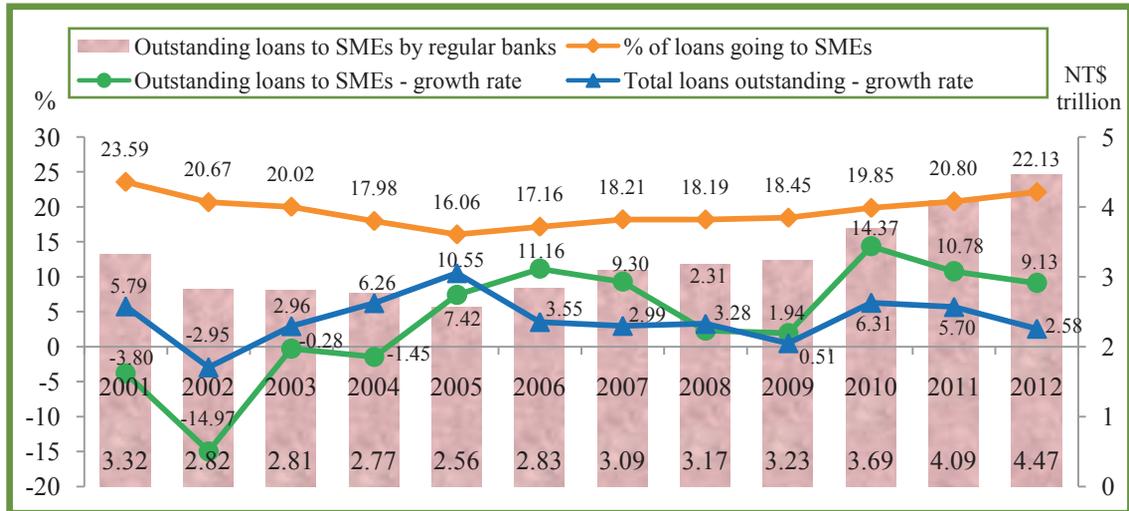
## 2. Continuous Increase in Total Bank Loans to SMEs in 2012

As of the end of 2012, the total outstanding loans of SMEs from ordinary commercial banks in Taiwan (including the Taiwan branches of foreign banks, but excluding overseas loans) came to NT\$4,465.5 billion, representing an increase of NT\$373.8 billion, up 9.13% compared to the end of 2011. The share of total loans going to SMEs rose slightly, to 22.13% in 2012 from 20.80% in 2011 (Figure 3-3-1). Financial Supervisory Commission data give the total volume of loans to SMEs by

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domestic banks as NT\$4,447.5 billion, accounting for 50.18% of loans to all business enterprises in 2012, and representing an increase of NT\$379.8 billion, compared to the 2011 total of NT\$4,067.8 billion; the SMEs' share of all bank loans rose by 3.37 percentage points.

**Figure 3-3-1 Changes in Bank Loans to SMEs by Regular Banks, 2001–2012**



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.

Both outstanding loans to SMEs (including overdue loans) by ordinary commercial banks and the share of total loans going to SMEs rose in 2012 compared to the end of 2011; the rate of growth of ordinary commercial banks' outstanding loans to SMEs, at 9.13%, was significantly higher than the overall growth rate of outstanding loans to all enterprises (2.58%).

### 3. State-Run Banks Accounted for the Most of the Loans to SMEs

The top 10 banks with loans outstanding to SMEs are mostly state-run banks, with the market share up to 73.64%. The reasons behind the phenomenon are that most state-run banks coordinated with the government policies, and 8 state-run banks accounted for 61.57% of total loans outstanding of all banks (including Taiwan branches of foreign banks) (Table 3-3-2).

In terms of the percentage of total loans going to SMEs in 2012, First Commercial Bank ranked first with 41.92% (NT\$523.5 billion) followed by Taiwan Cooperative Bank with 27.91% (NT\$484.8 billion).

**Table 3-3-2 Top 10 Banks by Amount of Loans to SMEs in 2012**

Units: NT\$ billions; %

Bank	Loans Outstanding	Market Share	Loans to SMEs as % of Total Loans
<b>Total</b>	<b>3,273,873</b>	<b>73.64</b>	<b>-</b>
First Commercial Bank	523,496	11.78	41.92
Taiwan Cooperative Bank	484,838	10.91	27.91
Taiwan Business Bank	374,169	8.42	41.60
Hua Nan Commercial Bank	366,218	8.24	29.24
Land Bank of Taiwan	314,457	7.07	18.42
Chang Hwa Commercial Bank	309,486	6.96	30.53
Mega International Commercial Bank	290,918	6.54	28.48
Bank of Taiwan	284,140	6.39	13.96
E. Sun Commercial Bank	188,767	4.25	28.01
Shanghai Commercial & Savings Bank	137,293	3.09	37.83

Source: Banking Bureau, Financial Supervisory Commission, Executive Yuan, Statistics of Banking Business, 2013.

#### 4. Private Banks Active in Lending to SMEs

Along with a wave of micro-enterprises and the introduction of various government measures of providing preferential loans to SMEs, private banks' SME loans increased substantially in 2012 as showed in Financial Supervisory Commission data. In terms of annual growth rate from 2011 to 2012, the top ten private banks saw SME loans growth between 21.5% and 343.4%, with loan balances between NT\$ 14.1billion and NT\$ 128.7 billion (Table 3-3-3).

**Table 3-3-3 Outstanding Loans to SMEs and Annual Growth Rate by the Private Banks in 2012**

Units: NT\$ billions; %

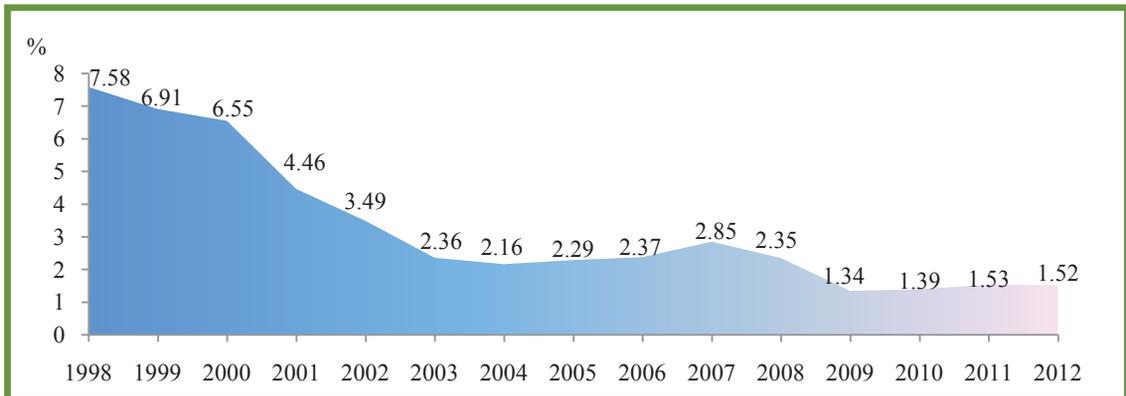
Bank	Outstanding Loans in 2012	Outstanding Loans in 2011	Annual Growth Rate
Ta Chong Bank	16.7	3.8	343.38
Sunny Bank	53.6	34.2	56.71
Shin Kong Commercial Bank	110	77.7	41.84
King's Town Bank	24.2	17.9	35.45
Far Eastern International Bank	14.1	10.6	33.07
Bank SinoPac	113	86.7	30.84
Chinatrust Commercial Bank	89.4	69.4	28.89
Taichung Commercial Bank	128.7	101	27.55
Taishin International Bank	66.6	54.6	21.91
JihSun International Commercial Bank	16.8	13.8	21.45

Source: Financial Supervisory Commission, Executive Yuan, The Statistics of Outstanding Loans to SMEs by Domestic Banks.

### 5. Cost of New Loans Steady in 2012

From June 2010 to July 2011, the Central Bank increases its benchmark discount rate five times from 1.250% to 1.875% in order to avoid economic overheating and counter rising inflation expectation. It has held the discount rate steady since then. The Central Bank data show that the average interest rate on new loans (weighted averages for the month of December in each year) 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 further to 2.85%. The average interest rate on new loans then fell back to 2.35% in 2008 and in 2009 it fell even further to 1.34% due to aggressive easing of the Central Bank amid global financial crisis and recession. The average interest rate on new loans remained steady in 2011 and 2012 at 1.53% and 1.52 respectively (Figure 3-3-2).

**Figure 3-3-2 The Average Interest Rate on New Loans Extended by Taiwan's Five Largest Banks, 1998–2012**



Notes: 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

## SME Human Resources

This chapter examines SME human resources utilization, working conditions, and talent development in 2012. An SME is defined as an enterprise with 200 or fewer regular employees in mining and quarrying, manufacturing, and construction industries, or an enterprise with 100 or fewer regular employees in other industries.

This chapter is divided into three sections. Section I examines labor utilization by SMEs; Section II looks into labor conditions in SMEs; Section III expresses SMEs' manpower cultivation.

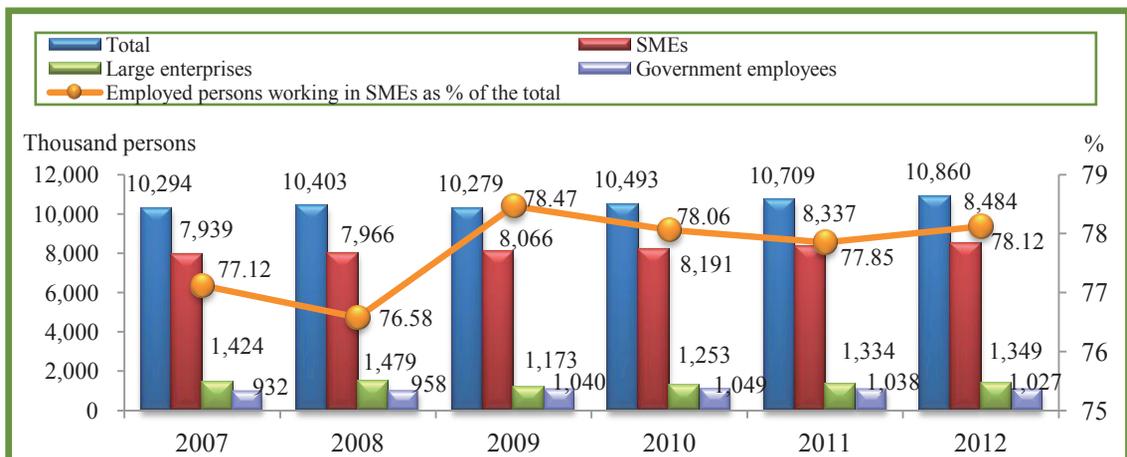
### I Labor Utilization by SMEs

In 2012, the workforce in Taiwan totaled 11,340,000 people, including 10,860,000 employed persons (including employers, own-account workers, paid employees and unpaid family workers) and 481,000 unemployed persons; the labor participation rate was 58.35%, and the unemployment rate averaged 4.24% over the course of the year. Due to the recovery of the global economy, the workforce increased by 140,000 and the number of employed persons rose by 151,000, while the number of unemployed persons declined by 10,000 in 2012. The following section examines SME labor utilization in 2012.

#### 1. The SME Sector Provided over 8,484,000 Jobs in 2012

In 2012 the number of employed persons working in SMEs in Taiwan totaled 8,484,000, which was 147,000 higher than the total of 8,337,000 in 2011, and accounted for 78.12% of all employed persons in Taiwan; large enterprises employed 14.42% and the government employed the remaining 9.46% (Figure 4-1-1).

Figure 4-1-1 No. of Employed Persons in Taiwan, 2007–2012



Source: DGBAS, Monthly Bulletin of Manpower Statistics.

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The number of employed persons working in SMEs in the manufacturing sector in 2012 stood at 2,171,000, accounting for 25.59% of all SME employees. The wholesaling and retailing industry had the second largest number of employed persons working in SMEs, 1,731,000 (20.40%), followed by the construction industry, with 826,000 (9.74%) (Table 4-1-1).

**Table 4-1-1 The Number of Employed Persons and Paid Employees Working in SMEs in 2011 and 2012**

Units: thousand persons; %

Industry \ Item/Year	No. of Employed Persons				No. of Paid Employees			
	2011	2012	Share of Total	Growth Rate	2011	2012	Share of Total	Growth Rate
<b>Total</b>	<b>8,337</b>	<b>8,484</b>	<b>100.00</b>	<b>1.76</b>	<b>5,958</b>	<b>6,122</b>	<b>100.00</b>	<b>2.75</b>
Agriculture, forestry, fisheries and animal husbandry	536	538	6.34	0.37	78	79	1.29	1.28
Mining and quarrying	3	4	0.05	33.33	3	3	0.05	0.00
Manufacturing	2,158	2,171	25.59	0.60	1,895	1,919	31.35	1.27
Electric power and gas	3	3	0.04	0.00	3	3	0.05	0.00
Water supply and pollution control	32	36	0.42	12.50	23	27	0.44	17.39
Construction	813	826	9.74	1.60	676	690	11.27	2.07
Wholesaling and retailing	1,696	1,731	20.40	2.06	992	1,041	17.00	4.94
Transportation and warehousing	296	302	3.56	2.03	204	217	3.54	6.37
Hotel and restaurant	709	731	8.62	3.10	409	433	7.07	5.87
Information, communications and broadcasting	156	165	1.94	5.77	142	149	2.43	4.93
Finance and insurance	321	323	3.81	0.62	317	318	5.19	0.32
Real estate	83	85	1.00	2.41	74	76	1.24	2.70
Professional, scientific and technical services	270	274	3.23	1.48	199	199	3.25	0.00
Supporting services	227	237	2.79	4.41	204	213	3.48	4.41
Educational services	226	230	2.71	1.77	195	195	3.19	0.00
Medical, healthcare and social welfare services	203	216	2.55	6.40	171	182	2.97	6.43
Arts, entertainment and leisure services	75	76	0.90	1.33	53	54	0.88	1.89
Other service industries	528	534	6.29	1.14	319	321	5.24	0.63

Notes: Data for 2011 and 2012 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.

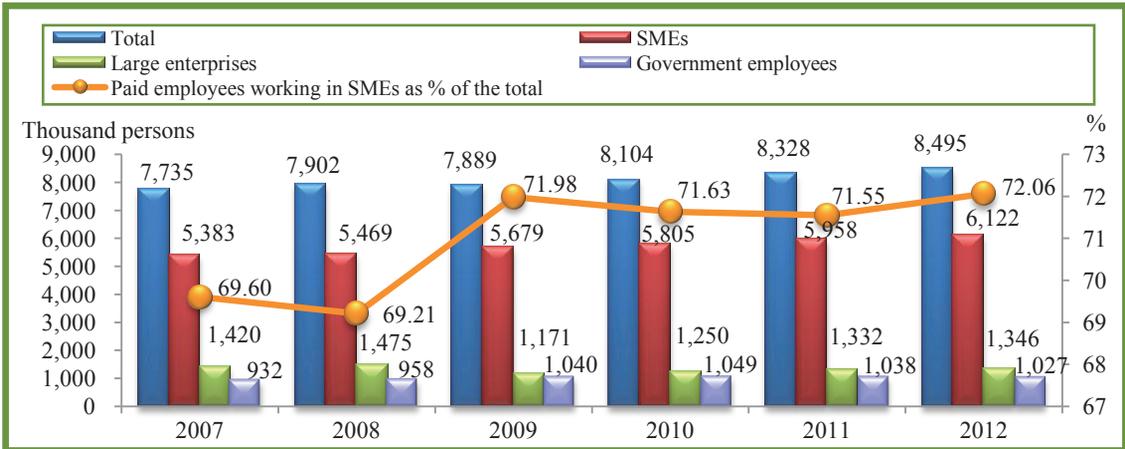
Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2011 and 2012.

## 2. A Total of 6,122,000 Paid Employees Working for SMEs in 2012

The total number of paid employees in Taiwan averaged 8,495,000 in 2012 (including government employees and private company employees), representing an increase of 167,000 (up 2.01%)

compared to 2011; of the total paid employees, 6,122,000 or 72.06% were working in SMEs compared to 71.55% in 2011 (Figure 4-1-2). The number of paid employees working in SMEs in the manufacturing sector in 2012 stood at 1,919,000, accounting for 31.35% of all paid employees working in SMEs, followed by wholesaling and retailing industry, at 1,041,000 (17.01%), and construction industry, at 690,000 (11.27%) (Table 4-1-1).

**Figure 4-1-2 No. of Paid Employees in Taiwan, 2007–2012**



Source: DGBAS, Monthly Bulletin of Manpower Statistics.

### 3. The Share of SMEs' Manpower with University Education Increased Gradually

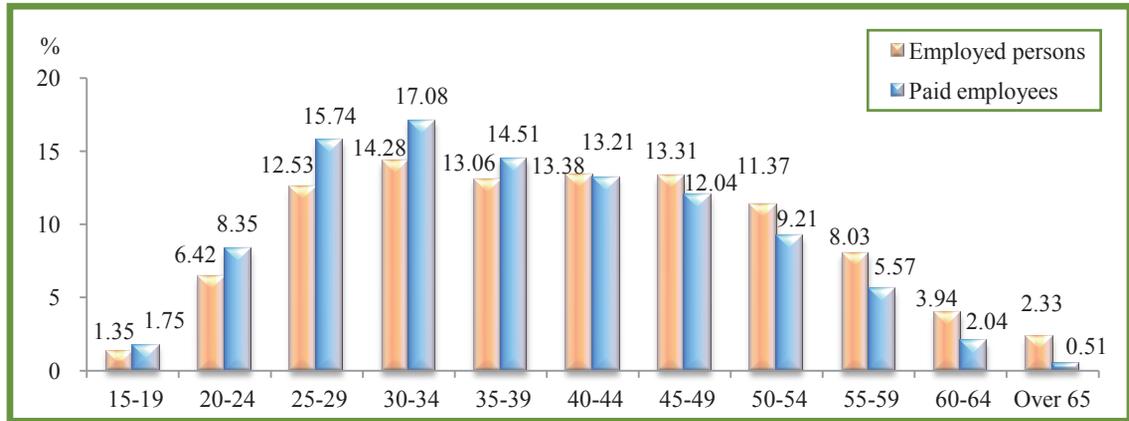
In 2012, employed persons working in SMEs were mainly between the ages of 30 and 34, with the proportion up to 14.28%, followed by those between 40 and 44, and those between 45 and 49. Paid persons working in SMEs were also mainly between the ages of 30 and 34, with the proportion up to 17.08%, followed by those between 25 and 29, those between 35 and 39, and afterwards, the more aged group, the lower the proportion (Figure 4-1-3).

The male to female ratio of employed persons or paid employees in SMEs was greater than one, which shows that employment continues to be male-dominated (Figure 4-1-4).

As can be seen from the educational structure, the highest proportion of employed persons (paid persons) working in SMEs consisted of those with a vocational education in 2012 at 27.91% (28.22%), though down a slight -0.25 (-0.20) percentage points compared with 2011. The share of those with a university education gradually increased and was consistent with Taiwan's higher education expansion policy. The share of employed (paid) employees working in SMEs with a university education in 2012 was 18.74% (22.43%), up 1.05 (0.95) percentage points compared with 2011 (Figure 4-1-5).

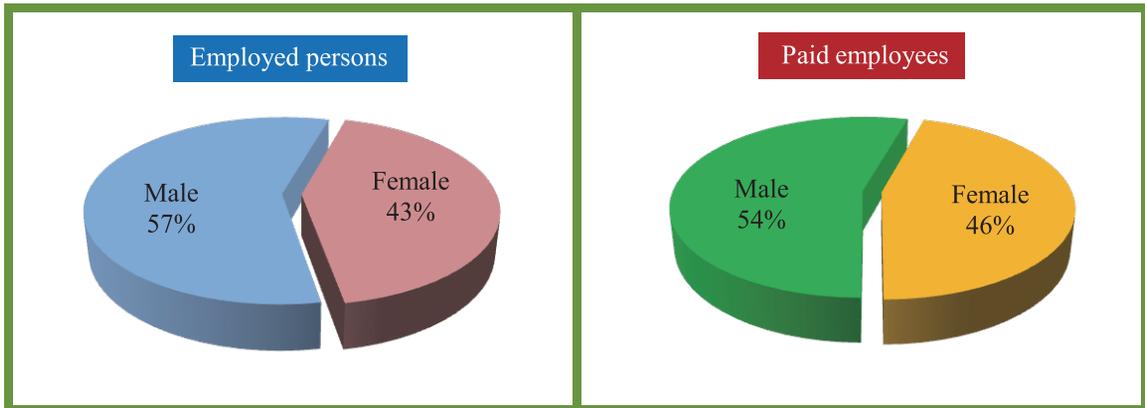
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**Figure 4-1-3 The Age Structure of Employed Persons and Paid Employees Working in SMEs in 2012**



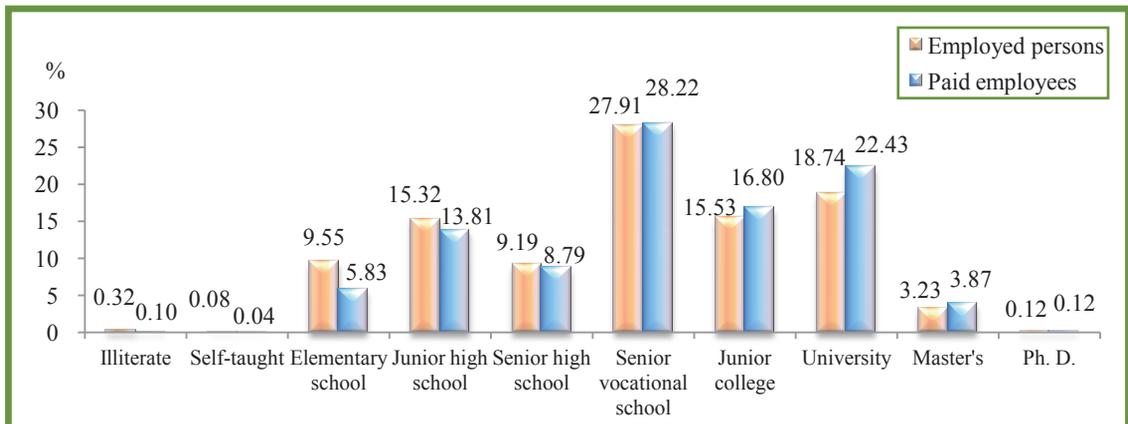
Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2012.

**Figure 4-1-4 The Sex Structure of Employed Persons and Paid Employees Working in SMEs in 2012**



Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2012.

**Figure 4-1-5 The Educational Structure of Employed Persons and Paid Employees Working in SMEs in 2012**



Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2012.

## 4. The Number of SME Employers down by 4,000 in 2012

There were around 474,030 SME employers in Taiwan in 2012, and approximately 1,830 large enterprise employers. The number of SME employers declined by about 4,000 or -0.90% in 2012 while the number of large enterprise employers rose by 210 or 12.96%. Clearly SMEs often suffer the most in challenging environment especially for weaker ones in terms of survival, as shown in 2012. The age structures of SME employers showed that they were younger than large enterprise employers, and the educational structure distribution was broader, with only 21% having university or higher education vs. over 50% of large enterprise employers (Table 4-1-2).

**Table 4-1-2 Characteristics of Employers in 2011 and 2012**

Units: thousand persons; %

Item \ Year	2011		2012	
	SMEs	Large Enterprises	SMEs	Large Enterprises
<b>No. of Persons</b>	478.33	1.62	474.03	1.83
<b>Share</b>	99.66	0.33	99.61	0.39
<b>Age</b>	100.00	100.00	100.00	100.00
15 – 19	0.02	—	0.03	—
20 – 24	0.20	—	0.32	—
25 – 29	2.23	—	2.05	—
30 – 34	6.47	—	5.87	4.38
35 – 39	11.98	4.07	9.73	1.92
40 – 44	17.02	7.28	16.44	19.20
45 – 49	20.32	9.32	19.52	17.05
50 – 54	19.85	19.41	19.92	25.36
55 – 59	13.33	28.70	15.24	4.98
60 – 64	5.58	19.28	7.39	12.55
Over 65	2.99	11.94	3.50	14.57
<b>Sex</b>	100.00	100.00	100.00	100.00
Male	80.90	86.82	80.70	74.92
Female	19.10	13.18	19.30	25.08
<b>Education</b>	100.00	100.00	100.00	100.00
Illiterate	0.06	—	0.05	—
Self-taught	0.04	—	0.02	—
Elementary school	7.94	—	7.68	—
Junior high school	15.39	9.81	14.60	15.97
Senior high school	10.37	7.38	9.81	7.75
Senior vocational school	26.63	—	27.16	—
Junior college	19.31	21.48	19.44	25.79
University	16.35	33.07	16.83	29.42
Master's	3.50	18.91	4.05	16.42
Ph.D.	0.41	9.34	0.36	4.66

Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2011 and 2012.

### 5. A Decline in the Number of Self-Employed Persons

The self-employed either work alone or as part of a partnership, but they do not have any paid employees. Self-employed persons can thus all be classified as SMEs. The number of self-employed persons in Taiwan peaked in 1991–1992 at around 1,572,000, and then declined consistently, dropping to 1,319,000 in 2012, down around 4,000 from 2011. As can be seen from the age structure, the shares of self-employed in the 40-59 age group is about 63% in 2012, and about 53% at or over 50 years old, much more aged than average SMEs employers excluding the self-employed (Table 4-1-3).

**Table 4-1-3 Characteristics of Self-Employed Persons in 2011 and 2012**

Units: thousand persons; %

Item	Year	
	2011	2012
<b>No. of Persons</b>	1,323	1,319
<b>Age</b>	100.00	100.00
15 – 19	0.07	0.06
20 – 24	0.67	0.55
25 – 29	2.77	2.86
30 – 34	5.91	5.61
35 – 39	8.38	8.26
40 – 44	14.20	13.37
45 – 49	17.10	16.46
50 – 54	17.15	17.56
55 – 59	15.43	15.48
60 – 64	9.42	10.67
Over 65	8.89	9.13
<b>Sex</b>	100.00	100.00
Male	74.20	74.59
Female	25.80	25.41
<b>Education</b>	100.00	100.00
Illiterate	1.12	1.03
Self-taught	0.24	0.24
Elementary school	24.25	23.97
Junior high school	22.69	21.87
Senior high school	9.75	10.33
Senior vocational school	25.71	24.94
Junior college	9.73	10.16
University	5.45	6.39
Master's	1.02	1.01
Ph.D.	0.06	0.05

Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2011 and 2012.

## 6. There Were about 427,000 Female SME Owners and Self-Employed Persons in 2012

There were 91,469 female SME owners in Taiwan in 2012, which accounted for 19.30% of SME employers overall, representing a decline of 534 (-0.58%) compared to 2011. There were 335,191 female self-employed persons, which accounted for 25.41% of self-employed persons overall, representing a decrease of 6,255 (-1.83%). Overall, the combined total for female SME owners and female self-employed persons in 2012 was 426,670 persons, reflecting a decrease of 6,789 (-1.57%) persons compared with 2011; its share of all SME owners and self-employed persons was 23.08%, down from 24.06 in 2011.

Despite the wholesaling and retailing industry being the first priority for SMEs owners and self-employed persons, female SME owners are highly concentrated in the next four industries: hotel and restaurant, followed by the other service, manufacturing, and education service. The female self-employed is highly concentrated in the next four industries, i.e. other service, followed by hotel and restaurant, agriculture, forestry, fisheries and animal husbandry, and technical service. Overall, the choice of the female self-employed is quite different from that of female SMEs owners.

## 7. Temporary and Contract Workers Increased in SMEs

According to the data presented in the 2012 Taiwan Region Manpower and Employment Survey, there was a substantial increase of 171,000 full-time workers in SMEs, but a decrease of 11,000 in large enterprises. The part-time workers in SMEs also rose sharply by 353,000, while in large enterprises the part-time manpower rose only by 1,000. Overall, the share of part-time workers stabilized at around 4% in SMEs but below 2% in large enterprises.

The utilization of part-time workers is most common in the SMEs in service sector, especially in the wholesaling and retailing industry, followed by the hotel and restaurant industry.

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

2012 saw an increase in both the number of applications to employ foreign laborers and the number of foreign laborers actually working in Taiwan. The number of approvals rose to 260,308, up around 10,000 from 2011, while the number of foreign laborers actually working in Taiwan increased to 233,572, up 14,000. In terms of the size of enterprises that employ foreign laborers, the rise in the number of foreign laborers in 2012 was attributable to SMEs, where the number of foreign laborer approvals rose to 157,221 for SMEs, while the number of foreign laborer approvals by large enterprises declined to 103,087 (down 4,772). Similarly, the number of foreign laborers actually in Taiwan and working for large enterprises decreased slightly in 2012, while the number of foreign laborers in Taiwan and working for SMEs rose by 16,000, reaching a record high 59.6% of all foreign labors working in Taiwan. The result might be due to the adjustment of the domestic allowance allocation policy starting in 2009 which enabled SMEs to hire foreign laborers more easily.

### 9. SMEs Contributed to the Reduced Unemployment Rate

In 2012, the number of unemployed persons in Taiwan fell by approximately 10,000 and the unemployment rate fell to 4.24% (from 4.39%) compared to 2011. Despite the first time job-seekers, the number of unemployed persons who had previously been working for SMEs fell from 327,350 in 2011 to 318,040 in 2012, while the number of unemployed who had previously been working for large enterprises declined from 37,260 to 35,190 (Table 4-1-4).

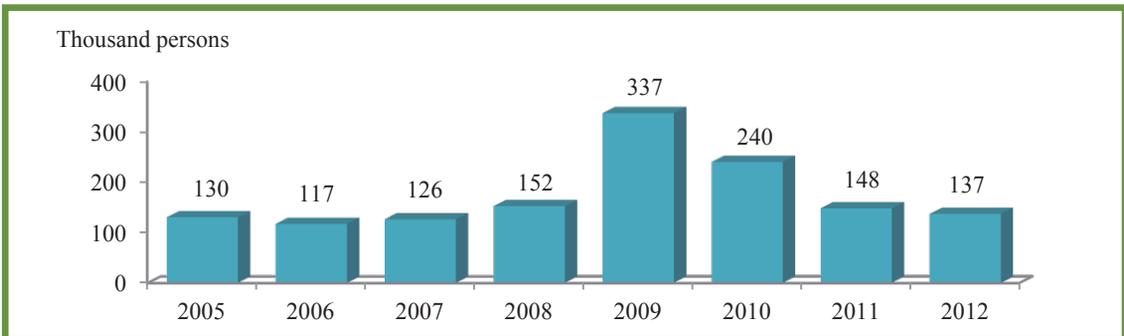
The number of unemployed due to the layoffs or employers going out of business declined to 137,000, down 7.43% compared to 2011 (Figure 4-1-6). The decline was consistent for SMEs, large enterprises and government departments. However, the dissatisfaction with previous jobs increased significantly, a phenomenon probably related to the recovery from the financial crisis (Table 4-1-5).

**Table 4-1-4 Characteristics of the Unemployed in 2011 and 2012**

Units: thousand persons; %

Item \ Year	2011				2012			
	SMEs	Large Enterprises	Government Employees	First time job-seekers	SMEs	Large Enterprises	Government Employees	First time job-seekers
<b>No. of Persons</b>	327.35	37.26	26.39	100.15	318.04	35.19	22.02	105.35
<b>Share</b>	66.65	7.59	5.37	20.39	66.18	7.32	4.58	21.92
<b>Age</b>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
15 – 19	1.67	0.55	0.20	9.80	2.01	0.43	0.20	6.34
20 – 24	10.91	13.36	6.69	50.66	11.18	13.28	5.73	55.33
25 – 29	19.82	28.81	21.64	30.23	18.92	28.13	26.80	30.17
30 – 34	17.39	19.49	11.99	6.49	18.16	20.65	15.48	5.76
35 – 39	12.55	11.62	9.99	1.55	13.76	11.74	8.84	1.71
40 – 44	11.59	10.96	11.75	0.73	11.11	10.84	11.16	0.40
45 – 49	11.45	6.16	15.20	0.13	10.32	6.80	9.66	0.20
50 – 54	8.03	5.45	12.25	0.19	7.76	5.14	10.38	0.03
55 – 59	5.15	3.09	6.87	0.17	4.93	1.95	7.71	0.05
60 – 64	1.38	0.50	3.21	0.03	1.75	0.99	3.78	—
65 or over	0.05	—	0.21	0.02	0.09	0.04	0.26	—
<b>Sex</b>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Male	63.36	57.37	51.26	54.71	62.39	58.44	49.52	53.07
Female	36.64	42.63	48.74	45.29	37.61	41.56	50.48	46.93
<b>Education</b>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Illiterate	0.03	—	0.02	0.02	0.03	—	—	0.01
Self-taught	0.02	0.03	—	—	0.01	0.02	—	—
Elementary school	6.20	2.01	7.53	7.53	5.82	1.24	7.95	0.17
Junior high school	16.79	4.64	14.20	14.20	16.97	4.75	9.44	3.86
Senior high school	10.31	6.52	6.25	6.25	10.10	5.50	6.37	6.53
Senior vocational school	31.72	24.27	19.88	19.88	29.43	25.87	18.65	12.25
Junior college	13.95	21.56	14.12	14.12	13.68	19.81	11.55	6.16
University	19.06	33.60	32.13	32.13	21.69	33.41	36.28	59.24
Master's	1.90	7.17	5.62	5.62	2.23	8.98	9.51	11.69
Ph.D.	0.02	0.19	0.26	0.26	0.05	0.42	0.25	0.09

Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2011 and 2012.

**Figure 4-1-6 No. of Workers Becoming Unemployed Because of Layoffs or Factory Closures, 2005–2012**

Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2005–2012.

**Table 4-1-5 Reasons Given for Leaving One's Previous Job in 2011 and 2012**

Units: thousand persons; %

Item	Year	2011			2012		
		SMEs	Large Enterprises	Government Employees	SMEs	Large Enterprises	Government Employees
<b>No. of persons</b>		327.35	37.26	26.39	318.04	35.19	22.02
Layoffs, or employer went out of business		41.05	30.59	7.70	39.21	28.73	8.95
Dissatisfaction with previous job		41.68	54.43	13.41	43.55	54.85	19.44
Poor state of health		2.58	3.96	0.98	2.85	2.81	1.32
Previous job was seasonal or temporary work		10.50	7.58	70.63	10.67	7.42	61.35
Marriage or pregnancy (women)		0.85	0.32	1.41	0.55	1.99	0.91
Retirement		0.28	1.15	3.34	0.36	0.68	4.68
Needed to devote self to housework		1.18	1.04	0.46	1.17	0.94	1.00
Other		1.89	0.92	2.07	1.64	2.64	2.36

Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2011 and 2012.

## 10. A Decrease of around 25,000 in the Number of SME Employees Changing Jobs

In 2012, a total of 507,000 SME employees changed jobs. This figure was about 25,000 lower compared to 2011. The rate of those taking up a position with another SME was the highest. Only 12% took a job in the government or a large enterprise. The figure suggests that it is not easy for former SME employees to find jobs in large enterprises or public sector (Table 4-1-6).

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**Table 4-1-6 Choice of New Employer by Former SME Employees, 2006–2012**

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	No. of Persons	Share	No. of Persons	Share
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	518	472	91.14	24	4.69	22	4.17
2010	536	471	87.80	42	7.82	23	4.38
2011	532	461	86.75	48	9.03	22	4.22
2012	507	444	87.60	46	8.98	17	3.42

Note: \* Data since 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, 2006–2012.

### 11. The Government Has Been Active to Encourage Entrepreneurship

In 2012, the Council of Labor Affairs held Introduction to Entrepreneurship classes that were attended by a total of 7,700 people, Intermediate Entrepreneurship classes that were successfully completed by 4,252 people, and Advanced Entrepreneurship classes that were attended by 1,232 people, giving a combined total of 13,184 participants (Table 4-1-7). The Council provided business start-up consulting services to 4,689 people, of which 2,008 succeeded in establishing their own businesses, creating a total of 5,176 jobs (Table 4-1-8).

**Table 4-1-7 Entrepreneurship Classes Organized by the Council of Labor Affairs, 2007-2012**

Unit: persons

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	8,940	5,050	1,822	15,812	
2010	8,000	4,601	1,285	13,886	
2011	Male	2,743	1,180	402	4,325
	Female	5,218	2,840	961	9,019
	Sub-total	7,961	4,020	1,363	13,344
2012	Male	2,700	1,370	388	4,458
	Female	5,000	2,882	844	8,726
	Sub-total	7,700	4,252	1,232	13,184
<b>Total</b>	<b>48,200</b>	<b>22,484</b>	<b>8,945</b>	<b>79,629</b>	

Source: Council of Labor Affairs, Executive Yuan.

**Table 4-1-8 Results Achieved in the Provision of Business Startup Assistance by the Council of Labor Affairs, 2007-2012**

Unit: persons

Year	No. of Persons Receiving Guidance	No. of Persons Helped to Start Their Own Business	No. of New Jobs Created (including business owners)
Mar. – Dec. 2007	2,024	1,276	2,983
2008	2,693	1,168	2,819
2009	4,016	2,149	6,494
2010	5,916	1,715	5,328
2011	4,661	1,867	5,235
2012	4,689	2,008	5,176
<b>Total</b>	<b>23,999</b>	<b>10,183</b>	<b>28,035</b>

Source: Council of Labor Affairs, Executive Yuan.

## II Labor Conditions in SMEs

### 1. The Personnel Costs as a Percentage of Operating Costs or Operating Expenses in 2011 Declined in Most Industries for SMEs

An enterprise's operating costs are the sum of business costs and operating expenses, which include personnel costs. As the 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 2011, most industries saw increased operating expenses but salaries did not follow accordingly. As such, the personnel costs as a percentage of operating costs or operating expenses in 2011 declined in most industries, especially for SMEs. For SMEs, the personnel costs as a percentage of operating expenses declined for all industries except manufacturing, information, communications and broadcasting, finance and insurance, and other service in 2011 (Table 4-2-1).

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**Table 4-2-1 Personnel Costs as a Percentage of Operating Costs and Operating Expenses in 2010 and 2011**

Unit: %

Item \ Year	Personnel Costs as a Percentage of Operating Expenses				Personnel Costs as a Percentage of Operating Costs			
	SMEs		Large Enterprises		SMEs		Large Enterprises	
	2010	2011	2010	2011	2010	2011	2010	2011
Agriculture, forestry, fisheries and animal husbandry	32.01	28.77	37.25	34.80	4.89	3.47	5.74	4.03
Mining and quarrying	16.71	15.56	32.61	7.71	2.84	2.36	2.21	1.59
Manufacturing	32.88	33.65	23.54	22.34	3.84	4.69	1.51	1.44
Electric power and gas	32.00	20.82	46.37	48.45	8.80	5.82	1.43	1.56
Water supply and pollution prevention	27.65	24.17	55.21	56.68	8.39	7.27	4.77	5.77
Construction	38.39	35.52	47.61	50.99	5.03	4.70	2.45	2.36
Wholesaling and retailing	42.97	40.77	34.57	34.84	8.84	0.51	3.24	3.32
Transportation and warehousing	35.96	33.04	46.51	48.39	11.08	9.92	4.61	6.97
Hotel and restaurant	36.92	36.74	37.30	34.79	16.07	14.47	16.78	15.21
Information, communications and broadcasting	46.62	47.02	30.98	32.84	22.56	21.40	9.56	10.23
Finance and insurance	29.47	34.79	46.33	48.78	12.13	12.68	1.56	3.05
Real estate	35.76	31.84	24.33	26.20	14.83	13.38	2.83	3.54
Professional, scientific and technical services	42.16	41.79	35.26	41.13	19.79	18.09	7.79	8.89
Supporting services	51.87	50.77	42.30	56.02	29.26	29.32	9.80	15.06
Educational services	74.89	54.70	47.62	48.55	22.87	42.25	24.79	27.89
Medical, healthcare and social welfare services	46.64	43.84	37.86	37.04	33.36	19.47	3.35	3.26
Arts, entertainment and leisure services	47.02	33.10	31.40	31.92	24.14	14.61	14.79	13.77
Other service industries	33.83	35.55	33.41	28.14	18.20	14.98	10.65	7.94
<b>Total (all industries)</b>	<b>38.55</b>	<b>37.39</b>	<b>32.72</b>	<b>32.69</b>	<b>6.92</b>	<b>1.24</b>	<b>2.14</b>	<b>2.53</b>

Note: 1. Operating costs include business costs and operating expenses.

2. Operating Expenses include salary, rent, travel freight, advertising, utilities, postal fees, insurance, entertainment expense, training fees, etc.

Source: Ministry of Finance Tax Data Center, Business income tax data for 2010, 2011.

## 2. Weekly Work Hours Remained Stable for Most Industries in 2012

In 2012, for SMEs, the hotel and restaurant industry had the longest average working hours at 47.94 hours per week. The education services had the shortest average working hours at 37.97 hours per week, followed by the agriculture, forestry, fisheries and animal husbandry at 39.31. Average weekly work hours remained stable for most industries in 2012 (Table 4-2-2).

**Table 4-2-2 Working Hours per Week in 2011 and 2012 – by Industry**

Unit: hours per week

Industry	Item	201 1			201 2		
		SMEs	Large Enterprises	Government Employees	SMEs	Large Enterprises	Government Employees
Agriculture, forestry, fisheries and animal husbandry		40.03	43.84	39.31	39.31	40.35	40.32
Mining and quarrying		41.95	—	41.44	44.46	40.00	41.23
Manufacturing		42.56	42.97	39.77	42.38	43.29	40.33
Electric power and gas		42.22	41.31	39.63	42.50	41.21	40.38
Water supply and pollution prevention		43.47	42.59	40.50	43.10	40.66	40.81
Construction		40.14	43.23	39.63	40.35	42.06	40.44
Wholesaling and retailing		46.46	42.93	39.38	46.29	43.41	39.61
Transportation and warehousing		45.50	43.25	39.63	45.40	44.41	40.43
Hotel and restaurant		48.41	45.39	42.31	47.94	44.15	44.82
Information, communications and broadcasting		41.88	42.52	42.09	42.59	43.32	41.92
Finance and insurance		41.94	41.87	39.85	42.06	42.28	41.31
Real estate		46.31	44.34	37.26	45.03	44.01	39.59
Professional, scientific and technical services		41.89	42.24	39.24	42.85	43.02	40.82
Supporting services		43.47	47.55	36.85	44.14	49.03	39.95
Educational services		38.39	35.90	36.27	37.97	36.50	36.05
Medical, healthcare and social welfare services		44.12	43.82	41.58	44.02	44.67	42.41
Arts, entertainment and leisure services		45.41	44.00	39.28	44.04	42.89	40.22
Other service industries.		46.68	41.47	40.67	46.95	41.00	43.23

Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2011 and 2012.

### 3. The Highest Average Salary Level for SME Employees Was in the Electric Power and Gas Industry

As can be seen from the data presented in Table 4-2-3, most of the SME employees had a lower average salary or only slight increase in 2012 compared to 2011. However the highest average salary level for SME employees was in the electric power and gas industry at NT\$44,270 per month, a NT\$472 raise per month, followed by information, communications and broadcasting, at NT\$35,420 per month, a NT\$1,074 raise per month.

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**Table 4-2-3 Average Monthly Income of Major Jobs for Employees in 2011 and 2012 – by Industry**

Unit: NTS thousand

Item Industry	2011			2012		
	SMEs	Large Enterprises	Government Employees	SMEs	Large Enterprises	Government Employees
Agriculture, forestry, fisheries and animal husbandry	15.71	20.34	31.24	15.84	24.40	36.14
Mining and quarrying	29.34	—	63.91	25.98	—	57.57
Manufacturing	20.97	28.56	36.87	21.55	34.62	52.64
Electric power and gas	39.55	50.04	39.57	44.27	42.17	38.27
Water supply and pollution prevention	29.25	31.05	24.60	20.98	36.40	23.54
Construction	29.71	41.66	39.59	28.23	51.01	35.01
Wholesaling and retailing	20.76	24.72	23.71	20.69	22.44	28.71
Transportation and warehousing	25.38	33.57	23.22	25.20	38.93	24.47
Hotel and restaurant	17.18	20.05	17.60	18.49	19.57	—
Information, communications and broadcasting	24.68	36.42	40.16	35.42	49.59	38.48
Finance and insurance	29.71	33.80	54.19	24.72	37.90	52.20
Real estate	24.40	30.42	34.00	27.04	31.63	40.76
Professional, scientific and technical services	27.25	59.27	37.60	22.89	46.73	46.93
Supporting services	21.85	24.53	26.58	19.00	20.40	35.00
Educational services	22.91	28.61	29.47	23.36	27.53	31.85
Medical, healthcare and social welfare services	26.99	38.65	35.25	25.14	32.87	33.46
Arts, entertainment and leisure services	31.38	30.53	24.30	21.10	21.86	33.97
Other service industries.	19.93	28.12	27.55	20.56	37.11	32.78

Source: DGBAS, Monthly Bulletin of Manpower Statistics, 2011 and 2012.

### III Manpower Cultivation in SMEs

#### 1. Various Subsidized Training Programs Including a New Job Training Subsidy for SMEs with below 50 Employees

The Council of Labor Affairs, Executive Yuan provides 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). In 2012, a new job training subsidy was created for SMEs with below 50 employees providing professional and individual counseling and training, no long requiring lengthy and costly application and expense verification process.

In 2012, the number of individual training and the number of joint training plans reached 1,204 and 127 respectively. The number of firms taking part, number of classes organized and number of training participants all declined, especially for joint training plans, which were difficult to execute involving various firms. For SMEs with below 50 employees in 2012, the number of individual training and the number of joint training plans reached 256 and 91 respectively (Table 4-3-1).

**Table 4-3-1 Provision of Assistance to Enhance Manpower Cultivation of Business Enterprises, 2006–2012**

Units: enterprises; classes; persons

Year	Individual Training Plans			Joint Training Plans			
	No. of Firms Receiving Subsidies	No. of Training Classes	No. of Training Participants	No. of Project	No. of Firms Taking Part	No. of Training Classes	No. of Training Participants
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
2010	1,793	40,902	869,520	126	775	3,617	130,244
2011	1,779	41,173	863,296	101	625	2,688	112,213
2012	1,204	27,269	600,480	127	463	1,730	58,624

Source: Bureau of Employment and Vocational Training, Council of Labor Affairs, Executive Yuan, April 2013.

## 2. The Number of SME Trainees per Annum Was around 3,530,000 in 2011

According to data compiled by the Bureau of Employment and Vocational Training, Council of Labor Affairs, in 2011, the number of SME trainees per annum was around 3,526,309, or 22.30% of all trainees, costing NT\$ 4,738 million, or 28.01% of total training expenditure (Table 4-3-2).

**Table 4-3-2 The Number of Enterprise Participation in Training, the Number of Trainees and Training Expenditure in 2011**

Units: enterprises; persons; NT\$ million; %

Item	Total	SMEs	Large Enterprises
No. of enterprise participation in training	113,617	109,263 (96.17)	4,354 (3.83)
No. of trainee	15,815,759	3,526,309 (22.30)	12,289,450 (77.70)
Training expenditure	16,916	4,738 (28.01)	12,178 (71.99)

Note: The number in bracket represents percentage.

Source: Bureau of Employment and Vocational Training, Council of Labor Affairs, Executive Yuan, The Report of Vocational Training, 2011.

## 3. Labor Demand Rose Slightly

According to the results from the 2013 Manpower Requirements Survey, enterprises showed improved expectation over increasing hiring amid global recovery (Table 4-3-3).

It is anticipated that net labor demand will rise by 40,800 jobs from the end of April to the end of July 2013. For the same period, 61% of enterprises will not add net paid employees; 24.44% of enterprises will add net paid employees of 49,900; only 4.80% of enterprises will reduce net employees of 9,100.

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The most increase in labor demand will be in the manufacturing sector, with a net increase around 24,100 (of which 3,500 in the metalwork industry, 3,300 in electronic component industry, 2,400 in foods, 2,300 in textile, etc.), followed by around 4,500 in hotel and restaurant industry, around 2,700 in supporting services, around 1,900 in arts, entertainment and leisure services, and so on. Most of the increased labor demand by skills sets will be for craftsmen, machinery operators and assembly line workers (around 12,000), followed by services and sales (around 8,100) (Table 4-3-3). The top two factors account for new hiring are market expansion and pent-up openings.

**Table 4-3-3 Anticipated Increase in the Number of Personnel Employed by Business Enterprises over the Period from April 30, 2013 to July 31, 2013**

Unit: persons

Industry	Net Increase in No. of Employees	Change in Manpower Requirements		Four Categories of Worker with Highest Demand			
		New Positions	Positions Eliminated	Technicians and Assistant Specialists	Basic-level skilled workers and laborers	Craftsmen, Machinery Operators and Assembly Line Workers	Service and Sales Personnel
All industries	40,768	49,854	9,086	7,388	6,564	11,992	8,069
Manufacturing	24,059	27,972	3,913	3,467	4,989	11,376	205
Pollution prevention and remediation	36	36	-	9	18	-	-
Construction	328	818	490	65	-68	187	-
Wholesaling and retailing	1,775	2,824	1,049	637	177	161	515
Transportation and warehousing	963	2,070	1,107	312	214	-40	188
Hotel and restaurant	4,498	5,223	725	84	429	-	3,900
Information, communications and broadcasting	318	1,031	713	-130	140	-	-28
Banking and insurance	1,365	1,473	108	977	-	-	40
Real estate	609	635	26	467	-	-	78
Specialist, scientific and technical services	749	986	237	583	-	16	83
Supporting services	2,733	3,249	516	504	371	222	1,433
Healthcare and social services	1,085	1,245	160	188	-30	-12	181
Arts, entertainment and leisure services	1,857	1,857	-	91	169	22	1,416
Other service industries	393	435	42	134	155	60	58

Source: Council of Labor Affairs, Executive Yuan.

# CHAPTER 5

## SME Strategies in Response to Changes in the Business Environment

Despite improved global financial conditions and reduced short-term risks after easing of European debt crisis in 2012, the world economy continues to expand at a subdued pace. After a marked downturn over the past two years, global economic activity is expected to slowly gain momentum in the second half of 2013 and 2014 on the back of accommodative monetary policies in developed and developing economies.

Taiwan GDP rose 2.49% in the second quarter after increasing 1.62% in the first quarter. Exports account for nearly three-quarters of the Taiwanese GDP and have been significantly challenged by the slowdown in the United States, European Union, and more recently China, its biggest trading partner, which recorded a second straight quarterly slowdown. Directorate-General of Budget Accounting and Statistics in August lowered its official forecast for 2013 GDP growth to 2.31% from 3.15% projected in last November.

Given the tepid recovery in global economy and trade, stagnant import demands of matured economies, clear slowdown of emerging economies, and intensified competition from Japan, South Korea, and Mainland China, how can SMEs in Taiwan adapt and thrive in navigating the challenging environment?

This chapter is divided into four sections to address the challenges facing SMEs and strategies recommended. Section I presents an overview of the macroeconomic environment in 2013; Section II examines the state of the Taiwanese economy in 2013; Section III analyzes SMEs strategies responding to the changing environment; Section IV reviews a series of policy measures that intend to revive the economy.

### I Global Economic Environment in 2013

#### 1. A Subdued Global Economic Recovery

Global growth was projected to remain subdued at around 3.1% in 2013 by IMF's July 2013 World Economic Outlook (WEO), less than its forecast in April, driven to a large extent by appreciably weaker domestic demand and slower growth in several key emerging market economies, as well as by a more protracted recession in the euro area. Also in July, the Global Insight (GI) revised its whole-year global economic growth forecasts downwards to 2.4% (Table 5-1-1).

New risks have emerged, including the possibility of a longer growth slowdown in emerging market economies such as BRICS (Brazil, Russia, India, China, South Africa), especially given risks of lower potential growth, slowing credit, and possibly tighter financial conditions if the anticipated unwinding of monetary policy stimulus in the United States leads to sustained capital flow reversals.

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Most world regions are likely to see a moderate pick-up in activity, but growth will continue to be below potential and employment gains, especially in developed economies, will remain weak at best. The whole-year growth rate for the advanced nations in 2013 is now expected to be round 1.2% by IMF (1.0% by GI). The emerging economies have experienced a pronounced slowdown but are still expected to achieve whole-year growth of 5.0% by IMF (4.9% by GI).

**Table 5-1-1 Global and Regional Economic Growth Rates**

Unit: %

Region	Forecasting Body	Global Insight (GI)						IMF			
		2012	2013					2014	2012	2013	2014
				Q1	Q2	Q3	Q4				
World		2.5	2.4	2.0	2.3	2.5	2.9	3.4	3.1	3.1	3.8
Advanced nations		1.2	1.0	0.6	0.8	1.0	1.5	2.0	1.2	1.2	2.1
United states		2.2	1.6	1.6	1.7	1.4	1.8	2.7	2.2	1.7	2.7
Euro zone Countries		-0.6	-0.7	-1.2	-1.0	-0.7	0.0	0.6	-0.6	-0.6	0.9
Japan		1.9	1.7	0.2	1.0	2.5	3.1	1.9	1.9	2.0	1.2
Emerging economies		4.8	4.9	4.5	4.9	5.0	5.1	5.6	*4.9	*5.0	*5.4
Asia Pacific (excl. Japan)		5.7	5.7	5.7	5.7	5.8	5.8	6.3	**6.5	**6.9	**7.0
China		7.8	7.5	7.7	7.5	7.3	7.5	7.8	7.8	7.8	7.7

Note: \* denotes emerging economies; \*\* denotes developing nations in Asia.

Source: Global Insight Inc., Global Insight's Comparative World Overview, July 2013; IMF, World Economic Outlook Update, July, 2013.

## 2. Commodity Prices Face Downward Pressures

In 2013, the aggregate commodity price index is expected to decline marginally owing to feeble global demand. A further decline by 3.3% is forecast for 2014 as supply for metals and oil is likely to expand notably and the dollar is expected to strengthen against other major currencies. Despite the massive monetary easing by major central banks, inflation remains tame worldwide. Global CPI is projected by GI to moderate further to 2.9% in 2013, down from 3.2% in 2012. This decline mainly results from somewhat lower inflation in the United States (1.3%), Europe (1.3%) and Japan (0.4%) in the face of subdued demand, continued high unemployment and contained energy and food prices.

The price of Brent crude oil remained elevated during the first half of 2013, although supply continued to exceed demand, following Saudi Arabia's activation of significant spare capacity last year. For 2013 as a whole, an average price of \$110 per barrel is expected, slightly lower than in 2012. Renewed geopolitical tensions in the Middle East could increase the risk premium for oil prices. However, the U.S. is reaping the benefits of an energy boom created by new drilling technologies that have unlocked vast domestic oil and natural gas reserves. With oil demand from developed countries declining coupled with China (replacing the U.S. in Dec. 2012 as No. 1 oil importer) slowdown, decreasing demand due to energy efficiency and continued cultivation of alternative energy sources, the average annual price of crude oil is forecast to drop further in 2014.

### 3. Labor Markets: More Pains in the Euro Area; U.S. Is Improving

The employment situation remains a key policy challenge in a large number of economies. Among developed countries, unemployment is the most severe in parts of the euro area, which continue to see sharp contractions of economic activity amid stringent fiscal austerity programs. Average unemployment in the euro area reached a new all-time high of 12.1% in March 2013, and is forecast to average 12.7% in 2013 by July GI Comparative World Overview. Greece is forecast to average 27.9% in 2013, the highest in euro area, followed by Spain (26.9%), Italy (12.1%), France (10.9%), and Germany (6.8%).

The unemployment rate in the United States has fallen to 7.3% in Aug. 2013 (from 8.1% in Aug. 2012), but is still high by historical standards and the drop partly reflects a significant decline in labor force participation. Some further improvement is expected in the outlook period, with US unemployment forecast to average around 7% in 2014.

In most developing regions, labor markets have not as extensively suffered from weakened demand as in developed economies. In South America and East Asia, unemployment rates have dropped below the levels seen before the financial crisis, and the employment outlook has remained robust in the face of the recent economic slowdown.

### 4. Global Trade Expected to Pick up Only Moderately

Despite the ongoing difficulties in the global economy, notably in the euro area as a minor recession is expected for 2013, global export is forecast to grow at a rate of 1.6% in 2013, partly supported by emerging countries and the improving U.S. economy. IMF expected trade in goods and services to grow 3.1% in 2013. Euro area export is expected to grow 1.6%, but 0% for import as demand contracted, constrained by austerity measures, private deleveraging and rising unemployment.

Export growth also weakened in most emerging economies in East Asia. The first half of 2013 saw weakened export growth of 0.6% in South Korea, 2.4% in Taiwan, 1.9% in Thailand, 10.4% in Mainland China, and 10.7% in Hong Kong, as well as export decrease of -2.8% in Singapore, and -3.1% in Malaysia.

### 5. Global Leadership Changes in 2012

In 2012, we saw startling numbers of incumbent Prime Ministers and Presidents leaving or losing elections throughout Africa, Asia, Europe, Latin America, and the Caribbean, such as in China, Japan, France, Russia, South Korea. In fact, U.S. President Barack Obama was the only incumbent re-elected to office among main economies. The ensuing new economic policy measures and their impact merit careful examination, especially the most drastic policy measures in Japan as called Abenomics.

### 6. Abenomics and Its Impact on Taiwan Export

Abenomics is the name given to a suite of policy measures introduced by Japanese Prime Minister Shinzo Abe after his December 2012 re-election to the post he last held in 2007. His aim was to revive the sluggish economy with “three arrows”: a massive fiscal stimulus, more aggressive monetary easing from the Bank of Japan, and structural reforms to boost Japan’s competitiveness and end its stubbornly long term deflation. By the end of February the measures had resulted in a dramatic weakening of the Yen and a 22% rise in the TOPIX (Tokyo Stock Price Index) since his election win. Japan’s central bank had also yielded to pressure from Mr. Abe’s administration to set an inflation target of 2%. In Jan. 2013, Japan made a massive emergency stimulus package worth over 20 trillion yen (about US\$228.6 billion) to inject vitality to its stagnant economy.

Taiwan exports, challenged by the slowdown in the United States, European Union, and more recently China, has been exacerbated by the fast and significant depreciation of currencies in Japan and South Korea, Taiwan’s competitors in the electronics market, who together account for 28% of Taiwanese exports. In Q1 2013, Taiwan’s trade balance shrank a sharp 63% year over year, as exports grew just 2% compared to a 4% expansion in imports. Exports were hit by a 6% year-over-year decline in sales to the United States and European Union (19 percent of exports), with April 2013 sales to Mainland China and Hong Kong (40% of exports) coming in flat.

## II Taiwan Economy in 2013

### 1. Taiwan Economy Remained Weak in the First Half of 2013

Taiwan GDP rose 2.49% in the second quarter after increasing 1.62% in the first quarter, well below expectation amid feeble global economic recovery and hurt by flagging exports and sluggish private consumption. Exports have been significantly challenged by the slowdown in the United States, European Union, and more recently China. Meanwhile, domestic consumption has also stalled. While private consumption grew a low 0.3% in Q1 2013 as a result of sluggish wage growth, government consumption fell 0.5%. In August, official forecast for 2013 GDP growth was revised to 2.31% from 3.15% projected in last November. In 2013, food, non-food, and private-sector consumption are projected to grow at rates of 2.28%, 1.49%, and 1.59% respectively. Private-sector investment is expected to grow 5.91% in 2013, a bright spot mainly driven by up grading in semiconductor industry and telecom’s expansion in clouding and digital business.

### 2. Consumer Price Index Is Expected to Increase Modestly

Taiwan wholesale price index (WPI) is projected to fall by 1.96% in 2013 amid downward pressure on global commodity prices and weak domestic demand. Taiwan consumer price index (CPI) is forecast to increase modestly by 1.07%, eased by downward commodity prices, subdued demand externally and internally, and lower import prices driven by substantial Yen depreciation.

### 3. Industrial Production Remained Weak

Gross industrial production in the first half of 2013 grew only 0.29%. The manufacturing industry production index increased by a mere 0.13% in the first quarter of 2013 due to falling output over 5% in computer and electronic products, optical products, machinery and equipment, and automotive and components industry. The outlook for industrial production in the second half is also not encouraging amid feeble global recovery and slowdown in China.

### 4. Exports Grew Far Slower than the Previously Expected Pace amid Sluggish Global Trade

During the first eight months of this year Taiwan's exports grew only 2.5%, far slower than the previously expected pace of 5.5% amid sluggish global trade. While exports growth in large-sized LCD TV panel, mobile communication products, and high-end semiconductor wafer pick up nicely, Taiwan electronics exports are less and less competitive. For example, around half of Taiwan's exports to the U.S. are electronic products (The U.S. imported US\$18.6 billion worth of goods from Taiwan in the first half of this year). Last year, as the U.S. economy expanded 2.8%, Taiwan's exports to the U.S. dropped 9.3%. In the first seven months of this year Taiwan's exports to the U.S. were off 1.1% from a year earlier, despite the improved U.S. recovery. HTC was the No. 1 brand of smart phone in the U.S. back in 2010, but Apple and Samsung Electronics Co. have grabbed much of its market share with deep product pipelines and aggressive marketing campaigns - and HTC is no longer even in the top three. Similarly, Acer, once a contender to be the world's biggest personal-computer maker, now trails Lenovo Group Ltd., Apple Inc. and Dell Inc. in global shipments.

With regard to the outlook for the whole year 2013, the potential for significant export growth is limited because of the combined impact of the global economic slowdown, a weakening in the pace of global trade growth, and the increasingly serious competitive threat to Taiwan's hi-tech manufacturers from leading international corporations including those in China. Overall, Taiwan is forecast to post export growth of 2.3% (US\$308.1 billion) and import growth of 1.85% (US\$275.5 billion).

### 5. Money Supply, Interest Rates and Exchange Rates

The M1B money supply (M1 daily average) rose steadily by 5.2% in the first quarter and 6.9% second quarter of 2013, higher than the growth rate of 4.0% in the fourth quarter of 2012. The M2 money rose by 4.3% in the second quarter of 2013, higher than the growth rate of 3.4% in the first quarter 2013 as well as in the fourth quarter of 2012.

The central bank has held the same benchmark discount rate at 1.875 from July 1, 2011, the longest period of inaction.

President Ma Ying-jeou said in an interview in July that he ruled out driving down the Taiwan dollar to boost exports following the currency's rally against Japanese Yen. He said the government

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aims for growth of at least 2 percent this year. As of September 24, 2013 the NT\$ exchange rate to US\$ was 0.03378, down a modest 0.76%. In the same period, NT\$ fell by 4.80% against the Euro, but appreciated sharply by 25.86% against Japanese Yen.

### 6. Employment and Consumption

In 2012, the workforce in Taiwan totaled 11,340,000 people, including 10,860,000 employed persons and 481,000 unemployed persons; the labor participation rate was 58.35%, and the unemployment rate averaged 4.24% over the course of the year. Due to the recovery of the global economy, the workforce increased by 140,000 and the number of employed persons rose by 151,000, while the number of unemployed persons declined by 10,000 in 2012. The unemployment rate was steady at 4.19% in August of 2013.

Meanwhile, domestic consumption has stalled. While private consumption increased 1.61% in the second quarter 2013, compared to a mere 0.35% gain in the first quarter as a result of sluggish wage growth, government consumption fell 0.5%. The outlook for private and government consumption for the rest of the year is also not encouraging.

### 7. Continued Progress in Regional Economic Integration

Taiwan's economy is highly dependent on exports. Facing the global trend of regional economic integration, Taiwan should take advantage of ECFA and FTAs as soon as possible to lower trade tariffs and avoid non-tariff barriers, which is vital to strengthen export markets and SMEs' competitiveness. In 2013 the Cross-Strait Agreement on Trade in Services, one of the follow-up agreements under ECFA, was signed between Taiwan and Mainland China. This new agreement stipulates in writing the various matters related to gradually reducing or eliminating restrictions on trade in services across the Taiwan Strait.

The government is also working to forge free-trade agreements (FTAs) with Singapore, New Zealand, and the United States. The FTAs are aimed at diversifying Taiwan's trade, which currently relies heavily on China, as well as countering competitor South Korea, which has already established agreements with important trade partners, such as the United States and European Union. Earlier in July, the government signed an economic cooperation agreement with New Zealand, its first deal with a developed country. Further efforts are dedicated to complete negotiation for Trans-Pacific Partnership Agreement (TPP) and Regional Comprehensive Economic Partnership (RCEP) by the end of 2013.

## III SMEs: Adapt and Thrive in Navigating the Challenging Business Environment

Given the tepid recovery in global economy and trade, slowdown of emerging economies, and intensified competition from Japan, South Korea, and Mainland China, how can Taiwanese government and SMEs adapt and thrive in navigating the challenging environment ?

## 1. Strategic Alliance: Key to Export Expansion for SMEs

SMEs normally lack the capital, technology, information, and talents of many large businesses with which they regularly compete internationally. One of the key elements in developing export market, especially emerging markets expansion is for SMEs to find right partner to leverage complementary external resources through strategic alliances such as vertical or horizontal integrations, establish niche markets, provide customized services and make decisions with flexibility and swift adaptation. Further discussions can be found in Chapter 6 and Chapter 7.

## 2. Enhance Trade in Service Strategy for SMEs

The service sector is the main driver of Taiwan's economy and responsible for the bulk of local job creation, with sector output reaching NT\$9.4 trillion (US\$32 billion) and accounting for 68.19% GDP in 2012. The industries employed nearly 6.28 million people or 58.6% of the entire workforce in 2012. Service sector is mainly domestic market oriented. Therefore, to boost economic growth, the service sector needs to expand its markets internationally.

Given sluggish recovery of developed economies and their import demand, emerging markets, albeit slowing down, have become primary target for companies all over the world for their relative higher growth and rising middle class. To multinational firms, even recent wobbles in some of the emerging countries have not curbed their enthusiasm for the BRICS and other countries of high-growth markets whose prospects have more than offset a gloomy prognosis for the maturing, growth starved domestic markets of the developed economies. However, various restrictions existed in emerging markets on currency exchange, income, technology, and so on could post significant challenges for service industries, so the next tough question is to figure out what services would have a good chance to penetrate and succeed in these markets. This is partly addressed by the nationwide program "Three Industries, Four Reform" launched by Ministry of Economic Affairs (MOEA), which focus on developing a service-oriented manufacturing industry, an internationalized, high-tech service industry, and a uniqueness-oriented traditional industry. Clearly, Taiwan enterprises need to drive innovation and expansion through high value added consumer-relevant products or services to meet the demand of the surging emerging middle class as well as the developed markets. Lastly, majority of firms in service industry are SMEs that lack scale. Therefore, to help SMEs expand trade in services, we need to figure out the international and emerging market trends, examine pros and cons of the current policy measures, enhance the international competitiveness of Taiwan's service industries, and craft trade in service strategy to assist SMEs to cope with challenges and grasp opportunities in targets markets. Further discussion can be found in Chapter 7.

## 3. Nurture the "Hidden Champions"

As Taiwan sees declining exports, decreasing market shares and fewer overseas orders, the government is studying the German experience of "hidden champions" to uncover high-potential SMEs in Taiwan and develop them into the "backbone enterprises" of the nation's economy.

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A backbone enterprise harnesses three major features: market niche, core technologies and global perspectives. That is, it owns high-quality core technologies, dominates a niche market and pursues global strategies and sales. It is or on its way to become a “hidden champion” which, as defined by German Professor Hermann Simon, is among top three in the global market, or number one on the company's continent, determined by market share, with revenue below US\$4 billion and low level of public awareness. The hallmarks of a hidden champion are quality, service, innovation, closeness to the customer, and a dominant position in a niche market. For decades, the best hidden champion companies have been thriving by eschewing complexity, avoiding diversification, laser focusing on their core skills, and resisting temptation of management fads and media limelight. For example, Zeiss, a global leader in optoelectronics, now over 150 years old, continues to be associated with high-quality images, high priced and high-quality optical lenses, and elegance of engineering and designing.

Government's new Champion Enterprises Project is designed to nurture outstanding SMEs who are highly competitive and also control core technologies in the global market. These firms may not be household names, but they are the backbone enterprises or hidden champions of Taiwan's economy. For example, Tung Pei Industrial Co. is Taiwan's largest manufacturer of professional precision components (ball bearings). The firm has managed to achieve market dominance and wrestle market share from foreign firms in Taiwan, and successfully market its brand worldwide. Another champion is Pai Lung Machinery Mill Company, one of the world's top three knitting machine manufacturers which also holds the rights to hundreds of domestic and international patents, and markets its own-brand around the globe.

Elite SMEs usually have one overriding trait in common – they find and dominate market niches. If a company does something that everybody is doing, it will inevitably end up competing on scale or price, where SMEs will not excel. Elite SMEs compete by elevating their added value. Because of Taiwan's small market size, the world is the natural battlefield of most Taiwanese companies from the day they are founded. Through the backbone industries project, the government hopes to take lessons from Germany's enterprising spirit to develop unique advantages for domestic industries, while at the same time providing quality job opportunities, promoting technological innovation, and taking quality Taiwan brands to the world.

### **4. Product/ Brand Development through Integrated Innovations**

Firms own core technologies and are capable of integrating multiple innovations and value chain activities necessary for a successful new product (especially complex high-tech products such as iPhone) can enjoy higher profitability through their pricing power than firms only have single innovation or technology - such as many Taiwan OEMs who produce low margin products and specialize in only one type of arrangement in a supply chain.

South Korea's unique success in building global brands – stories of Samsung, LG, and Hyundai, offers a big edge over Taiwan. The problem, which has become increasingly clear in the last six

years, is the narrowness of Taiwan's niche: its share of the global market for laptops has risen from 30% to about 80% at the highest over the last decade, yet its companies have no pricing power because Western brands can easily turn to contract manufacturers elsewhere, or just play the five big producers in Taiwan off one another. And as China begins to lose some of its competitive advantage, particularly in labor costs, so too does Taiwan. Besides low margin, Taiwanese contract manufacture face yet another tough challenge of the vertical integration trend, exemplified by Apple's building a closed ecosystem where it exerts control over nearly every piece of the supply chain, and outsourcing businesses returning to the U.S.

In view of the less promising outlook of OEM business, companies seeking high added value are expected to increasingly engage in activities beyond manufacturing. Entering into ODM (Original Design Manufacturer) and OBM (Original Brand Manufacturer) is a step towards this trend. Prototype creation, detailed product design, and development of product concepts, the core activities of ODM, may prove vital for Taiwanese companies to master in order to move up the front-end of the value chain. Some companies may choose to adopt OBM, stepping into the back-end of the value chain to reap greater profits of having their own brands. But OBM is a difficult business model that needs commitment to invest in the brand over the long term by building capabilities in product development, brand building, marketing and distribution. Given a lack of brand development expertise and financial resources, SMEs can incubate their brands in some small pilot markets. After becoming successful, the brands may be promoted in other potential markets, especially the emerging markets, which are more receptive to new brands.

Product or brand development through integrated innovations is an effective approach to address the above challenges. Taiwan's strengths in R&D and manufacturing are recognized over the world. These strengths, combined with Taiwan's highly-developed industry clusters, its effective protection of intellectual property rights, the large number of patents held by Taiwanese firms, and probably the only oriental nation with a unique combination of advanced free market economy, freedom of thought and cultural diversity, and developed cultural and creative industry, create significant potential for the development of new products and strong brands by Taiwanese enterprises.

For firms, especially SMEs to adopt integrated innovation approach require vision, integration and innovation capability, market knowledge, and entrepreneur spirit to take risks. Government should design coordinated policy measures not to promote specific fields or products, which often are fads that fade quickly or established ones with high barrier (patents and/or brands) that new comers have no advantage, but to establish pro-business, pro-innovation environment, nurture talents, provide venture capital or start-up funding, and in attracting foreign investment or strategic alliance, focus on obtaining technology and market rather than investment amount.

# IV Government Strategies in Response to the Business Environment

With the serious challenge posed by the European debt crisis, slowdown in China and other emerging markets, the subdued recovery in the U.S. and its anticipated unwinding of monetary policy stimulus leading to sustained capital flow reversals and possible adverse effects on global financial stability, and the global trend of regional economic integration, Taiwan's trade-dependent economy continues to struggle with lackluster growth due to weak demand for its exports as well as poor domestic consumption. The government is taking a series of policy measures (spanning short-, mid- and long-term) to revive the economy, such as "Economic Power-up Plan", "Free Economic Demonstration Zone Plan," "Cross-Strait Agreement on Trade in Services," etc.

## 1. Economic Power-up Plan

The Executive Yuan unveiled a massive economic stimulus plan (Economic Power-up Plan) on September 11, 2012 to improve prospects for long-term growth. The plan will address internal issues such as an imbalanced industry structure, mal-adjustment between labor supply and demand, and declining exports. The plan's five major initiatives are summarized as follows:

### (1) Initiative No. 1: Promote Innovative and Diverse Industries

- A. Promote the "Three Industries, Four Reforms" program (referring to the creation of a service-oriented manufacturing industry, an internationalized and high-tech services industry and a specialty oriented traditional industry);
- B. Over the next three years, develop over 150 high-potential SMEs into "backbone enterprises;"
- C. Speed up industrial application of R&D results, strengthen industry-academia collaboration, and focus on 10 fundamental industrial technologies for further development;
- D. Create a "Taiwan Tourism Calendar" that would be a comprehensive marketing tool for tourism in Taiwan. Drive the growth of tourism-related industries and improve both the quality and quantity of tourism. Aim to attract 10 million visitors annually by 2016;
- E. Spark sustainable growth for Taiwan's financial sector. Develop cross-strait financial services and build a Taiwan-centric wealth management platform for residents of Taiwan;
- F. Develop safe, stable, efficient, clean and sustainable energy resources for industrial development. Upgrade Taiwan's green energy industry, promote green energy use and expand green jobs;
- G. Integrate the resources of the Council of Agriculture, the Ministry of Economic Affairs, the Ministry of Transportation and Communications and local governments to create a "golden corridor" featuring LOHAS agricultural practices.

## (2) Initiative No. 2: Develop New Export Markets

- A. Increase value-added exports and explore emerging markets. Select leading manufacturers to guide others in developing emerging markets. Promote 12 models of success in these respects;
- B. Augment the competitiveness of service exports by expanding overseas marketing of globally competitive services. Host 1,000 international conferences and 1,000 exhibitions (including tourism promotions) in Taiwan to generate NT\$90 billion (US\$3 billion) in business opportunities for the exhibition and peripheral industries;
- C. Strive to participate in regional economic integration. Promote the signing of economic cooperation agreements with major trade partners. Expedite negotiations on pacts following up on the cross-straits Economic Cooperation Framework Agreement (ECFA);
- D. Strengthen intellectual property rights strategies. Formulate Strategic Guidelines for Intellectual Property Rights.

## (3) Initiative No. 3: Cultivate Industry Talents

- A. Continue the second phase of technical and vocational education reform to meet industry demands through the incorporation of industry resources. Have industries co-plan curricula as well as teaching methods and personnel exchanges with schools. Develop model universities of science and technology;
- B. Smooth the transition between academia and industry and actively promote the Council for Economic Planning and Development's plan to bridge the gap between training offered in school and the knowledge and skills employers require;
- C. Promote the strategic distribution of human resources, foster talents for tapping into emerging markets, and cultivate global marketing managers. Strategically select students from important emerging markets; attract outstanding foreign students to study Chinese or further their education in Taiwan;
- D. Adjust labor laws and regulations to respond to industrial and social trends. Create a work-friendly environment for overseas professionals, and continue to examine labor policies and regulations that apply to them.

## (4) Initiative No. 4: Spur Investments and Public Construction

- A. Expand bids to attract private investments of at least NT\$1 trillion (US\$33.3 billion) per annum; bring in foreign investments of NT\$33.5 billion (US\$1.1 billion) in 2013. Encourage overseas Taiwanese businesses - especially those that occupy key supply chain positions and produce high value-added commodities - to direct their investments back to Taiwan and build international brands;
- B. Find creative ways to finance public construction works such as the cross-regional integrated infrastructure projects. Alleviate the government's burden by tapping into new investment

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- resources from home and abroad, including Mainland China;
- C. Research the feasibility of relaxing regulations to facilitate more medium and long-term investment for public works;
  - D. Adjust investment regulations in time with industrial trends. Study factors that put off overseas Taiwanese, foreigners or mainland Chinese from investing in Taiwan; analyze which businesses they are attracted to and restrictions that keep them from doing so;
  - E. Design model of Free Economic Demonstration Zones. Open up Taiwan's market to support regional economic integration and facilitate Taiwan's entry into the Trans-Pacific Partnership. Relax investment regulations to boost Taiwan's competitiveness and create an attractive business environment by improving land, labor and capital conditions.

### (5) Initiative No. 5: Enhance Government Efficacy

- A. Improve procurement mechanisms and amend the Government Procurement Act. Promote projects that raise the quality of public construction works. Award contracts to the most advantageous tenders, adopt "turnkey contracts" and have senior civil servants evaluate procurement cases. Build quality public structures that are sustainable, eco-friendly and energy efficient;
- B. Implement government budget review mechanisms. Cross-ministry or interdisciplinary issues should be reviewed by the Directorate-General of Budget, Accounting and Statistics and the agencies concerned;
- C. Strengthen regulatory reviews and revise laws to meet changing needs. Bolster Taiwan's regulatory competitiveness in global trade;
- D. Put undeveloped or underused public properties to full use;
- E. State-owned enterprises, including China Steel, Taiwan Sugar, Taiwan International Ports Corp. and Taoyuan International Airport Corp., will launch major investment projects over the next few years.

## 2. Traditional Industries Reform Plan

To adjust the domestic industrial structure and create momentum for the next wave of economic growth, the government has adopted the theme of a specialty-oriented traditional industry. The Executive Yuan in September 2012 approved the Traditional Industries Reform Plan, to invigorate the industry by promotional activities highlighting the strengths of the industry, introduce innovative ideas, and adopt appropriate branding, distribution and marketing strategies to add value and step up industrial transformation. Multiple "highlight" projects to accentuate the industry's special characteristics are expected to be added each year for a total of 50 in five years by August 2019.

### (1) Vision and Goals

Vision is to transform traditional industry into an innovative, high value-added, safe, and ecologically sustainable industry.

Goals include (A) 50 highlight projects to accentuate the industry's special characteristics to be implemented in five years; (B) during the execution period by August 2019, the plan is estimated to develop five global brands, create 25,000 new jobs, grow exports in aggregate of NT\$200 billion, and attract private investment of NT\$50 billion.

### (2) Strategies

Strategies adopted include (A) Create: high value-added innovation and specialties; (B) Rebuild: pro-reform business environment; (C) Coordinate: collaborative process; (D) Promote: market expansion and brand building.

### (3) Actions

- A. Phase I (2012-2014): To implement 12 highlight projects, such as agricultural tour, traditional inns, freshness preservation and traceable logistics, MIT brand clothing, fashionable LED lamps, intelligent small appliances, digital hand tools, biomass plastics products, happy snacks.
- B. Phase II (2013-2015): To implement 8 highlight projects, such as organic products supply and marketing, footwear brand building, baseball industry upgrade.

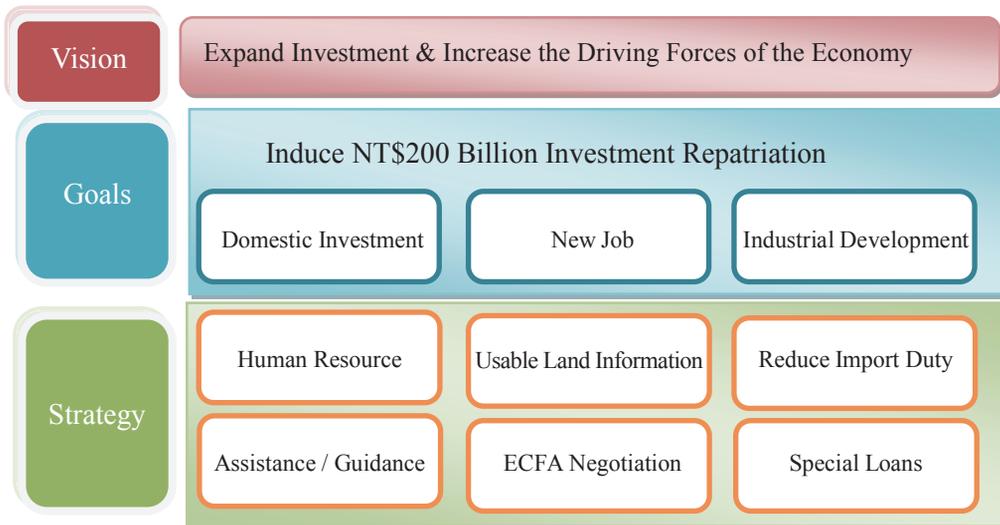
### (4) Time frame and Budget

The timeframe of the plan is during September 1, 2012 to August 31, 2019 with budget totaled NT\$10 billion and average NT\$200 million for each project.

## 3. Project to Strengthen Promotion of Investment in Taiwan by Overseas Taiwanese Businesses

Changes in the Mainland China investment environment have caused overall production costs to rise closer and closer to the level of advanced countries. This and additional factors such as the high employee turnover rate and the bad social climate have made more and more Mainland-invested businesses consider returning to invest in Taiwan. A trend of manufacturing repatriation has already appeared in U.S. and South Korea. The Executive Yuan unveiled the "Project to Strengthen Promotion of Investment in Taiwan by Overseas Taiwanese" in November 2012. Expected main benefits are (1) inducing overseas Taiwanese businesses to invest a total of NT\$200 billion back in Taiwan; (2) creating additional production output amounting to NT\$303.7 billion, including exports worth NT\$227.8 billion; (3) raising Taiwan's real GDP by an average of 0.31% in 2013 and 2014; and (4) increasing Taiwan's direct and indirect employment by a total of approximately 82,000 (Figure 5-4-1).

**Figure 5-4-1 Investment Repatriation Promotion Plan**



Source: Council for Economic Planning and Development, Executive Yuan, 2012.

## 4. Free Economic Demonstration Zone Plan by Executive Yuan (2013)

The free economic demonstration zones will cover areas near the ports of Taipei, Keelung, Suao, Taichung, Kaohsiung and Anping, as well as Taiwan Taoyuan International Airport and Pingtung Agricultural Biotechnology Park. Under the project, restrictions on manpower, capital and merchandise flows in the targeted areas will be eased significantly to enhance business efficiency and attract domestic and foreign investment.

The first-phase free economic demonstration zone plan is expected to increase private sector investment by NT\$20 billion (US\$670 million), raise national domestic product by NT\$30 billion and create 13,000 jobs by 2014. The second phase of the project will involve tax incentives. The industries included are intelligent logistics, international medical services, value-added agriculture and industrial cooperation.

## 5. Economic Climate Response Program by Executive Yuan

To address the changing situation of the European debt crisis in the external realm and issues arising from transition and adjustment of the industrial structure in the internal realm, the Executive Yuan has approved “Economic Climate Response Program” on December 2011.

The program comprises seven strategies: (1) stabilizing finance; (2) holding down prices; (3) increasing employment; (4) promoting investment; (5) helping industries; (6) popping up consumption; (7) boosting exports.

## 6. Cross-Strait Agreement on Trade in Services

Taiwan's economy is highly dependent on exports. Facing the global trend of regional economic integration, it is vital to strengthen service export markets and SMEs' competitiveness. In 2013 the Cross-Strait Agreement on Trade in Services, one of the follow-up agreements under ECFA, was signed between Taiwan and Mainland China. This new agreement stipulates in writing the various matters related to gradually reducing or eliminating restrictions on trade in services across the Taiwan Strait. It is expected to help Taiwan service firms expand their market share in Mainland China, lessen the competitive pressure on Taiwan's SMEs in service industry, and give Taiwanese providers access to preferential treatment that exceed the conditions for entering the Chinese services market under its WTO commitments.

Under the pact, which includes four chapters and 24 articles, 64 Taiwanese industries will be opened to Chinese investment, including transportation, tourism and traditional Chinese medicine, while China will open up 80 industries to Taiwan, including finance, retail, electronics, publishing and travel sectors. Of the 64 Taiwanese industries opened to Chinese investment, 23 are below WTO commitment, 22 are WTO equivalent, and 19 exceed WTO commitment; of the 80 Chinese industries opened to Taiwanese investment, 12 are below Hong Kong CEPA commitment, 46 are CEPA equivalent, and 23 exceed CEPA commitment.

Services now account for more than 70% of Taiwan's GDP while for Mainland China the ratio is under 50%, reflecting the relative maturity of Taiwan's market for services. Given the vital influence of culture and localization on services, Taiwan's service providers have a lot more room to develop in the Mainland's services market than do Western providers.

### (1) Impact of Cross-Strait Agreement on Trade in Services

A post-signing impact study by the Chung-Hua Institution of Economic Research commissioned by the Ministry of Economic Affairs released on July 16 forecast that the pact would (A) lift GDP by between 0.025 - 0.034 percentage points; (B) provide over 11,000 new service sector jobs over the next decade; (C) service exports increase US\$378 million (up 1.61%) and service imports increase US\$62 million (up 0.30%); and (D) Service output increases US\$390 - 428 million (0.10 - 0.11%).

### (2) Measures in Response to Concerns

Though the benefits of the Cross-Strait Agreement on Trade in Services exceed the potential negative impacts on domestic Taiwanese firms facing intensified competition from China in certain open service industries, the government will form industrial responding program to counsel and help firms explore Chinese service market, while track and monitor the potential impacts form Chinese firms on employment, market shares, complains, and illegal competition.



# Part Two

## Special Topics on SMEs



### **Chapter 6 International Cooperation for SMEs to Expand in Emerging Markets**

### **Chapter 7 Strategies of Trade in Services for SMEs**

*In recent years, over the course of the global financial crisis and European debt crisis, the outlook for Taiwan's SMEs to obtain growing shares from advanced markets, such as Europe, the U.S., and Japan, is no longer as promising as that in the past. In contrast, during the past two decades, we have seen strong capital inflow toward emerging markets, such as China, ASEAN countries, Russia, and India, that enjoyed unprecedented growth in GDP and foreign exchange reserves.*

*Given sluggish recovery of developed economies and their import demand, emerging markets, albeit slowing down, have become primary target for companies all over the world for their relative higher growth and rising middle class. Taiwan's SMEs need to diversify their export markets and drive innovation and expansion through high-value-added consumer-relevant products and services to meet the demand of the surging emerging middle class as well as the developed markets.*

*Part Two provides in-depth discussion on emerging market opportunities, the trade in service strategy for SMEs, as well as the importance of forming strategic alliances for SMEs to expand in emerging markets, with focus on market niche, brand building, core technologies and global perspectives to move upward along the value chain.*



## CHAPTER 6

# International Cooperation for SMEs to Expand in Emerging Markets

A cornerstone of Taiwan's economic edifice, export-oriented SMEs have powered Taiwan through economic take-off and decades of rapid expansion, an envy of the world economic miracle. Taiwan's SMEs have gained broad access to the markets of Europe, the U.S., Japan and other developed countries through direct exports or trading partners, and evolved into high quality manufacturing powerhouse.

In recent years, over the course of the global financial crisis and European debt crisis, the outlook for Taiwan's SMEs to obtain growing shares from advanced markets such as Europe, the U.S., and Japan is no longer as promising as that in the past. In contrast, during the past two decades, we have seen strong capital inflow toward emerging markets such as China, ASEAN countries, Russia, and India, that enjoyed unprecedented growth in GDP and foreign exchange reserves. Facing surging global emerging economies, Taiwan's SMEs need to diversify their trade markets and explore new markets overseas, especially in emerging markets.

Michael J. Andrew, chairman of KPMG International, pointed out in 2012 that, while the global economy is under the shadow of the European debt crisis, the rising middle class in emerging markets becomes main driving force for consumption growth. Worldwide growth in middle class consumption is shifted from the U.S. and European markets to Asia. Within Asia, it is shifted from Japan, Korea, Hong Kong, Singapore, Taiwan and other industrialized countries, as well as wealthy Middle East oil producing countries, to China, India, Indonesia, Vietnam, and other rapid growing emerging economies. The outlook of consumers in emerging markets differs from those in developed ones in many ways. On average, consumers in emerging economies are younger – 63% aged 35 or under in 2010, versus 43% in developed countries - and more optimistic than their more affluent counterparts. These characteristics have significant implications for brand images and marketing strategies. Therefore, to explore emerging markets, SMEs must meet the appetite of local emerging middle class for quality, fashion and experience – often seen in branded products, and add value across the price spectrum beyond cheap and basic categories.

Given this environment, there is no surprise that Taiwan's SMEs are facing turning point as market expansion through direct export or investment overseas becomes increasingly challenging as the advanced economies struggle with their debt, tepid economic growth, and growth starved domestic markets. High growth emerging markets with favorable demographic and increasing affluence and affordability should be SMEs' next main target. The mindset that the emerging markets are merely cheap contract manufacturing or export processing bases is getting awfully stale. To successfully explore new emerging markets, Taiwan's SMEs should start bold thinking to

craft strategies more oriented toward driving innovation and expansion through consumer-relevant products or services and brand building to meet the local demand of the surging emerging middle class.

This chapter is divided into four sections. Section I presents an overview of the practice and theory in emerging markets development for SMEs. Section II examines the current development and business opportunities in emerging markets. Section III offers case studies of Taiwanese SMEs in emerging market development and international cooperation. Section IV discusses the strategic direction and offer recommendations for SMEs to expand in emerging markets through international cooperation.

### **I Emerging Markets Development of SMEs – Practice and Theory**

SMEs normally lack the capital, technology, information, and human resources of many large businesses with which they regularly compete. To succeed in overseas emerging markets, SMEs often need to leverage complementary external resources, focus on developing market niche, core technologies and broad perspectives, provide customized services and make decisions with flexibility and swift adaptation. The following sections will review the theories and practice of international strategic alliances and SMEs' emerging marketing strategies in Asia.

#### **1. Taiwanese Enterprises' Emerging Markets Strategies**

Taiwanese enterprises' strategic approaches toward emerging markets are quite different from those applied to advanced markets.

Sun (2011) proposed “four must-haves” to expand in emerging markets such as (1) innovative leap - emerging markets could shorten its learning curve to reap benefit from innovative leap through ever changing technology and U.S./ European markets experience; (2) to understand that the latest or the most popular trend is not necessarily the best - the latest ideas or the most trendy products in advanced countries do not necessarily apply to emerging markets where consumers are far from being rich; (3) brands and channels – focus on branding and distribution, a business model far more viable and profitable than low margin contract manufacturing with no pricing power; (4) to carve niche markets with flexibility and quick adaptation – to understand the consumer and trading habits that are closely tied to local cultural, political and economic environment, and act quickly. Liu (2011) also pointed out the rise of the middle class in Indonesia in recent years with that over 80% of the population is Muslims. Therefore an in-depth understanding of the Muslim lifestyle is vitally important to grasp business opportunities.

Liu (2011), by studying the successful emerging markets experience of Johnson Health Tech (JHT)<sup>1</sup>, based in Taiwan since 1975, summed up three key success factors in exploring emerging

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<sup>1</sup> JHT has specialized in the design, production and marketing of award-winning fitness equipment, and becomes Asia's largest and the world's third-largest and one of the industry's fastest growing fitness equipment manufacturers.

market: (1) effective marketing research, quality products and target pricing designed to meet the needs of the middle class; (2) language capability; (3) new-brand acceptance is very high in the emerging markets middle class. This provides a great opportunity for Taiwan enterprises. However, lack of talent in emerging markets is the biggest hurdle to overcome.

Liu (2013), after examining Taiwan's successful cases in Asian emerging markets, pointed out that the key factor for sustainable operation and growth in emerging markets is to recruit and nurture local talents to achieve optimal mix of human resources. It's also important to seek new opportunities from free trade agreements among emerging countries. For example, Thailand and Myanmar bilateral trade and investment relations will be further enhanced with the expected establishment of ASEAN Economic Community in 2015. As government of Myanmar began to open its markets, it's time for Taiwan SMEs to further explore Thai market and at the same time reap benefit from Myanmar market.

Lan (2012) pointed out that in Indonesia, Taiwan SMEs in aftermarket (AM) component maintenance and repair business must pay special attention to billing. Due to the questionable reputation of AM component dealers and auto repair shops, one must establish the Chinese Association based "relationship circle," a business and information network, thereby screening out bad AM vendors and shops to avoid billing problem, such as delayed or uncollectible accounts receivable. He also pointed out that in Philippine footwear market, Taiwan exporters often lose business to Mainland China on price. Taiwan SMEs could be much more competitive while working with local Chinese distribution channels through "Philippine Chinese Footwear Joint Union" and other local intermediary platforms to pool brands and scales to meet the minimum order amount with high quality shoes with reduced costs and fast delivery to stores.

According to Satoru Ito of Mizuho Research Institute, his investigation results indicate that from 1990 to 1999, the average survival rate of Taiwan-Japan joint ventures in Mainland China was significantly higher than that of Japanese firms. The reasons that help explain this could include: (1) Japanese firms often are unable to adapt to Chinese custom or complex trading habits across the continent and vulnerable to intellectual property infringement; (2) the historical and cultural factors – Taiwanese know Chinese market better than Japanese do, and also understand Japanese firms far better than mainland Chinese do. Historically through long-term cooperation and complementary resources exchange, Taiwanese and Japanese companies have established great relationship and trust. Taiwan-Japan joint ventures or strategic alliances are proven effective business models to develop the Chinese mainland market.

In summary, in developing emerging market strategy, Taiwan enterprises must focus on brand enhancement, affordable quality products, marketing, talent acquisition, as well as careful balance among local relevance, international cooperation and scale.

## 2. SMEs' Emerging Market Strategies

Taiwanese SMEs approach emerging markets mainly through exports or overseas investment.

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Lack of local market expertise and experience and limited by technology, information, and human resources of many large businesses with which they regularly compete, SMEs often bear high risk of failure.

Azusa Audit (2012) pointed out three key factors for SMEs in successful expansion in emerging markets: differentiation, rapid market response, and shared corporate vision and goals.

First, in order to establish differentiation advantages in emerging markets, SMEs should pursue unique positions among competitors and become unique in the minds of their customers, often achieved through patented technology or unique product offerings in design, brand image, or other attractive features. This is particularly true in segments such as high-precision components manufacturing, as well as special products closely tied to local cultures and environment standards. As SMEs do not have sufficient resource, scale and capacity to match large competitors, without differentiation they will likely fail in pricing competition. Conversely, established differentiation often leads to customer loyalty, which in turn can create price inelasticity on the part of buyers. As a result, customers will be less sensitive on price decisions. In turn, it can help SMEs erect barrier to entry and maintain higher margins and stable income.

Secondly, rapid market response is indispensable. With changing customer preferences and market conditions, if SMEs fail to quickly respond to the market, the differentiation advantage once established could soon erode. SMEs should maximize its natural advantage of lean organizational hierarchy, shared information flow, quick market response and on site decision making, and moving nimbly in unfamiliar environments.

Finally, the SME operators must set clear corporate vision and goals, and lead by example so that all employees will make concerted effort across the company toward the same direction.

Japan External Trade Organization (JETRO) (2012) also noted that while exploring emerging markets, SMEs need to address several key areas. First, before entering the market, pay close attention to market segmentation, pricing, distribution channels and marketing; Secondly, after entering the market, focus on account receivables, intellectual property rights, business practices, legal requirements and personnel training. For example, due to different consumer preferences and payment habits in different regions, SMEs need to conduct diligent market research to uncover consumer needs for effective market segmentation and at the same time maintain sound financial discipline in cash flow, credit, and account receivables management.

Nitta Hiroyuki (2012) analyzed Japanese SMEs cases in emerging markets such as Thailand and summed up the importance of finding right local partners and international cooperation. Yan Zhu (2010) pointed out that in recent years, Japanese SMEs, facing declining domestic market with intensified competition, show high intention to explore Mainland China but stalled by lack of key talent who truly understand the target market. Taiwan's SMEs can play a key role as partners and guide to Japanese SMEs for they know Chinese market better and also understand Japanese firms far better than mainland Chinese do. At the same time, Taiwan's SMEs could gain access to Japan's

expertise and technology and grow in Chinese mainland market.

In summary, SMEs' emerging markets strategy must address key issues such as differentiation, quick market response, shared corporate vision and goals, financial discipline, and finding right partners.

### 3. International Strategic Alliances

Based on the discussion above, one of the key elements in emerging markets expansion is to find right partner to leverage complementary external resources. Followed is a review of the literatures on international strategic alliances in theory and practice.

Wernerfelt (1984) proposed a "resource-based view of the firm". A competitive advantage of an enterprise lies primarily in the application of a collection of resources – tangible and intangible assets, such as brand names, in-house knowledge of technology, employment of skilled personnel, trade contacts, machinery, efficient procedures and capital. The more difficult to replicate a firm's resources that are neither perfectly imitable nor substitutable without great effort, the more protection of a resource position barrier a firm enjoys, indicating potential for high returns. In this context, growing enterprises need some specific resources of other companies start to form partnership or strategic alliances, rather than build from scratch, often too difficult or too costly.

A strategic alliance is an agreement between two or more parties to pursue a set of agreed upon objectives while remaining independent organizations, and often involves technology transfer (access to knowledge and expertise), economic specialization, shared expenses and shared risk. This form of cooperation lies between M&A and organizational growth (Killing, 1983; Porter and Fuller, 1985).

Since the early 1980s, international strategic alliances (ISAs) between enterprises of different nationalities have increased rapidly. In the 1980-1990 decade, there were about five hundred strategic alliances established between Japan and the United States (Oster, 1994). In the 1989-1999 decade, international strategic alliances jumped five-fold, the most notable example was Star Alliance among major airlines around the world (Kang & Sakai, 2000). Chen (2003) pointed out that enterprises through strategic alliances with foreign peers can reduce transportation and transaction costs by leveraging local logistics network, and minimize the competition among partners. Chang and Chen (2008) indicated that for the 1989-1999 decade, Japan-US strategic alliance between manufacturers achieved significantly improved overall performance in three years; comparatively, SMEs' overall performance improved even more.

Trust and control are inextricably interlinked with risk in strategic alliances. Hence, to understand how to share knowledge and expertise with other companies without losing control over proprietary information and intellectual property rights, participating companies need to decide the scope of the trust and control in the formation process (Woodley, 2006). Indeed, the ISAs are "competition through cooperation". Empirical findings suggest that the level of trust between the cooperation partners is greater in successful alliances. A well designed agreement must seek to maintain

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expectations of a continuing, mutually productive relationship over the foreseeable future with built-in trust producing mechanism that lies within management's control. Such expectations tend to promote cooperative and trustful behavior, and reduce untrustworthy behavior and free riding. Long time horizons, frequent interactions to generate social, cultural familiarity and understanding, and high behavior transparency are factors that alliance managers can influence in order to enhance trust (Parkhe, 1998).

Performance of ISAs can be measured by sales, profitability, technological innovation, branding, distribution channels, cost efficiency, etc. Most Latin American managers give priority on access to foreign partner's technical expertise in ISA success measurement, followed by market performance and profitability enhancement (Kotabe, Teegen and Aulakh, 2000).

In summary, the key factors in successful ISAs are complementary resources, management capabilities with balancing control and trust, contractual agreement with built-in trust producing mechanism that promotes cooperative and trustful behavior, and reduces untrustworthy behavior and free riding, frequent interactions and high behavior transparency.

## II Current Development and Business Opportunities in Emerging Markets

### 1. Current Development in Emerging Markets

Originally brought into fashion in the 1981 by then World Bank economist Antoine Van Agtmael, the term "Emerging Market" is sometimes loosely used as a replacement for emerging economies in a transitional phase between developing and developed status. Criteria established by the International Monetary Fund (IMF) states that an emerging market is defined by a GDP-per-capita ratio that ranges between \$2,000 and \$12,000. There are around 40 emerging markets in the world with the economies of China and India the largest. These countries make up 82% of the world's population<sup>1</sup> and 36% of the world GDP, according to an April 2012 IMF estimate.

In 1988 Morgan Stanley Capital International Inc. (MSCI) compiled Emerging Markets Index, including Emerging Asia, Emerging Europe, Latin America, Africa, Middle East, etc. As of March 2011, 22 countries were listed as the MSCI Emerging Market countries: Brazil, Chile, Colombia, Mexico, Peru, the Czech Republic, Egypt, Hungary, Morocco, Poland, Russia, South Africa, Turkey, China, India, Indonesia, Korea, Malaysia, the Philippines, Taiwan, Thailand, and Ukraine.

In recent years, emerging market countries are further divided into a variety of specific groups by economies of scale, growth or other benchmarks. Goldman Sachs chief economist Jim O'Neil in 2001 coined the acronym "BRIC" (or BRICs) in a 2001 paper entitled "Building Better Global Economic BRICs," that referred to the countries of Brazil, Russia, India and China, which were all deemed to be at a similar stage of newly rapid economic development. The acronym has come into widespread use as a symbol of the apparent shift in global economic power away from the developed G7 economies towards the developing world, as Jim O'Neil predicted that China could overtake the

United States as the world's largest economy by 2027. Later, Japan's economic commentator Takashi proposed "VISTA Five," which represents Vietnam, Indonesia, South Africa, Turkey, and Argentina, a group of emerging markets that are poised to grow quickly in the coming years. These nations generally have a young growing labor force, political stability, and surging levels of consumption. "The Next Eleven" (N-11) are the eleven countries – Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, Turkey, South Korea, and Vietnam – identified by Goldman Sachs and its chief economist Jim O'Neil in a research paper as having a high potential of becoming, along with the BRICs/BRICS, the world's largest economies in the 21st century. The criteria that Goldman Sachs used were macroeconomic stability, political maturity, openness of trade and investment policies, and the quality of education. The combined GDP of N-11 was predicted to reach two-thirds of the G7 GDP by 2050.

According to IMF 2012 World Economic Outlook Database, within vast emerging markets, each of the 12 emerging market countries - China, India, Indonesia, Brazil, Russia, Mexico, the Philippines, Vietnam, Egypt, Turkey, Thailand and South Africa - with population over 50 million is expected to enjoy demographic dividend and high per capita economic growth rate in 2012-2015 period.

Japan's "2012 SMEs Overseas Business Activities Annual Field Survey" results indicate that 61.1% of Japanese SMEs ranks China as the most important market in overseas expansion in the future, followed by Thailand (7.5%), the U.S. (6.8%), South Korea (5.3%), Vietnam (7.71%), Taiwan (3.3%), Hong Kong (2.8%) and Indonesia (2.7%). Clearly, China and ASEAN countries are crucial to Japanese SMEs.

A comprehensive phone survey conducted by UPS Asia Business Monitor during Mar 11-Apr 20, 2010 interviewed 1,351 decision makers of SMEs in Asia. On "regions and countries of great economic growth outlook", 50% of the respondents favored Asia-Pacific, 77% pick India, followed by Indonesia (62%), Vietnam (59%), Mainland China (54%), the Philippines (51%), Thailand (47%); On "regions for future business expansion," 56% chose the Asia-Pacific region, followed by European (20%), Middle East (19%), North America (14%), Africa (12%) and Latin America (11%); further, for those who chose the Asia-Pacific, 86% chose Indonesia, followed by Singapore (81%), Malaysia (80%), Thailand (78%), the Philippines (77%), Japan (68%) and Vietnam (57%). Again, China and ASEAN countries rank high among the best markets to expand.

According to "2012 Report on Operations and Strategies of Taiwan Manufacturers" by Department of Statistics, Ministry of Economic Affairs, as shown in Table 6-2-1, of 2,887 enterprises surveyed in Taiwan, the highest ranked main export market to expand for medium-sized enterprises (100 to 199 regular employees) is Mainland China, followed by North America, ASEAN, Japan, Europe, South America, South Korea, India, Australia, New Zealand and the Middle East; for small manufacturers (less than 100 regular employees), Mainland China remains on top, followed by North America, ASEAN, Japan, Europe, South America, Middle East, India, South Korea, Australia, New Zealand. Clearly, China, ASEAN and India are top choices for Taiwan SMEs.

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In summary, in the next 20 years, emerging market countries will gradually catch up with the advanced countries and could become dominant force in the global economy. Therefore, it is of vital importance for Taiwan as well as other Asian SMEs to compete for the biggest growth opportunity in the history of capitalism in these emerging markets, especially in Mainland China, ASEAN, and India.

**Table 6-2-1 Taiwan Manufacturing Sector: Main Export Markets Ranking**

Unit : %

Country / Region	Total	Large Enterprise	Medium Enterprise	Small Enterprise
China (incl. HK & Macao)	35.23	36.46	33.39	35.03
Japan	12.32	12.43	12.75	11.99
ASEAN	12.07	11.04	12.92	12.59
N. America	16.21	16.70	16.61	15.56
Europe	10.04	10.11	9.23	10.37
S. Korea	1.86	1.39	3.19	1.62
S. America	3.75	3.90	4.03	3.49
Australia, New Zealand	1.47	1.30	1.68	1.53
India	2.63	3.43	3.02	1.70
Middle East	1.86	2.23	1.34	1.79
Other Countries	2.56	1.02	1.85	4.34

Notes: No. of regular employees of large enterprises > 200; medium enterprise: 100 to 199 regular employees; small enterprise: < 100 regular employees.

Source: Department of Statistics, Ministry of Economic Affairs, 2012 "Report on Operations and Strategies of Taiwan Manufacturers".

## 2. Overview of Asian Emerging Markets

According to Directorate-General of Budget, Accounting and Statistics, in 2012, exports to ASEAN-6 countries (Indonesia, Thailand, Malaysia, the Philippines, Vietnam and Singapore) increased by 9.8%, far better than the overall export performance of -2.3%. At the same time, exports to ASEAN-6 countries accounted for 18.5% of Taiwan total exports, a record high and two percentage points improvement from 2011, second only to China, Taiwan's largest export market. As Taiwan SMEs place more emphasis on emerging market countries, followed we will introduce and discuss emerging markets opportunities, focusing on China, ASEAN-6 countries as well as India.

### (1) Mainland China

In the five-year period of 2006-2011, according to the National Bureau of Statistics of China, Mainland China's average annual economic growth rate remained above 10%; total retail sales of social consumer goods increased from 7.9 trillion RMB to 18.4 trillion RMB at 18.4% compounded annual growth rate (CAGR), while urban residents per capita disposable income increased from

11,760 RMB to 21,810 RMB at 13.1% CAGR, much faster than GDP growth. China is gradually transforming itself from the “world factory” into a “world market” and rebalancing toward higher consumption with lower investment-led growth pattern. As the second largest economy after the United States, China is projected to become the world’s largest economy by 2025.

Based on Taiwan import and export trade statistics, total trade in 2012 between Taiwan and its largest trading partner Mainland China was about US\$121.6 billion, accounting for 21.27% of Taiwan total trade, of which exports to Mainland China amounted to US\$80.7 billion, and imports amounted to US\$40.9 billion, with US\$39.8 billion trade surplus. Taiwanese businesses entered Mainland China in 1991, first in the Pearl River Delta, a region of traditional labor-intensive industries, followed by large-scale investment in Yangtze River Delta, a main hub of electronic communications industry. In recent years, however, stricter environmental requirements, labor shortage, rising wages, land and other key input costs present serious challenge to grow business in the coastal cities. As the central and western regions offer preferential investment measures, some coastal Taiwanese firms start migrating to Sichuan, Hubei and other inland areas. A new tier of inland powerhouses - cities including Wuhan, Zhengzhou and Wuhu are drawing capital and factories from the east and abroad as companies such as Continental, the world’s fourth-largest tire-maker, and Unilever, the world’s No. 2 consumer-products maker, bet they will underpin the nation’s next decade of growth. In terms of market expansion strategy in China, many international consumer product companies (such as Coca Cola) indicate that they are in the process of shifting their strategy – moving from one in which the underdeveloped nature of the market made it fairly easy to grow by expanding capacity and infrastructure, to a more sophisticated strategy centered on greater brand building and regional and brand segmentation. They are still in the early stages of this strategy shift.

## (2) ASEAN-6

### A. Indonesia

According to IMF statistics, over the period of 2010-2012 Indonesia’s average annual economic growth rate remained at over 6%. Based on Indonesian Central Bureau of Statistics, 2011 per capita income of US\$ 3,500 was 16.7% higher than US\$ 3,000 in 2010; 2011 total trade value of US\$ 380.8 billion was 29.8% higher than US\$ 293.3 billion in 2010.

The incumbent President Susilo Bambang Yudhoyono is the first leader in Indonesia to serve two terms since the fall of the Suharto dictatorship in 1998, and he is bringing stability and flexibility the country needs to sustain a new phase of rapid growth.

Domestic demand is very strong under political stability and rapid economic growth. 2011 domestic consumption grew by 4.7%. AC Nielsen Company’s global consumer confidence survey pointed out that with Indonesia’s per capita gross national income in 2011 exceeding US\$ 3,500, consumers showed high confidence in personal finance and job market stability; 2nd quarter 2012 survey revealed consumer confidence index at 120, the highest in the world.

In 2009, the Indonesian government invested 113 trillion rupiah (about US\$11.7 billion) in

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roads, ports, airports, bridges, power plants and other infrastructure, and promised further investment in infrastructure to ensure sustainable economic growth. The 2007 “The New Investment Law” and ensuing policy measures increase the investment willingness of foreign enterprises, which are treated the same as local enterprises under the laws.

Based on Taiwan import and export trade statistics, total trade in 2012 between Taiwan and Indonesia (ranked 11th on trading value) was about US\$12.5 billion, accounting for 2.19% of Taiwan total trade, of which exports to Indonesia amounted to US\$5.2 billion, and imports amounted to US\$7.3 billion, with US\$2.1 billion trade deficit.

In terms of investment, statistics of the Indonesian Investment Coordinating Board show that from 1967 to 2011, Taiwan ranked 9th in foreign investments with 1,440 investments with cumulative amount of nearly US\$14.6 billion. The top three industries of Taiwan investment are furniture, textile and footwear. Taiwan businessmen formed “Taiwan Business Association” in all major cities in Indonesia and also established the “Indonesia and Taiwan Industry and Commerce Association” for local integration.

To seek business opportunities in Indonesia, in addition to the traditional motorcycle components, footwear, textiles and clothing industry, the trend in retail and service industries is promising, such as chain or franchise business models for restaurants, retail and service. Indonesia, among non-Chinese speaking country, has the largest ethnic Chinese population of over 20 million, about 10% of the population, with deep and rich Chinese food and dining culture. Indonesia is the world’s most populous Muslim nation, with approximate 204 million Muslim people in 2010. Muslims and Chinese consumers in Indonesia will be great opportunities for Taiwan’s SMEs to leverage cultural familiarity in building brand visibility with a cluster-by-cluster strategy that achieves high visibility and an aura of trust in both segments.

Currently, Indonesia IT products penetration rate is still low and the potential market is huge. 2010 IT spending was US\$4.5 billion, 25% over US\$3.6 in 2009. According to the International market research agency BMI (Business Monitor International), Indonesia’s IT market is expected to more than double from 2010 to US\$9.6 billion in 2015. Indonesia’s large and fast-growing IT market has drawn attention from leading international firms including Google, Microsoft, Toshiba, and Lenovo, who are vigorously strengthening their marketing and sales force in Indonesia. Bureau of Foreign Trade, Ministry of Economic Affairs added Indonesia in its list of key target emerging markets. It also authorizes Taiwan External Trade Development Council (TAITRA) to promote high quality, high value added Taiwan brands, such as IT products directly to end consumers by building visibility that achieves top-of-mind recognition.

### B. Vietnam

According to Vietnam Bureau of Statistics, over the period of 2009-2012 Vietnam’s average annual economic growth rate remained at over 5.5%. 2011 per capita income reached US\$1,300 in 2011 from US\$837 in 2007; total trade value of US\$109.2 billion in 2012 more than doubled US\$50.0

billion in 2007. The Vietnamese economy has weathered the global economic downturn relatively well at the expense of a brief spike of double digit inflation around 2011. In February 2011, the government shifted policies away from aiming high economic growth, which had stoked inflation, to those aimed at stabilizing the economy, through tighter monetary and fiscal control. In early 2012 Vietnam unveiled a broad, “three pillar” economic reform program, proposing the restructuring of public investment, state-owned enterprises, and the banking sector.

Vietnam initiated political and economic reform in 1986, shifting from the centrally-planned economy to a socialist-oriented market economy. Since implementation of the open-door economic policy, Vietnam has signed cooperative economic and trade agreements with EU (1992), engaged in ASEAN membership (1995) and AFTA, ASEAN Free Trade Agreement (2001), gained APEC admission (1998), sealed a US-Vietnam bilateral trade pact (2001), and joined WTO (2007). Vietnam offers a welcoming investment climate for foreign firms that wish to establish a presence here, including solid economic growth, political stability, a competitive workforce, a gradually more open and transparent market, abundant natural resources, and good geographic positioning in the region, no anti-Chinese sentiment, good for Taiwanese investors, improved transparency, predictability and significantly reduced tariffs after joining WTO and other critical bilateral and multilateral trade agreements. However, risks are plenty for foreign investment in Vietnam: bloated bureaucracy, lack of clarity is manifested in the process of investing, specific details such as prerequisite conditions for investment and land rights are not entirely evident, local governments’ tendency to overpromise and under-deliver, lack of infrastructure, lack of skilled labor, illegal strikes without warning, frequent power shortages, etc.

Based on Taiwan import and export trade statistics, total trade in 2012 between Taiwan and Vietnam (ranked 13rd on trading value) was about US\$10.7 billion, accounting for 1.88% of Taiwan total trade, of which exports to Vietnam amounted to US\$8.4 billion, and imports amounted to US\$2.3 billion, with US\$6.1 billion trade surplus.

In terms of investment, Vietnamese investment statistics show that from 1988 to 2011, Taiwan ranked 4th in foreign investments (after Singapore, S. Korea and Japan) with 2,219 investment cases with cumulative amount of nearly US\$23.5 billion. Majority of Taiwan investments are in small to medium size manufacturing. However, more Taiwan enterprises are increasingly exploring investment opportunities in Northern Vietnam, especially in ICT industry.

In terms of market opportunities, the textile, automobile and components, ICT, and medical and health care industries show great potential. In the textile industry, Taiwan businessmen in Vietnam have already established complete supply chain from raw materials to downstream. Taiwan enterprises can leverage Vietnam as a manufacturing base to further expand to ASEAN countries, China, Japan, South Korea and the European markets by forming strategic alliances with local Taiwanese garment factories, who can take advantage of the Vietnamese abundant skilled workforce in the industry while sourcing high quality chemical fiber, yarn, fabric products from Taiwan.

In automobile and components industry, Vietnamese enterprises and individuals have strong

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demand for cars, with 2011 per capita income reaching US\$1,300. The Vietnamese government is in the process of building the largest auto production base in Southeast Asia largest by 2015. In addition, Vietnam already joined WTO and other critical bilateral and multilateral trade agreements so improved transparency and reduced tariffs are expected.

In the ICT industry, there are over 20,000 ICT retail stores in Vietnam, number of stores and sales are growing at a rapid rate. In the medical and health care industry, Vietnamese elderly disease survey showed that proportion of elderly people suffering from chronic diseases is quite high, and an elderly person suffering from an average of more than two kinds of diseases. Health and prevention care are in earnest demand. Furthermore, disabilities in Vietnam about 6% of the total population, the local government will continue to implement the subsidy program to provide free wheelchairs, prostheses and other medical aids.

### C. Thailand

According to IMF statistics, In 2010 Thailand's economy growth rate was high at 7.8%, then down to mere 0.1% in 2011 due to historic flood. In 2012, Thailand economy recovered from previous year and increased by 5.4%. Total trade value jumped 30.2% to US\$452.8 billion in 2012 over US\$345.2 billion in 2011.

To relieve the fiscal burden of the government and attract investment inflow, The Board of Investment (BOI) of Thailand prescribes policies for investment promotion, including enhanced tax and duty privileges granted to projects that benefit the economy, remove of the restrictions on exports and use of local materials as required by international trade and investment agreements, special investment promotion plus maximum tax and duty privileges given to low income regions, no foreign equity restrictions on manufacturing activities or on some services, and no restrictions on land ownership by foreign entities. Furthermore, to attract foreign investment, Bank of Thailand relaxed foreign exchange control measures and waived the 30% withholding of foreign reserves for import requirements in March 2008. However, there are still plenty of risks investing in Thailand, including political instability, slow bureaucracy, lack of infrastructure, lack of skilled workforce, and rising wages.

Based on Taiwan import and export trade statistics, total trade in 2012 between Taiwan and Thailand (ranked 14th on trading value) was about US\$10.3 billion, accounting for 1.80% of Taiwan total trade, of which exports to Thailand amounted to US\$6.6 billion, and imports amounted to US\$3.7 billion, with US\$2.9 billion trade surplus.

In terms of investment, BOI statistics show that from 2009 to 2011, Taiwan ranked 10th in foreign investments with 111 investment cases, cumulative amount of nearly US\$5.0 billion. Majority of Taiwanese investments are in small to medium size manufacturing, agriculture, and fishery, with a few large investments in electronics, rubber, steel and petrochemicals.

In terms of market opportunities, Thailand's auto industry has well developed assembly lines but is not capable of making most components, such as small passenger engine, fuel injection pump,

transmission, differential gear, nozzles, electronic systems, and electronic control devices. Firms that have advanced technology and R&D capability could build factories in Thailand as local OEMs supplier of spare parts and technical services. To form strategic alliance with Japanese auto OEMs is another option since Thailand is being built into Japan's strategic auto models R&D base in Asia.

#### D. Malaysia

After the Asian financial crisis of 1997-1998, Malaysian economy has continued to post solid growth rates, averaging 5.5% per year from 2000 – 2008. According to statistics from Malaysian Investment Development Authority (MIDA), in 2009 economy was down 1.7%, then recovered quickly and up by 7.2% in 2010. Afterwards, total trade value jumped 30.2% to US\$452.8 billion in 2012 over US\$345.2 billion in 2011. Over the period of 2011-2012 average annual economic growth rate remained at over 5.0%. 2011 per capita income reached US\$9,508 in 2011 from US\$6,634 in 2009; total trade value of US\$414.7 billion in 2012 compared to US\$289.0 billion in 2009.

Based on Taiwan import and export trade statistics, total trade in 2012 between Taiwan and Malaysia (ranked 8th on trading value) was about US\$14.4 billion, accounting for 2.52% of Taiwan total trade, of which exports to Malaysia amounted to US\$6.6 billion, and imports amounted to US\$7.8 billion, with US\$1.3 billion trade deficit.

In terms of investment, Malaysian investment statistics show that as of 2011, Taiwan ranked 4th in foreign investments (followed by the U.S., Japan, and Singapore) with cumulative amount of nearly US\$11.6 billion.

In April 2009, Malaysian government offered new licenses for investment banking, Islamic banking, and insurance business between 2009 and 2011, and allowed foreign banks to open up new branches and micro-credit facilities. It also announced that the threshold of foreign equity ownership to be raised from 49% to 70% in industries such as tourism, transportation, sports and leisure, commerce and computer repair services, in an attempt to improve its domestic service personnel. In January 2012 it further relaxed foreign exchange regulations. However, Malaysian is the only Asian nation in which foreign direct investment is falling: the total flow of investment went negative in early 2006 and is still flowing out fast, at a rate of -2.5% of GDP in the 4th quarter of 2011. Consumer electronics is still the core of what remains of Malaysian manufacturing. But its manufacturing trade surplus has fallen sharply in the last decade, while China, S. Korea, Taiwan, and Singapore have all seen sharp increases.

Risks investing in Malaysia include bureaucracy, lack of domestic market statistics and information, and underdeveloped broadband internet and infrastructure, which make it hard for investors to build business intelligence and expand their business.

Majority of Taiwan investments are in food manufacturing, wholesale and retail, and electronic components industries in Kuala Lumpur, Penang, Johor, Malacca and other regions.

In terms of market opportunities, with rising per capita income and high consumption population increasing even faster, sports and leisure, and high-end consumer brands show great

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potential.

Malaysia population consists of Malays (63.1%), Chinese (24.6%), Indians (7.3%) and others. Most of them are Muslim. Currently Malaysian halal food certification issued by Halal Industry Develop Corporation (HDC) has won approval of 22 countries and 42 Muslim Associations around world. That helps explain, in part, why halal food market has been expanding.

### E. The Philippines

According to IMF statistics, in 2008 Philippine economy growth rate was 3.7%, then down to mere 1.1% in 2009 due to the global financial crisis. In 2010, it expanded by 7.3% anchored on recovery consumer demand, exports, investment, and fiscal stimulus. Amid sluggish U.S. economy, European debt crisis, Japan earthquake, and typhoons and El Niño, Philippine economy growth rate was back at 3.7% in 2011. In recent years, The Philippines has restored stability and proved resilient to food and fuel price hikes, the global financial crisis and recession. The economy again posted a 6.6 percent GDP growth in 2012, driven by higher government spending, especially in infrastructure expansion, and exports. Since 2010, per capita GDP has remained over US\$2,000; 2011 total trade value of US\$108.2 billion was slightly higher than US\$106.4 billion in 2010.

The Philippine Congress adopted the “Foreign Investment Act” in July 1991, which substantially liberalized foreign investment laws and policies in an attempt to catch up other ASEAN countries. Recently, Philippine government planned to attract about US\$1,218 billion foreign investment over the period of 2011-2016 through 13 investment promotion agencies. The Bangko Sentral ng Pilipinas, the country’s central bank, relaxed its rules on foreign currency transactions in a bid to stem the appreciation of the Philippine peso against the U.S. dollar in April 2013. This is the sixth time since 2007 that the BSP has relaxed its rules on foreign exchange transactions with banks.

The Philippines provides attractive investment climate for Taiwan enterprises, including markets with growing potential (such as agricultural cooperation), improving infrastructure, abundant labor resources, and its active participation in regional free trade agreements. Risks involve political instability, lack of industry clusters, and high wages.

Based on Taiwan import and export trade statistics, total trade in 2012 between Taiwan and The Philippines (ranked 12th on trading value) was about US\$11.0 billion, accounting for 1.92% of Taiwan total trade, of which exports to The Philippines amounted to US\$8.9 billion, and imports amounted to US\$2.1 billion, with US\$6.8 billion trade surplus.

In terms of investment, Philippine statistics show that over the period of 1998 - 2011, Taiwan ranked 8th in foreign investments (followed by the U.S., Japan, and Singapore) with cumulative amount of US\$1.2 billion.

Majority of Taiwan investments are SMEs (about 6,000 Taiwanese) spreading widely in cement, automotive, convenience stores, textiles and clothing, agriculture, electronics, real estate, construction, machinery, paper, plastics, chemical, food, finance and insurance, etc.

In terms of market opportunities, with growing per capita income and population, typically not savers, consumer market shows great growing potential. Other promising areas are farming and fishery that contribute the most to agricultural sector. In 2011, the country's agriculture sector is made up of 4 sub-sectors: farming, fisheries, livestock, and forestry (the latter 2 sectors are very small), which together employ 33% of the labor force. There are vast unutilized agricultural lands due to limited technology. Taiwan agriculture firms are well known for their advanced technology in The Philippines, and could play a key role in farming and fisheries.

## F. Singapore

According to IMF statistics, in 2011 Singapore's economy growth rate was 4.9%, down significantly from 14.8% in 2010. Hiring constraints due to government's push to limit the intake of foreign labor have led to a growing shortage of workers, coupled with an uneven U.S. recovery and Europe's protracted sovereign-debt crisis, the export-dependent economy only registered a 1.2% growth in 2012.

Singapore has a highly developed trade-oriented market economy. Its economy has been ranked as the most open in the world, least corrupt, most pro-business, with low tax rates (14.2% of GDP) and one of the highest per-capita gross domestic products in the world.

Singapore's aggressive pursuit of foreign investment as another pillar of its overall economic strategy has enabled the country to evolve into a base for multinational corporations (MNCs). The Economic Development Board (EDB), Singapore's investment promotion agency, focuses on securing major investments in high value-added manufacturing and service activities as part of a strategy to replace labor-intensive, low value-added activities that have migrated offshore. The government of Singapore is strongly committed to improving business environment, reducing operating costs, and maintaining a free market with comprehensive trading agreements with advanced markets and emerging countries, but also takes a leadership role in planning Singapore's economic development. The advantages to invest in Singapore include political stability, advanced infrastructure, highly educated and skilled workforce, pro-business foreign investment incentive system, free trade policy and respect for suggestions, which make Singapore a foreign investment priority in the Asian country. The World Bank's "Doing Business 2012" report ranked Singapore as the easiest country in which to do business. However, rising wages and labor shortage resulting in escalating operating costs are major concerns. Some observers also criticized the dominant role of government-linked corporations (GLCs) in the domestic market, arguing that it has displaced or suppressed private sector entrepreneurship and investment.

Based on Taiwan import and export trade statistics, total trade in 2012 between Taiwan and Singapore (ranked 5th on trading value) was about US\$28.2 billion, accounting for 4.93% of Taiwan total trade, of which exports to Singapore amounted to US\$20.1 billion, and imports amounted to US\$8.2 billion, with US\$12.0 billion trade surplus.

In terms of investment, Taiwan statistics show that in 2011 Taiwan made 12 investments cases

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amounted to US\$0.4 billion; over the period of 1952 to 2010, 485 investment cases with cumulative amount of US\$6.0 billion. The majority of Taiwan investments are in electronic component manufacturing, finance and insurance, transportation and warehousing.

In terms of market opportunities, telecommunications, petrochemical and ICT sectors show clear growing potential. In November 2011, the government amended the Telecommunications Act, to curb monopolistic anti-competitive behavior and ensure equal and open access. Singapore government strives to attract foreign investors in the petrochemical industry, an example of a cluster approach to expansion. The government has recently committed to promoting e-government policies. Taiwan needs to watch carefully and grasp the opportunities of the coming large ICT orders.

### (3) India

According to IMF statistics, over the period of 2003-2011 India's average annual economic growth rate remained at over 8.0%. 2011 per capita income reached US\$1,517 in 2011 from US\$443 in 2001 at a superior 13% CAGR.

Indian economic policy after independence (1947) tended towards protectionism and central planning socialism, resulting in depressed industries, poor living standard, and on verge of fiscal bankruptcy in 1991. Then Finance Minister Manmohan Singh initiated fiscal and financial reform to improve trade and investment environment and moved toward market economy. Based on the economic analysis of Department of Investment Services, India presents the polarization of lifestyles in social class and consumption. It has more absolutely poor people than Africa, and more billionaires than Britain. Ethnic and religious influences are significant in business conduct. Tiered marketing and traditional small shops are the main marketing channels. Foreign investors need to be keen on lack of credit information, difficulty in building business intelligence, high hidden costs, and vast difference among local government business tax provisions and cultures – even the dates and names of holiday seasons and the peak seasons for brand advertising shifting state by state. Compared to China, India is far less homogeneous in languages and consumer tastes.

In terms of investment, Taiwan statistics show that total trade in 2012 between Taiwan and India (ranked 19rd on trading value) was about US\$6.1 billion, accounting for 1.05% of Taiwan total trade, of which exports to India amounted to US\$3.4 billion, and imports amounted to US\$2.6 billion, with US\$0.8 billion trade surplus. Over the period of 2000 to 2012, Taiwan's cumulative investment amount to mere US\$0.1 billion. The majority of Taiwan investments are located in New Delhi (capital), Mumbai (the largest industrial and commercial hub), and Chennai (major manufacturing center). Local Taiwanese established Taiwan Business Council of New Delhi in August 2010 and Taiwan Business Council of Mumbai in March 2011 to promote regional cooperation.

In terms of market opportunities, retail, auto and motorcycle components, and ICT sectors show growing potential. The United Nations Conference on Trade and Development (UNCTAD) indicates that Indian retail service channels consist of 12 million grocery stores – 78% are small family-run mini stores, while only 4% stores have over 500 square feet. The potential for large scale retailers are

huge. Starting from 2012, Indian allowed 100% foreign ownership of single-brand retail business. India is also the world's fastest growing market for auto sales, with low auto ownership leaving considerable room for growth. The India Semiconductor Association (ISA) forecasts that by 2015, the Indian ICT market will grow to US\$363 billion, accounting for 11% global ICT markets. Due to under developed and incomplete local ICT supply chain, B2B remains a potential opportunity.

The above overview of major Asian emerging countries and their economic and trading relationship with Taiwan is summarized in the following as shown in Table 6-2-2.

**Table 6-2-2 Asian Emerging Markets Economic Performance in 2012**

Indicators Countries	Macro economy			Amounts and annual changes of foreign trade				Amounts and annual changes of foreign trade of Taiwan				The investment amount and case of Taiwan	
	Per capita GDP (US\$)	GDP (million US\$)	Economic growth rate (%)	Amount (million US\$)		Annual percentage change (%)		Amount (million US\$)		Annual percentage change (%)		Case	Amount (US\$)
				Export	Import	Export	Import	Export	Import	Export	Import		
China	4944.338	6,698,892	7.8	2,048,814	1,818,069	0.08	0.04	80,713	40,907	-3.86	-6.16	636	12,792
India	1,315.94	1,643,984	4.0	293,214	489,364	-0.03	0.05	3,384	2,623	-23.55	-16.35	3	20
Singapore	43,489.97	217,534	1.3	408,393	379,723	0.00	0.04	20,090	8,105	19.02	1.91	19	4,498
Thiland	4,946.07	341,343	6.4	229,519	247,590	0.03	0.08	6,565	3,696	6.94	-15.86	14	61
Indonesia	3,540.75	852,242	6.2	188,146	190,225	-0.06	0.08	5,190	7,324	7.31	-1.39	6	17
Philippines	2,158.11	210,958	6.6	51,995	65,360	0.08	0.03	8,876	2,100	27.45	-13	2	10
Malaysia	8,501.53	248,257	5.6	227,388	196,615	0.00	0.05	6,557	7,841	-4.85	-8.83	10	187
Vietnam	1,427.10	128,993	5.0	114,573	113,792	0.18	0.07	8,431	2,294	-6.58	24.36	24	943

Source: IMF World Economic Outlook; DGBAS, National Accounts; National Bureau of Statistics of China; Bureau of Foreign Trade, and Investment Commission, Ministry of Economic Affairs.

### III Case Studies of SMEs: Emerging Market Development and International Collaboration

In recent years, many outstanding SME Awards winners in Taiwan have accumulated successful experience in emerging markets development and international collaboration, which provide valuable source of case studies.

#### 1. 3S Silicon Tech., Inc.

##### (1) Introduction

3S Silicon Tech., Inc. (3S) is a total solution provider of die bonding in discrete power devices. 3S is established in 1998, headquartered in Hsinchu, Taiwan with branch offices and sales offices in Shanghai, Singapore, The Philippines and Malaysia.

Today, 3S is a niche market leader in Die Bonder in Discrete Power Devices, such as diodes,

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Power MOSFET, and High Power LED. Recently, clip die bonder has been widely used in the package of high current power devices, owing to its obvious advantages over traditional wire bonder in the respect of contact resistance and package size. Over 90% of world's major bridge rectifiers packaging companies using 3S's clip die bonder to produce high quality products. The keys to its success are relentless pursuit for better systems, better service and higher customer satisfaction, nonstop technological innovation and integration, and a total solution provider and scalable market leader in highly customized niche market. 3S was a proud winner of Taiwan's 2012 National Award of Small and Medium Enterprises granted by SME Administration, Ministry of Economic Affairs.

### (2) Business Strategies

3S' main customers are semiconductor manufacturers in Europe and America. Many of them have moved production to plants set up in Mainland China or ASEAN countries, especially in The Philippines that has been a semiconductor packaging plant center and 3S' strategic priority in ASEAN. The trend of localization has seen more local Filipino moved up as managers and/or shareholders of these local subsidiaries of 3S' main customers. Therefore, to get business from these subsidiaries, 3S must win over their local agents. 3S' Philippine market model is through local agents cooperation or vertical division of labor, i.e. 3S responsible for providing technology while local agents focus on marketing and developing new customers.

Through cooperation with local agents, 3S could quickly overcome cultural and language barriers, hence lower communication risk and cost while focusing more on R&D, quality and customer services. Further, through constant feedback from local agents, 3S is able to keep its finger on the market's pulse, and acknowledge latest customers' needs and competitors' moves. Mr. Weizhong Zhang, 3S's Chairman of the board of directors mentioned that semiconductor packaging equipment market used to be dominated by foreign firms. Faced the threat of large competitors, 3S had its own growing pain, and then realized that SMEs had better chance to survive and even thrive in a highly customized niche market, as flexibility could serves as SMEs' competitive advantage. Since then, 3S has concentrated its firepower at the high-power devices, characterizes by changes product specifications and high degree of customization.

In facing changing customization demands, 3S works tirelessly with local agents to get abreast of market trends and make timely adjustments. The long-term effort finally pays off. 3S is now regarded as a trusted and dependable total solution provider of highly customized die bonding in discrete power devices offering high quality, good services, and competitive prices, and gradually replaces foreign manufacturers. From this corporation model, agents can earn commission or fees from obtaining orders for 3S, as well as from subsequent orders of supplies and parts for maintenance or services – an attractive, repeat revenue stream.

3S and agents communicate with each other in three ways: (A) Daily email - agents provide instant feedback of customer needs and information of market so 3S can react quickly to solve customers' problems; (B) 3S pays personal visit in The Philippines on a quarterly basis; and (C) For major equipment problems that agents' service personnel cannot fix, 3S will send technical personnel

to The Philippines to fix problem while providing on-site training to agents' service personnel on maintenance or repair skills.

Successful cooperation with the Philippine agent is built on trust. Though 3S' local agents are Filipino-American, not Chinese, both sides have a common entrepreneurial experience and established deep relationship and trust for a long time. Besides mutual trust being the most important, Chairman Zhang said that, when choosing agents, 3S pays special attention to their core competencies in (A) networking, to reach wide customer base and able to obtain orders, (B) services, to help billing, accounts receivable, and debt collection – cash flow is king, and (C) basic maintenance and repair, for customer satisfaction and lowering S3's servicing cost.

## 2. Joy Industrial Co., Ltd.

### (1) Introduction

Joy Industrial Co., Ltd. (Joy) was founded in 1971 by Steven Chen. At its inception, Joy produced bicycle hubs on a small scale, only 6 workers and a factory of 50 square meters. Through years of hard work, Joy has expanded significantly with over a thousand workers and factories in Taiwan, Shenzhen, and Kunshan, and branch offices or dealers in Asia, Europe, and the U.S. Joy, a member of Taiwan's A-Team (a bicycle alliance), is now a leading international manufacturer of hubs and wheel sets. Its hubs, the chief product line, command 16.8% global market share (from the highest share at 18.6%), making Joy one of the world's leading hub producers. Alongside of its expansion, Joy keeps focus on actively brand marketing, such as "Joytech" for OEM and "Novatec" for aftermarket, and sustainable growth. It engages in continuous R&D, non-stop innovation, and builds up sales and production scale. Joy's full-carbon wheel set "Novatech Craft" won both an iF Award and Red Dot Design Award in 2009. Joy has expanded into green energy product lines including electric motors, controller, lithium battery assembly, and e-bikes under the Pantec and Dienatronic brands.

### (2) Business Strategies

Joy expands mainly through international cooperation to open up overseas markets covering Asia, Europe and Mainland China. In its early years, Joy entered the Southeast Asian market as OEMs for Southeast Asian Chinese manufacturers, producing low-end and low margin components. Later Joy partnered with Suntour, a Japanese leading innovator in bicycle components, to open Japanese market while learning Japanese quality management and manufacturing. Through a decade of effort, Joy established its presence in Southeast Asian market, but faced tough challenge from competitors who once were Joy's customers. Joy thus gradually shifted its target overseas markets towards Europe, Japan and the Chinese mainland market, built its own branded products such as "Novatech" (sports cars' hub and rim set) and "FACTOR" (top end brand wheel hubs). In recent years, the bicycle market in emerging Southeast Asia has shifted from purist fixed-gears toward branded models promoting images of health, youth, elegance, aesthetics, pleasure, and durability. Joy returned to Southeast Asian markets, adopting the proven U.S. and Europe models focusing on high-end bicycle components.

To meet customer requirements, Joy, through its Europe and the United States subsidiary

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working with local designers on latest sports fashions, joint R&D of new materials, exterior design, and joint marketing strategies, enhances the brand images and expand the Southeast Asian high-end bicycle components market. The design companies with which Joy collaborates have R&D teams that provide Joy immediate feedback on the latest technical information. Both sides communicate through international exhibitions and real-time video conferences on product development and designs for the Southeast Asian market. Joy, its European and the U.S. designers also conduct weekly video conference with its Asian agents to understand local demands.

Chun-Hsiung Chen, president of Joy pointed out that the emerging Southeast Asian markets, such as Vietnam, The Philippines, Thailand and Indonesia, are significantly different from Japan, Europe or the Chinese mainland market. Most of the Southeast Asian markets are dominated by Chinese enterprises. These local Chinese owners are usually the third or fourth-generation of the original Chinese immigrants, and are already deeply rooted into local thinking. To compete or cooperate with local Chinese enterprises is no easy task. Joy must differentiate by its advanced technology, strong R&D, and high-end branding, which local Chinese enterprises lack, and strengthens its strategic alliance with designers to achieve shared branding value-added effect in emerging markets.

### 3. Chi Hua Co., Ltd.

#### (1) Introduction

Chi Hua Co., Ltd. (Chi Hua) was founded in March 1997 by Mr. Lee Ying-Che. At the same year the patent of the magnetic brake was certified in the USA, Germany, Taiwan and China. Chi Hua is principally engaged in the manufacture and distribution of fitness equipment components and related products. It provides electric machines, including direct current (DC) motors, electric power generators and mini magnetic controllers; electronic controlling products, including electronic meters and controllers; system integration of electric machines and electronic controlling products, including controlling plates and magnetic controlling devices, as well as other products, such as hand grip sensors, gear motors and bicycle trainer systems.

In 1998 Chi Hua began producing “AC Generator Brake” and its matching “Lower Control Board” and “LED Console”. In 2000, patent of “Hybrid Brake” was certified in the USA, and Chi Hua became supplier to the U.S. leading sports equipment company “PRECOR.” In 2001, patent of “Direct Driving Apparatus for Electric Treadmill” was certified in the USA, Germany, Taiwan and China. In the meantime, Chi Hua Shanghai factory started to produce the Eddy Current Brake in June. In 2005, Chi Hua set up a design center in Taipei, and began supplying the “traditional type Brush DC Motor” to Precor Co. In May 2008, Chi Hua founded Vietnam factory to produce metal processing parts for Taiwan factory. In July, it founded Shanghai Yihua Sports Goods Co., Ltd. In 2010, Chi Hua started mass production in Vietnam factory, won Taiwan’s 2010 National Award of Small and Medium Enterprises granted by SME Administration, Ministry of Economic Affairs, and successfully launched initial public offering (IPO).

## (2) Business Strategies

Currently, Japan and the Netherlands are two major markets for Chi Hua's medical rehabilitation equipment. Chi Hua has decades of cooperation with Senoh, Japan's leading manufacturers of medical rehabilitation equipment in the world. Chi Hua used to supply the generator components to Senoh. Senoh invested heavily in R&D and manufacturing processes for decades. Due to very high quality requirements typically in Japan, Senoh's high-end expensive equipment cost even more without big enough market to justify mass production. The 2008 outbreak of the global financial crisis exacerbated the problem. Senoh realized that it had to drive costs much lower to increase production scale and gain market share. Therefore, Senoh and Chi Hua further strengthened their alliance: Senoh provides design specifications and completes data set of the study results (with exercise physiology researchers of University of Tokyo) to Chi Hua, and Chi Hua as a mass production ODM sells the equipment back to Senoh, which sells the products to the "Ten Ping Gym" of Japanese communities, providing preventive medicine and services to the elderly.

The so-called "Ten Ping Gym" is a rehabilitation and prevention program that the Japanese government promotes for aging society. The concept "Ten Ping Gym" is different from aerobic exercise and general fitness. It is based on what Kobayashi, Professor of University of Tokyo, introduced "perception-action training method." The goal is to enable easy and healthy exercise for older people to prevent various diseases from developing. A "Ten Ping Gym" is a gym of about 33 square meters, specifically designed to provide a 10 to 15 floor rehab exercise spaces, and the rehabilitation medical equipment. With more than 30 million people over 65 year old in Japan, medical rehabilitation equipment market is growing. Senoh drives to make its rehabilitation equipment an important part of the government promoted prevention program and are actively seeking cooperation with Japanese government and insurance companies to encourage more general residential communities to adopt "Ten Ping Gym."

Chi Hua continuously fine-tuned the production process, partnering with Taiwan's Chung Shan Medical University, and regularly seeks users' feedback and technical guidance from Senoh. Through mass production and process improvements, Chi Hua is able to sell equipment to Senoh at about 60% of the original retail price. Senoh's sales in Japan also increased dramatically, as the "Ten Ping Gym" becomes more popular. Besides its main markets in Japan and the Netherlands, Chi Hua intends to replicate the success in Japanese market, to get a larger share of the world's US\$300 billion medical rehabilitation equipment market. The next move is to expand Taiwan and ASEAN emerging markets. The Japanese "Ten Ping Gym" model of strategic alliance could be introduced to ASEAN countries, targeting affluent people. Thailand, a growing emerging economy with political stability, could be Chi Hua's pilot market for ASEAN expansion.

### 4. Shuter Enterprise Co., Ltd

#### (1) Introduction

Shuter Enterprise Co., Ltd (Shuter) , established in 1969, started from a small parking lot, now has become the leading storage company in Taiwan. Between 1969 and 1979, Shuter was a small contract manufacturer of chocolate boxes, a wide range of knife handles, and playback rotary knobs. With decade experience in OEM process and quality management, founder Jinglin Wu initiated the brand creation in 1979, and formally transformed itself into a consumer brand storage enterprise. Shuter currently owns two brands:

(A) “Shuter”: Taiwan’s No.1 brand in storage, targeting Taiwan domestic and India markets of office locked storage. “Shuter” focused on steel and plastic storage cabinets and work tables serving domestic factories but mainly exporting to seventy overseas countries targeting foreign industrial and OA office;

(B) “Livinbox”: A high-end storage brand, specifically targets furniture markets in U.S. and Australia, and offers organizers, cabinets, tables, keyless lockers, chic multi-functional storage, etc.

So far, Shuter has reached the markets in Asia, America, Canada, Europe, Africa, Australia, and New Zealand. It is aiming to offer a wide variety of distinctive branded storage systems all over the world.

Shuter was a small domestic player with about 100 employees until 2000, when Yirui Wu, the incumbent general manager, joined Shuter after finished study overseas, and established the R&D team of 15 consisting of precision tool engineers and graphic designers, and started creating the two brands and exporting to overseas. Shuter’s product qualities meet or exceed the highest standards of national testing, especially in safety, pressure or impact resistant, durability, and non-toxic plastic material. Shuter won Taiwan’s 2012 National Award of Small and Medium Enterprises granted by SME Administration, Ministry of Economic Affairs for its recognized quality and successful overseas expansion. “Shuter” brand is well recognized in India as high value-added products of safety and quality, characters typically sought after in the market.

#### (2) Business Strategies

In 2007, Shuter signed the agent as its exclusive distributor in India. Though no funding relationship with Shuter, the agent, based on the business potential and trust, promotes the same “Shuter” brand in India, and adopts the same red internal uniform for its staff as Shuter uses in Taiwan. The agent also takes initiative to follow market trends and offers design and marketing recommendations on a regular basis. Shuter, in return, provides product videotapes for sales staff training, including assembling procedure, layout map, and fixing minor quality problems.

Due to different commercial practices in India, Shuter maintains flexible on agent’s handling of timing on billing and collection, out of mutual understanding and trust. India agent’s innate understanding of the products and local niche markets adds a lot of value to the corporation, especially in Shuter’s successful expansion into medical storage market. Shuter is planning to

replicate the successful India model of alliance in Singapore market.

## 5. San Lien Technology Corp.

### (1) Introduction

San Lien Technology Corp. (San Lien) was founded on February 20, 1967, engaged in the design and production of control panel and switch gear. The company went IPO in 2001. It obtained ISO 9002 quality assurance system certification in 1997 and ISO 9001 certification in 2002. San Lien has been principally engaged in the design, manufacture, assembly, trade and system integration of sensors, measuring technology, monitoring systems, semiconductor equipment, industrial automation and graphic equipment.

For over 40 years, San Lien has been dedicated to Taiwan market. Today, it has transformed into an electromechanical integration vendors covering semiconductor, industrial sensing or measuring, and various construction projects. In addition to collaboration with semiconductor giants TSMC and UMC, San Lien has been actively developing overseas markets as part of its global diversification business model. San Lien won multiple awards for its achievement in R&D and quality management, such as Taiwan's 4th National Award of Small and Medium Enterprises in 1995.

### (2) Business Strategies

San Lien's founder Mr. Rongqu Lin in early years worked for the Taiwan Power Company and was sent to Japan to learn the industrial process automation technology, and gained factory operation experience, which planted the seeds for cooperation with Japanese companies in the future. After the 1990s, Taiwan's semiconductor gradually transformed from government-led industry into a market driven industry dominated by private enterprises. San Lien began branching out into electronics manufacturing equipment, specialty chemicals process equipment services, including wafer cleaning, etching equipment installation and testing, and various semiconductor equipment related supplies. San Lien's business and profits grew strongly during the semiconductor boom. In 1996, Kemitek Industrial Corp. (KIC), a 50-50 joint venture between San Lien and Japan's Tama Chemicals Co., Ltd. (Tama Chemicals) was formed, principally engaged in the production of specialty chemicals for semiconductor and optoelectronics industries and acted as a agent for Tama Chemicals to market products, such as high-purity chemicals.

The joint venture KIC operates in a highly collaborative way. Tama Chemicals is responsible for technology development and import quality management, while San Lien provides human resources, finance and accounting, and information management system, as well as assists in manufacture and sales of high-purity semiconductor cleaning and film-forming materials. Through the alliance, San Lien obtains valuable know-how of Tama Chemicals' advanced R&D, manufacturing, and quality management, while Tama Chemicals gains access to San Lien's sound finance, accounting, and information management system, low cost production, and market opportunity - a benign knowledge feedback mechanism.

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To San Lien and Tama Chemicals, in addition to develop chemical agents market in Taiwan, KIC, the joint venture, also serves as their Asian operations center in Chinese market, especially in Mainland China and Singapore, where San Lien already has some successful development experience.

KIC replicated the Taiwan model to set a Singapore factory – a 50-50 joint venture between KIC and a Singapore Chinese firm, a “(Taiwan + Japan) + Singapore” operation model. Specifically, KIC is responsible for staff training, technology transfer, policy and quality management, while Singapore Chinese firm focuses on production, networking, and marketing and sales, targeting local market as well as ASEAN countries.

In the Chinese mainland market, San Lien and KIC set a shared Shanghai branch office to market chemicals to electronics manufacturers in Shanghai. Both San Lien and KIC, through shared branch office, can lower the marketing and administrative cost, share business intelligence, and jointly develop new customers for both sensing machine equipment and chemicals. Furthermore, San Lien will benefit in Chinese market from lower tariffs as more chemical products will be included in ECFA list.

San Lien and Tama Chemicals’ cooperation model has been a success in Taiwan market, and has gradually borne fruits in Asian emerging markets. However, it was not a smooth sailing. Tingfang Lin, general manager of San Lien, pointed out that in business decisions, the Japanese companies tend to be more conservative, and Taiwan are more flexible. Therefore, both sides need to maintain open and regular communication, and make adjustments accordingly, in order to establish a solid basis for trust.

## 6. Aurotek Corp.

### (1) Introduction

Aurotek Corp. (Aurotek) was established in 1980. The Company employs about 160 peoples and is principally engaged in the manufacture and distribution of automation systems and safety systems. The core businesses are transmission, factory automation, and seismic isolation and safety devices. Its products include automation and robotics components, such as actuators (linear axis), motion controllers, transmissions, and quartz oscillators; factory automation comprising PCB separators, mechanical arms, optical communication equipment, plasma cleaning equipment, and DeMeet 3D CNC coordinate measuring machines; and patterned substrates, and patterned technology and equipment. The company also offers isolation and damping devices, natural ventilation systems, and energy saving blinds.

In 1981, Aurotek was a mainly a trading company importing products from Japan’s OILES Industry Co., Ltd. (OILES). In 1988, Aurotek made a major move to form joint venture with OILES and setup Taiwan OILES Industry Co.. Aurotek launched  $\beta$  Series robot and  $\Sigma$  series single axis robot arm in domestic and overseas markets in 1996, and then won National Silver Award of Excellence as well as Excellence of Taiwan Product 1997 by  $\beta$ -series Multi-axes Robot. In 2007, Aurotek was listed in Taiwan Stock Exchange.

## (2) Business Strategies

Aurotek has been transformed into an automation mechatronics vendor, and engages in import and export related components. Its products are widely used in aerospace, automotive, and semiconductor equipment industry. Based on successful automation innovation, it won 2001 SME Innovation Research Award and National Award of Small & Medium Enterprise.

Aurotek and OILES have been trusted partners for over 30 years. Currently, OILES is responsible for the operation, R&D and production in the joint venture plant in Thailand while Aurotek assists in marketing, sales, and post-sales service through its Thailand marketing subsidiary. The executive in charge of the subsidiary also have a seat in joint venture's board of directors. Both sides have maintained close partnership. The joint venture realizes the importance of hiring local talent to overcome language barriers, especially for transaction contracts documents.

Yongchang Zhang, Chairman of Aurotek, mentioned that Aurotek's collaboration with Japanese companies is built on trust. Once you win trust from Japanese companies, it's very likely that there will be a long-term relationship. However, it's not always a smooth sailing. The major issue is that most Taiwan firms, especially SMEs, are family owned business so that the owners often stay on top for decades, while most Japanese presidents or executives move up on top by climbing the corporate ladder for years. They may not stay very long. Once they are retired or replaced, there could be collaboration gap and concerns of the direction of strategy. Taiwan SMEs need to be proactive in facing this inherent difference.

## 7. Green Paddy Animation Studio

### (1) Introduction

Formerly known as the Blue Bird Cartoon Company founded in 1985, an animation OEM subject to low margin and seasonality. In 1989, Bluebird's Pepsi commercial animation was well received, and Blue Bird began to transform into an animation and entertainment company. In 1991, Green Paddy Animation Studio (Green Paddy) was established. Green Paddy is principally engaged in original animation content development, advertising animation and derivative product licensing.

Green Paddy has produced a series of well-known comical characters including "Jokes," "PoPo & Friends," "Pee-holding Dog," "Mr. EQ," "Why Why Why," etc. It has won many awards including "2010 Gold Medal Prize, 4th China Original Made-for-Mobile Animated Film or Video Game" and "2006 MIPCOM Mobile TV Awards - Best Original Made for Mobile Film or Video Content" in France.

In 2005, it created the "A Fish with a Smile" the biggest hit of all, and won over ten international awards including 2005 Best Animation Film Award at the Asia-Pacific Film Festival, and 2006 Special Jury Award at 56th Berlin International Film Festival. "A Fish with a Smile" is an animation adopted from Jimmy Liao's popular illustrated book by the same title. It is about a lonely man who meets a fish that smiles at him. He takes her home but finds himself saddened by the sight

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of the fish constrained in the tiny tank. Felt connected to her, he can no longer deny the desire for freedom that he feels deep within himself. In the end, he returns the fish to the ocean, and discovers what he has freed is indeed the long-lost himself.

### (2) Business Strategies

Green Paddy has customers across Taiwan, Mainland China, Hong Kong, Singapore, Thailand and Malaysia. In Taiwan market, it principally engages in the production of animation for mobile users and advertising animations for clients such as Mei Cakes, McDonald, E. Sun Bank and telecom industry. To penetrate Chinese mainland market, Green Paddy focuses on building reputation through participating and winning local animation competitions. Its major clients include China mobile, Hunan Talkweb Information Systems Co., Ltd. and Youku Potatoes Group. The similar strategy is applied to opening up ACEAN market.

In Dec. 2009, Green Paddy forged an alliance with DLE (Dream Link Entertainment Inc.), a Tokyo-based animation and entertainment content company founded in 2001 by former Sony executive Ryuta Shiiki, with the vision of becoming a global entertainment company. DLE is currently the No.1 flash animation studio in Japan, delivering shows and characters for television, web, ads, social networking, games and other media. Unlike previous animation producers, DLE pays much more attention to owning copy rights and distribution rights of the original content to protect its revenue stream. DLE has access to the best talent in Japan and is currently developing vertical integration, co-productions and co-ventures in Taiwan, Southeast Asia, the Middle East, China, and the United States.

DLE seeks to benefit from Green Paddy's in-depth knowledge and wide reach in the Chinese market and innate understanding of Chinese culture for its expansion into the Chinese market. Meanwhile, DLE can aid Green Paddy in penetrating the Japanese animation market and launching a strong brand name through its unparalleled networks in Japan.

DLE values Green Paddy's creativity and passion for original content, and wants Green Paddy to provide ideas, stories, and screenplay suitable to Chinese market for its production. However, Green Paddy does not agree with this approach without sharing content ownership. Green Paddy has the capacity to produce world class animation, and no longer wants to play the supporting role. For Green Paddy, the desired direction of cooperation with DLE, considering that about 70% of the animation profits come from the related merchandise and derivatives, is to play a partner role in production commanding fair share of life time revenue stream, while leverage on DLE's networks to establish its own global brand name.

### 8. Wei Kai Industrial Co., Ltd.

Wei Kai Industrial Co., Ltd (Wei Kai), headquartered in Taoyuan, Taipei, formerly a one-dimensional copper and scrap metal recycling vendor and a long-term sales agent for Japan casting products, was formally established in 1985 as sales agent to promote crucible, its main product line. In 1994, it

began to invest overseas to establish subsidiaries in Malaysia and Thailand, Vietnam, Indonesia and China.

Wei Kai has been sales agent in Taiwan for REFRATECH, Japan's crucible manufacturer, for more than 20 years, and has also extended its agent partnership to China and the East Asian regions. Although there is no equity or funding involved, Wei Kai acts as REFRATECH's Asian operation headquarter due to long term trust and great relationship between them. Wei Kai played a vital role in helping REFRATECH improve product specifications suitable to Taiwan market, establish its "Black Bear Crucible" brand, and gain market share.

The partnership works well in Asia outside Taiwan. For example, in 2006, REFRATECH set up a factory near Wei Kai's Thai subsidiary, which is responsible for Japanese local customer needs and products maintenance, reducing REFRATECH's operation and funding risks in Thailand.

The partnership between the two SMEs works on complementary strength effectively. Wei Kai is responsible for marketing, after sales customer service and end users feedback. Meanwhile, REFRATECH focuses on R&D and manufacturing activities. It will be a surprise to many that there is no legal document of agreement nor power of attorney binding the partnership, which is solely trust based, as Guochao Huang, Chairman of Wei Kai, put it "partnership based on trust, open communication, honesty, and common interests first, is more important than any legal document."

## IV Strategies and Suggestions

Based on the analysis of global emerging economies and case studies, Taiwan's SMEs need to diversify their trade markets, form complementary alliance to reduce cost and enhance success rate, and craft strategies more oriented toward driving innovation and expansion through consumer-relevant products and trusted brands to meet the local demand of the surging emerging middle class.

### 1. Establish Trust First with International Partners, Reducing the Risk of Failure in Emerging Markets

The real reason that most SME international alliances fail is the constant change in the business environment, especially in early stage cooperation in emerging markets, where partners inevitably encounter problems rising from gaps in value, cultures and business practice. High trust levels are a good predictor of alliance success. Trust allows the parties in a strategic alliance to deal with difficult discussions that will transform the alliance over time and give it longevity. In the most extreme cases, trust enables the adaptability – even renegotiation of the financial terms – to accommodate changes in market or other conditions that impact one of the partners. Therefore, it's vital to invest considerable time and efforts to know each other personally through meetings, exhibitions, networking and so on, and to build friendship and trust before enter into serious cooperation.

### **2. Build and Enhance Competitive Advantage through Complementary Alliance in Emerging Markets**

Taiwan's SMEs, whether partnering with firms from advanced countries or emerging countries, must recognize its own strength and weakness, and find the right partner to leverage complementary external resources to build on and enhance its own competitive advantage. In partnering with well established firms from advanced economies, Taiwanese SMEs should focus on knowledge and technology transfer and improve their own designing capability and value added brand images. In partnering with emerging enterprise, Taiwanese SMEs should leverage partners' sales networks, market knowledge, and customer services to build scale and customer awareness quickly in target markets.

### **3. Enhance Brand Value to Attract Right Partners**

SMEs should work tirelessly to build brand value, thus attracting international partners to provide new market opportunities, and expand the existing markets. In particular, participating and winning local and global contests to achieve high visibility and trust prove to be rather effective.

### **4. Value-Added Branding Strategy: Apply Advanced Markets Experience to Emerging Markets**

Most Taiwanese SMEs, before entering into emerging markets, have first-hand experience in advanced countries and built manufacturing capabilities for high-quality products. And thus are well recognized by international peers for good reputation. In emerging market, especially B2B market, building brand image that allows more customers to derive value from "shared brand value-added" is vital. In fact, many Taiwan SMEs are "hidden champions" with brand awareness in advanced markets, and apply this advantage selectively to emerging markets. Compared to consumers of advanced economies who accustomed to mass media commercials, the intensity of emerging consumers' focus on word of mouth favors brands with high visibility and an aura of trust. SMEs and their alliances can build visibility with a cluster-by-cluster strategy that achieves top-of-mind recognition in a handful of selected cities before moving to the next batch. Locally focused campaigns have the added advantage of accelerating network effects and making it easier for firms to generate positive word of mouth-a critical prerequisite for emerging market success.

### **5. Establish Investment and Counseling Platform to Facilitate Matching of International Partners**

SMEs normally lack the capital, talents, and networks to be able to find a suitable partner to expand in emerging markets. Government agencies may act as a platform for international business cooperation to promote Taiwan's outstanding SMEs and their specialty products and achievements to foreign industry associations whose members seek to expand into emerging markets. In addition to matching functionality, the platform can work with venture capital firms, set evaluation criteria, and facilitate funding of selected SMEs that have the potential to expand in emerging markets.

## **6. To SMEs Owners: International Vision, Business Acumen, and Continuous Learning**

To be successful in highly competitive emerging markets and maximized long term benefit of international partnership in ever changing business environment, SMEs owners must broaden its international vision, enhance business acumen, challenge status quo, and never stop learning. Currently government agencies entrust foreign trade associations, CDRI (Commercial Development Research Institute) and other legal think tanks promoting “quality affordable emerging market-driven solutions,” that offers courses on emerging markets related personnel training, marketing, international trading, etc. It will be of great help to add business decisions related courses and invite experienced SME operators to share their actual decision-making process in overseas expansion on a regular basis.

## **7. Assist SMEs in Building Network for International Cooperation**

Multiple concrete measures have been introduced by the MOEA (Ministry of Economic Affairs) to assist SMEs in various ways at full spectrum, especially in building networks to attract international partners in emerging market expansion. “Taiwan-Japan industrial cooperation matching program” promotes four core competencies matching areas in business development, R&D or design, manufacturing, and marketing or networking for Taiwan - Japan cooperation in emerging markets, of which Mainland China will be the initial target market. Meanwhile, the Taiwan-Japan cooperation model could be extended in other target markets such as ASEAN and India.

“Working strategy to strengthen economy and trade in the Southeast Asian region” is another program that has been executed since the first version drawn by the MOEA in 1994. The current program, the 7th version, is for the period of 2013 - 2016, including promotions led by senior officers to help SMEs build brands and networks, eliminate obstacles to investment and provide financial assistance, and so on in Southeast Asia.



# CHAPTER 7

## Strategies of Trade in Services for SMEs

Four years into the eruption of the global financial crisis and the ensuing European debt crisis, the world economy is still struggling amid tepid recover. Asian Development Bank (ADB) March report expected zero growth in the euro-zone and 2.1% growth in the U.S. (0.1% lower than 2012) while China was forecast to expand by 8.1% in 2013 (slightly higher than 7.8% in 2012).

Taiwan's export driven economy was highly sensitive to the global economic recovery. GDP growth rate fell significantly from 4.07% in 2011 to 1.32% in 2012 and the export growth suffered the most to a mere 0.13% from 4.45% in 2011. Almost all industries performed poorly in 2012 compared to previous year except mining and quarrying, with both manufacturing and services growing below 1.00%. However, service subsectors such as information, communication and broadcasting, support services, and arts, entertainment and leisure services still posted decent results (Table 7-0-1).

**Table 7-0-1 The Growth Rates of Industries in Taiwan, 2009-2012**

Industries	Year			
	2009	2010	2011	2012
Agriculture, forestry, fisheries and animal husbandry	-3.00	1.75	7.19	-4.43
Mining and quarrying	4.44	13.59	2.37	10.13
Manufacturing	-4.30	25.46	6.42	0.97
Electric power and gas	-0.19	6.65	2.41	0.66
Water supply and pollution prevention	0.68	2.22	-2.49	1.09
Construction	-6.84	11.81	-0.07	-0.97
Service industries	-0.20	4.84	3.05	0.98
Wholesaling and retailing	-1.01	5.08	4.00	0.09
Transportation and warehousing	-3.47	8.01	2.44	1.00
Hotel and restaurant	-1.35	9.70	9.52	2.02
Information, communications and broadcasting	4.25	8.92	4.19	3.84
Finance and insurance	-7.72	6.51	3.65	-0.28
Real estate	1.87	3.14	1.18	1.01
Professional, scientific and technical services	2.83	7.58	2.98	-1.62
Supporting services	-1.84	8.05	5.04	4.36
Public Administration and Defence	0.84	3.14	0.28	1.05
Educational services	2.44	0.84	1.27	1.23
Medical, healthcare and social welfare services	4.79	0.32	3.99	1.36
Arts, entertainment and leisure services	3.06	4.66	5.07	3.53
Other service industries	2.27	4.89	3.21	3.52
Total	-1.55	10.66	4.04	0.89

Unit: %

Note: Calculated by real GDP; the GDP value excludes import tax, value-added business tax and statistic difference.  
Source: DGBAS.

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The service sector is the main driver of Taiwan's economy and responsible for the bulk of local job creation, with sector output reaching NT\$9.4 trillion (US\$32 billion) and accounting for 68.19% GDP in 2012. The industries employed nearly 6.28 million people or 58.6% of the entire workforce in 2012, up 1.78% from 2010. As can be seen in Table 7-0-2, service sector are mainly domestic market oriented. Therefore, to boost economic growth, the service sector needs to expand its markets internationally.

**Table 7-0-2 Industrial Share of GDP in Taiwan, 2009-2012**

Unit: %

Industries	2009	2010	2011	2012
Agriculture, forestry, fisheries and animal husbandry	1.78	1.69	1.87	1.96
Mining and quarrying	0.43	0.49	0.23	0.34
Manufacturing	24.41	26.69	25.91	25.00
Electric power and gas	1.42	1.19	0.96	0.93
Water supply and pollution prevention	0.68	0.67	0.67	0.65
Construction	2.76	2.90	2.94	2.94
<b>Service sector</b>	<b>68.53</b>	<b>66.37</b>	<b>67.43</b>	<b>68.19</b>
Wholesaling and retailing	19.20	18.88	19.46	19.31
Transportation and warehousing	3.08	3.34	3.09	3.13
Hotel and restaurant	2.11	2.06	2.23	2.33
Information, communications and broadcasting	3.83	3.66	3.65	3.70
Finance and insurance	6.59	6.50	6.72	6.71
Real estate	9.43	8.85	8.85	8.94
Professional, scientific and technical services	2.35	2.30	2.34	2.32
Supporting services	1.51	1.49	1.55	1.63
Public Administration and Defence	7.86	7.47	7.49	7.68
Educational services	5.12	4.73	4.76	4.85
Medical, healthcare and social welfare services	3.28	3.09	3.17	3.33
Arts, entertainment and leisure services	0.97	0.93	0.97	1.00
Other service industries	3.20	3.07	3.14	3.27
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Note: Calculated by nominal GDP; the GDP value excludes import tax, value-added business tax and statistic difference.

Source: DGBAS.

The first key question is what markets should be targeted. Given slowing developed economies and their weak import demands, emerging markets have become primary target for companies all over the world for their relative higher growth and rising middle class. To multinational firms, even

recent wobbles in some of the emerging countries have not curbed their enthusiasm for the BRICS and other countries of high-growth markets whose prospects have more than offset a gloomy prognosis for the maturing, growth starved domestic markets of the developed economies. For example, services supplied by US majority-owned foreign affiliates to China and India proved more resilient to the global crisis than exports of cross-border. In 2009, services supplied to India and China through US majority-owned foreign affiliates established rose by 34% and 25% respectively. In contrast, services supplied through US majority-owned foreign affiliates to Europe and North America declined, following the same pattern as cross-border exports. However, various restrictions existed in emerging markets on currency exchange, money flow, technology, and so on could post significant challenges for service industries. So the next tough question is to figure out what services would have a good chance to penetrate and succeed in these markets. This is partly addressed by the nationwide program “Three Industries, Four Reforms” launched by Ministry of Economic Affairs (MOEA), referring to the creation of a service-oriented manufacturing industry, an internationalized and high-tech services industry and a specialty oriented traditional industry. Clearly, Taiwan enterprises need to drive innovation and expansion through high value-added consumer-relevant products or services to meet the demand of the surging emerging middle class as well as the developed markets. Lastly, majority of firms in service industry are SMEs that lack scale. Therefore, to help SMEs expand trade in services, we need to figure out the international and emerging market trends, examine the pros and cons of the current policy measures, enhance the international competitiveness of Taiwan’s service industries, and craft trade in service strategy to assist SMEs in coping with challenges and grasping opportunities in targeted markets.

This chapter comprises four sections. Section I presents an overview of the current state and trend in global trade in services. Section II discusses the opportunities for Taiwan exports of services. Section III examines the related government policies and measures. Section IV discusses the feasible strategies for exports of services.

## I Global Trade in Services: Current State and Trend

Based on Article I of General Agreement on Trade in Services (GATS), trade in services is defined as the supply of a service:

- (1) From the territory of one member into the territory of any other member;
- (2) In the territory of one member to the service consumer of any other member;
- (3) By a service supplier of one member, through commercial presence in the territory of any other member;
- (4) By a service supplier of one member, through presence of natural persons of a member in the territory of any other member.

Type 1 is known as cross-border supply, such as designers in Taiwan providing service for clients in Mainland China through internet, telephone or other means; Type 2 is known as

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consumption supply, such as tourists from Mainland China visiting Taiwan; Type 3 involves commercial presence, such as Taiwan Banks setting up branches in Mainland China; Type 4 involves presence of natural persons, such as Taiwan Banks sending managers to their branches in Mainland China.

Type 1, 2, and 4 are reflected in member nations' balance of payments (BoP) of service sector, though there is no subsector breakdown in WTO statistics. Type 3 foreign investment should mainly be based on statistics of foreign affiliates' trade in services (FATS), according to WTO, to reflect foreign affiliates' services transactions in the host nation. Due to insufficient FATS statistics, Type 3 foreign investment is instead measured by foreign direct investment (FDI) data. However, FDI classification is not the same as WTO, and FDI data may not be in line with that of WTO (Jing, et al., 2011).

Statistics of all four types of trade in services are still in early development stages in member nations with no subsector detail at present. Therefore, the WTO statistics database and its International Trade Statistics 2012 will be used in this section to examine current state and trend of global trade in services, especially Taiwan trade in services and its opportunities in emerging markets.

Mainland China, Thailand, The Philippines, Indonesia and Singapore are chosen for analysis based on their importance (current trade demand, growth potential, population, etc.), data consistency and integrity, and related research by Jing, et al. (2011) and Wang, et al. (2012).

WTO trade in services consists of three main categories: transportation services, travel, and other commercial services. Other commercial services comprise telecommunication, construction, insurance, financial services, computer and information services, royalties and license fees, personal, cultural and recreational services, and other business services.

Personal, cultural and recreational services are subdivided into two categories, (1) audiovisual services and (2) other cultural and recreational services. The first component includes services and fees related to the production of motion pictures, radio and television programs, and musical recordings. Other personal, cultural, and recreational services include services such as those associated with museums, libraries, archives, and other cultural, sporting, and recreational activities.

Other business services include trade-related services, operational leasing and rentals, and miscellaneous business, professional and technical services such as legal, accounting, management consulting, public relations services, advertising, market research and public opinion polling, R&D, architectural, engineering, agricultural, mining and on-site processing.

### 1. Slowdown of Global Trade in Service Growth

According to WTO database, the value of world exports of commercial services rose by 13% in 2012 to US\$ 4,350 billion, from pre-crisis levels of US\$ 3,846 billion in 2008. In the same period, the value of world imports of services grew by 14% to US\$ 4,152 billion from US\$ 3,633 billion. EU-

27 countries has the highest value of trade in services (US\$3,401 billion including sum of export US\$1,832 billion and import US\$1,569 billion) accounting for approximately 40% of the total value of global trade in services, followed by Asia and NAFTA. In terms of growth, the less developed regions, the faster. Taiwan remained an active net services exporter, growing faster than global average in both import and export. The value of service export rose by 33.37% in 2012 to US\$ 48,746 million from US\$ 36,549 million in 2008, while service import rose by 23.41% in 2012 to US\$ 42,143 million from US\$ 34,149 million in 2008 (Table 7-1-1).

**Table 7-1-1 Trade in Commercial Services in the World and the Major FTA Regions, 2008-2012**

Unit: US\$ million

Economies /Countries	Item	2008	2009	2010	2011	2012
World	Export	3,846,400	3,481,400	3,819,700	4,258,300	4,349,900
	Import	3,633,000	3,292,300	3,613,300	4,042,200	4,152,300
Asia	Export	896,300	780,400	954,200	1,067,700	1,135,300
	Import	885,400	797,800	961,500	1,094,700	1,179,400
Taiwan	Export	36,549	31,408	40,104	45,643	48,746
	Import	34,149	29,082	37,117	41,321	42,143
China	Export	146,444	128,526	161,210	175,670	190,440
	Import	158,004	158,016	192,174	237,003	280,164
ASEAN	Export	196,500	166,100	200,900	236,000	253,800
	Import	210,000	188,100	224,200	262,600	276,300
NAFTA	Export	606,500	573,400	626,700	682,100	714,800
	Import	485,500	452,400	486,900	524,300	541,500
EU-27 countries	Export	1,782,248	1,613,952	1,675,425	1,873,866	1,831,659
	Import	1,585,324	1,434,885	1,467,334	1,613,986	1,569,064

Source: WTO Statistics, Merchandise Trade and Commercial Services.

However, growth momentum after 2009 (excluding the impact of the global financial crisis) slowed down in Taiwan, Mainland China, ASEAN and Asia as a whole. Particularly, in 2012 we saw pronounced decline in the growth rates of trade in services: Taiwan export growing at a rate of 6.8% in 2012, down from 13.81% in 2011; ASEAN 7.54% from 17.47%; the Asian region as a whole 6.33% from 11.89%, the U.S. and EU also lost momentum from 2011 to 2012. NAFTA export grew at a rate of 4.79% in 2012, down from 8.84% in 2011, while EU export suffered a big hit of -2.25% in 2012 from 11.84% growth in 2011. Overall, global service import and export growth rates slowed down substantially in 2012 to 2.72% and 2.15% respectively (Table 7-1-2).

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**Table 7-1-2 The Growth Rate of Trade in Commercial Services in the World and Major FTA Regions, 2008-2012**

Unit: %

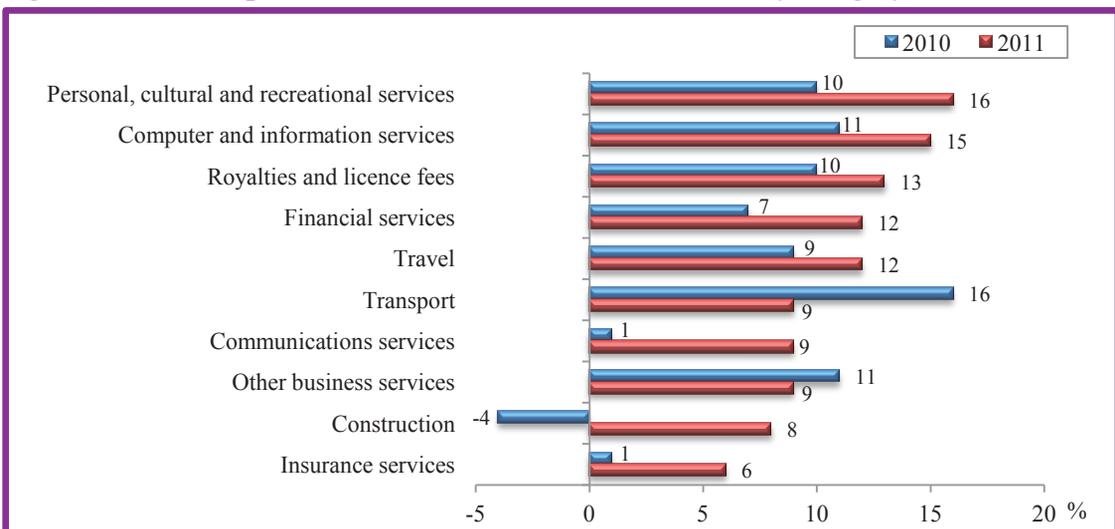
Economies /Countries	Item	2009	2010	2011	2012	2008-2012
World	Export	-9.49	9.72	11.48	2.15	13.09
	Import	-9.38	9.75	11.87	2.72	14.29
Asia	Export	-12.93	22.27	11.89	6.33	26.67
	Import	-9.89	20.52	13.85	7.74	33.21
Taiwan	Export	-14.07	27.69	13.81	6.80	33.37
	Import	-14.84	27.63	11.33	1.99	23.41
China	Export	-12.24	25.43	8.97	8.41	30.04
	Import	0.01	21.62	23.33	18.21	77.31
ASEAN	Export	-15.47	20.95	17.47	7.54	29.16
	Import	-10.43	19.19	17.13	5.22	31.57
NAFTA	Export	-5.46	9.30	8.84	4.79	17.86
	Import	-6.82	7.63	7.68	3.28	11.53
EU-27 countries	Export	-9.44	3.81	11.84	-2.25	2.77
	Import	-9.49	2.26	9.99	-2.78	-1.03

Source: WTO Statistics, Merchandise Trade and Commercial Services.

## 2. Personal, Cultural and Recreational Services Grew Fastest in 2011

Personal, cultural and recreational services was the fastest growing sector in 2011 (16%), mainly driven by the EU where exports increased by 22%. Computer and information services were the second fastest growing services sector in 2011, expanding by 15%, boosted in particular by 19% growth in Asia. Asian economies accounted for 29% of world exports of computer and information services in 2011 (Figure 7-1-1).

**Figure 7-1-1 The Export Growth Rate of Commercial Services by Category, 2010-11**

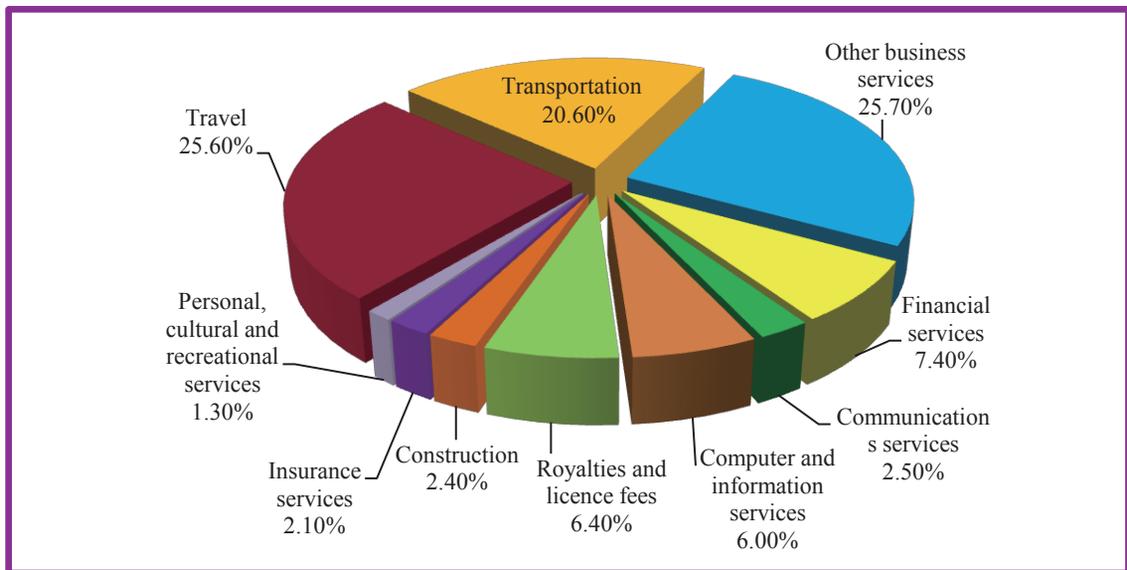


Source: WTO, International Trade Statistics, 2012.

### 3. Travel, Other Business Services Exceed 50% of Services Exports

Based on the pie chart of further breakdown from International Trade Statistics 2012, over half of world exports of commercial services consisted of travel receipts and other business services in 2011. Transportation services accounted for 20.6%, followed by financial services (7.4%), royalties and license fees (6.4%), and computer and information services (6.0%). Other sectors had much smaller shares in commercial services exports. Insurance services, construction and communications services accounted for between 2.1% and 2.5% in 2011. Personal cultural and recreational services, which include audio-visual services, had the smallest share with 1.3% of global commercial services exports (Figure 7-1-2).

**Figure 7-1-2 Category Share in Total Exports of Commercial Services, 2011**



Source: WTO, International Trade Statistics, 2012.

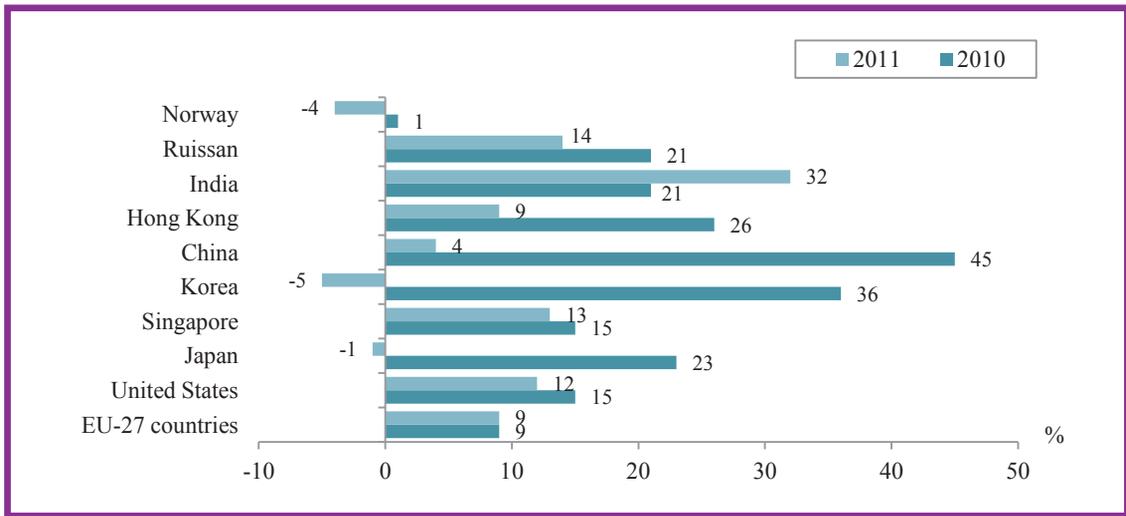
### 4. Asian Exporters Saw Slowdown in Exports of Transport Services

Several exporters of transportation services in Asia saw a substantial slowdown in 2011 after strong growth in 2010. China's exports rose by only 4% compared with 45% in 2010. This was its lowest level in a decade, excluding the crisis year of 2009. In S. Korea, exports of transportation services contracted by 5% due to a decline in sea freight services from a growth rate of 36% in 2010. Hong Kong's exports grew 9% in 2011 vs. 26% in 2010. Singapore exports of transportation services rose by 13% in 2011 vs. 15% in 2010. However, exports grew significantly by 32% in India compared with 21% in 2010.

EU exports of transportation services rose by 9% in 2011, similar to the rise in 2010, while US exports of transportation services went up by 12% in 2011 (Figure 7-1-3).

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**Figure 7-1-3 The Export Growth Rate of Transportation, 2010-2011**

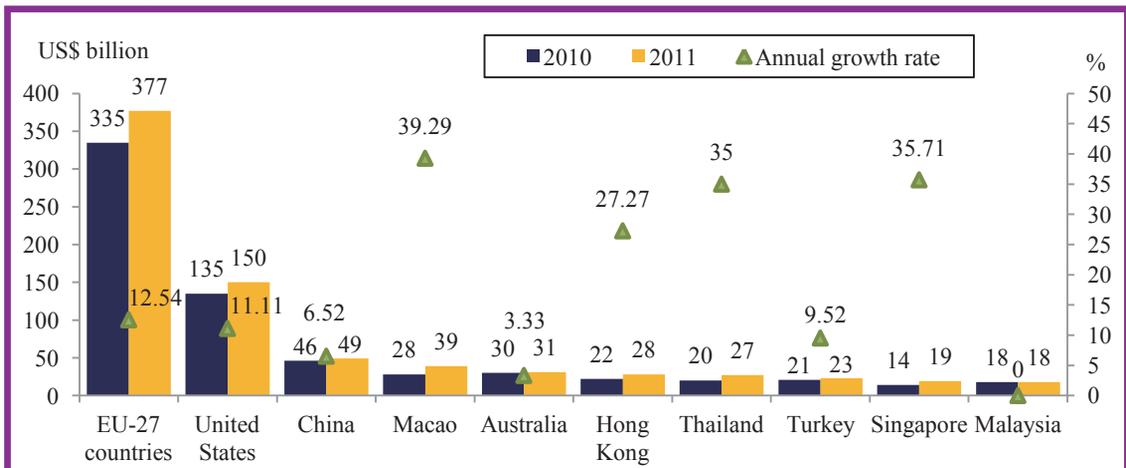


Source: WTO, International Trade Statistics, 2012.

## 5. Macao, China Became 4th Largest Exporter of Travel Services

Macao became the fourth-largest exporter of travel in 2011, recording growth of 39% and overtaking Australia. The economy's travel receipts, mainly resulting from gaming activities, reached US\$ 39 billion. Other Asian economies continue to record double-digit growth rates. Exports of travel rose by 33% in Thailand, 3% in Singapore and 25% in Hong Kong (Figure 7-1-4).

**Figure 7-1-4 The Export Value and the Growth Rate of Travel during 2010-2011**



Source: WTO, International Trade Statistics, 2012.

## 6. Exports of Computer Services Rise Steeply in Some Developing Economies

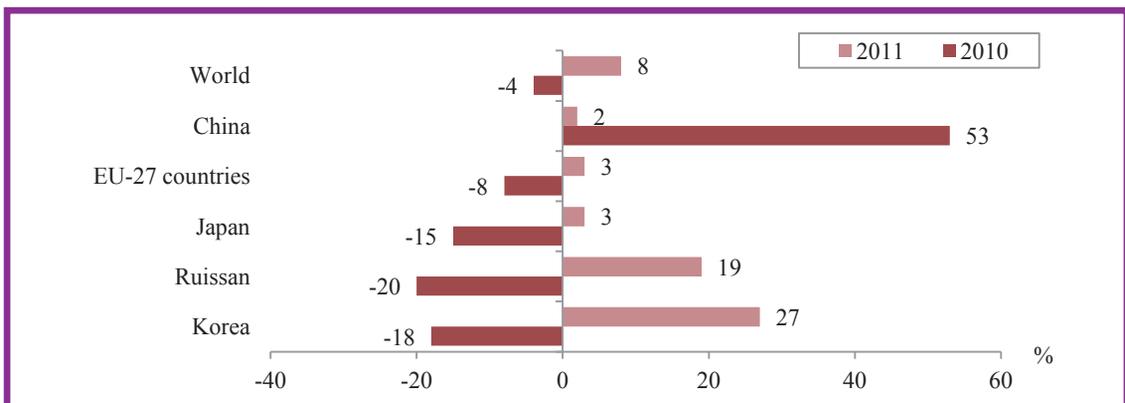
Following the path of India, many developing economies have recently emerged as computer

services exporters. Thanks to outsourcing, their exports have grown rapidly. Between 2005 and 2011, the Philippine exports of computer services rose by an annual average of 69% while Sri Lanka saw a 28% increase. In Argentina and Costa Rica, exports of computer services are expanded by an annual average of 37% and 35% respectively. Ukraine's exports of computer services recorded average growth of 59% while in the Russian Federation, they rose by 27%.

## 7. Construction Bounced Back

World exports of construction bounced back in 2011, rising by 8% following a 4% decline in 2010. South Korea exports of construction rose by 27% after the sharp fall recorded in 2010. Similarly, construction exports resumed an upward trend in the Russian Federation, growing by 19%. For the European Union, exports increased by 3%, following an 8% contraction in 2010. In Japan, exports increased by 3%, following a 15% contraction in 2010. China's construction exports slowed to 2% in 2011 after soaring 53% in 2010. These five major exporters of construction services represented 82% of global construction exports in 2011 (Figure 7-1-5).

**Figure 7-1-5 The Export Growth Rate of Construction, 2010-2011**



Source: WTO, International Trade Statistics, 2012.

## II Taiwan Trade in Services: Export Opportunity

### 1. Taiwan Trade Exports: Current State and Trend

#### (1) Other Business Services Accounted for 47% of Exports of Services

Taiwan exports of commercial services reached US\$ 48,746 million in 2012, up 6.8% from 2011. Other business services accounted for US\$ 23,014 million, over 47% of total services exports, followed by travel (US\$ 11,707 million or 24%), and transportation services (US\$ 9,986 million or 20%). Other sectors had a much smaller share in commercial services exports, with each below 2% mark. (Table 7-2-1).

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**Table 7-2-1 Taiwan's Export Value of Commercial Services, 2008-2012**

Unit: US\$ million

Industries \ Year	2008	2009	2010	2011	2012
Total	36,549	31,408	40,104	45,643	48,746
Transportation	9,191	6,342	9,765	9,696	9,986
Travel	5,937	6,816	8,721	11,065	11,707
Other commercial services	21,421	18,250	21,618	24,882	27,053
Communications services	334	343	392	439	499
Construction	235	294	355	348	418
Insurance services	350	473	430	513	595
Financial services	1,146	727	847	922	936
Computer and information services	141	129	218	388	505
Royalties and license fees	191	242	460	838	932
Other business services	18,925	15,955	18,818	21,298	23,014
Personal, cultural and recreational services	99	87	98	136	154

Source: WTO Statistics, Merchandise Trade and Commercial Services.

### (2) Travel Share Rose Steadily, Reaching 24% of Trade in Services

Travel share rose steadily, reaching 24% of trade in services in Taiwan in 2012, up 7.7 percentage points from 2008. In the same period of 2008 to 2012, Construction share was down 4.7 percentage points while share of other commercial services declined by 3.1 percentage points (Table 7-2-2).

**Table 7-2-2 Category Share in Total Exports of Commercial Services in Taiwan, 2008-2012**

Unit: %

Industries \ Year	2008	2009	2010	2011	2012
Transportation	25.15	20.19	24.35	21.24	20.49
Travel	16.24	21.70	21.75	24.24	24.02
Other commercial services	58.61	58.11	53.90	54.51	55.50
Communications services	0.91	1.09	0.98	0.96	1.02
Construction	0.64	0.94	0.89	0.76	0.86
Insurance services	0.96	1.51	1.07	1.12	1.22
Financial services	3.14	2.31	2.11	2.02	1.92
Computer and information services	0.39	0.41	0.54	0.85	1.04
Royalties and license fees	0.52	0.77	1.15	1.84	1.91
Other business services	51.78	50.80	46.92	46.66	47.21
Personal, cultural and recreational services	0.27	0.28	0.24	0.30	0.32

Source: WTO Statistics, Merchandise Trade and Commercial Services.

### (3) Personal, Cultural and Recreational Services Continued to Record Double-Digit Growth Rates

Growth momentum after 2009 (excluding the impact of the global financial crisis) slowed down in Taiwan, with service export growing at a rate of 6.8% in 2012, down from 13.81% in 2011 (27.69% in 2010 due to easy comparison with 2009). However, four sectors under other commercial services continued to record double-digit growth rates from 2010 to 2012. These are personal, cultural and recreational services, telecommunication, construction, computer and information services, and royalties and license fees (Table 7-2-3).

**Table 7-2-3 Taiwan's Export Growth Rate of Commercial Services, 2008-2012**

Unit: %

Industries	Year	2009	2010	2011	2012	2008-2012
Total		-14.07	27.69	13.81	6.80	33.37
Transportation		-31.00	53.97	-0.71	2.99	8.65
Travel		14.81	27.95	26.88	5.80	97.19
Other commercial services		-14.80	18.45	15.10	8.73	26.29
Communications services		2.69	14.29	11.99	13.67	49.40
Construction		25.11	20.75	-1.97	20.11	77.87
Insurance services		35.14	-9.09	19.30	15.98	70.00
Financial services		-36.56	16.51	8.85	1.52	-18.32
Computer and information services		-8.51	68.99	77.98	30.15	258.16
Royalties and license fees		26.70	90.08	82.17	11.22	387.96
Other business services		-15.69	17.94	13.18	8.06	21.61
Personal, cultural and recreational services		-12.12	12.64	38.78	13.24	55.56

Source: WTO Statistics, Merchandise Trade and Commercial Services.

## 2. Mainland China Imports of Services: Current State and Trend

### (1) Travel Services Play an Important Role in Import Services

Mainland China imports of commercial services reached US\$ 280,164 million in 2012, up 18.2% from 2011. The largest category for services was travel which accounted for 36.4% of imports. The largest contributors to other commercial services were other business services (15.1%), insurance (7.4%), and royalties and license fees (6.3%). Other sectors had a much smaller share in commercial services imports, with each below 1.4% (Table 7-2-4).

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**Table 7-2-4 China's Import Value of Commercial Services, 2008-2012**

Unit: US\$ million

Industries \ Year	2008	2009	2010	2011	2012
Total	158,004	158,016	192,174	237,003	280,164
Transportation	50,329	46,574	63,257	80,445	85,862
Travel	36,157	43,702	54,880	72,585	102,000
Other commercial services	71,518	67,740	74,037	83,973	92,302
Communications services	1,510	1,210	1,137	1,191	1,647
Construction	4,363	5,868	5,072	3,728	3,619
Insurance services	12,743	11,309	15,755	19,738	20,600
Financial services	566	643	1,387	747	1,926
Computer and information services	3,165	3,233	2,965	3,844	3,843
Royalties and license fees	10,320	11,065	13,040	14,706	17,749
Other business services	38,597	34,135	34,310	39,620	42,354
Personal, cultural and recreational services	255	278	371	400	564

Source: WTO Statistics, Merchandise Trade and Commercial Services.

### (2) Travel Share Rose Substantially, Reaching 36% of Service Imports in 2012

Travel share rose steadily, reaching 36.4% of imports of services in Mainland China in 2012, up 13.5 percentage points from 2008. In the same period of 2008 to 2012, construction share remained relative stable at about 30% while share of other commercial services declined by 12.3 percentage points. Every large sector's share under other commercial services was down (Table 7-2-5). Two small sectors' shares (financial services, and personal, cultural and recreational services) did grow significantly in percentage but with limited impact (imports share of 0.69% and 0.2% respectively in 2012) (Table 7-2-5).

**Table 7-2-5 Category Share in Total Imports of Commercial Services in China, 2008-2012**

Unit: %

Industries \ Year	2008	2009	2010	2011	2012
Transportation	31.85	29.47	32.92	33.94	30.65
Travel	22.88	27.66	28.56	30.63	36.41
Other commercial services	45.26	42.87	38.53	35.43	32.95
Communications services	0.96	0.77	0.59	0.50	0.59
Construction	2.76	3.71	2.64	1.57	1.29
Insurance services	8.06	7.16	8.20	8.33	7.35
Financial services	0.36	0.41	0.72	0.32	0.69
Computer and information services	2.00	2.05	1.54	1.62	1.37
Royalties and license fees	6.53	7.00	6.79	6.20	6.34
Other business services	24.43	21.60	17.85	16.72	15.12
Personal, cultural and recreational services	0.16	0.18	0.19	0.17	0.20

Source: WTO Statistics, Merchandise Trade and Commercial Services.

**Table 7-2-6 China's Import Growth Rate of Commercial Services, 2009-2012**

Unit: %

Industries \ Year	2009	2010	2011	2012	2008-2012
Total	0.01	21.62	23.33	18.21	77.31
Transportation	-7.46	35.82	27.17	6.73	70.60
Travel	20.87	25.58	32.26	40.52	182.10
Other commercial services	-5.28	9.30	13.42	9.92	29.06
Communications services	-19.87	-6.03	4.75	38.29	9.07
Construction	34.49	-13.57	-26.50	-2.92	-17.05
Insurance services	-11.25	39.31	25.28	4.37	61.66
Financial services	13.60	115.71	-46.14	157.83	240.28
Computer and information services	2.15	-8.29	29.65	-0.03	21.42
Royalties and license fees	7.22	17.85	12.78	20.69	71.99
Other business services	-11.56	0.51	15.48	6.90	9.73
Personal, cultural and recreational services	9.02	33.45	7.82	41.00	121.18

Source: WTO Statistics, Merchandise Trade and Commercial Services.

### 3. Thailand Imports of Services: Current State and Trend

#### (1) Transportation Plays an Important Role in Import Services

Thailand imports of commercial services reached US\$ 52,519 million in 2012, up 1.0% from 2011. Travel contributed US\$ 6,131 million or 11.7%. The largest category for services was transportation which accounted for 54.3% of imports. The largest contributors to other commercial services were other business services (19.2%), insurance (7.4%), royalties and license fees (6.9%), and insurance (5.8%). Other sectors had much smaller shares in commercial service imports, with each below 1% (Table 7-2-7).

**Table 7-2-7 Thailand's Import Value of Commercial Services, 2008-2012**

Unit: US\$ million

Industries \ Year	2008	2009	2010	2011	2012
Total	45,696	36,300	44,774	51,965	52,519
Transportation	22,973	16,978	22,431	26,719	28,514
Travel	5,003	4,433	5,623	5,716	6,131
Other commercial services	17,721	14,890	16,720	19,530	17,875
Communications services	219	296	301	402	460
Construction	786	782	713	308	224
Insurance services	2,037	1,637	2,164	2,753	3,050
Financial services	123	116	119	159	388
Computer and information services	55	50	62	76	52
Royalties and license fees	2,559	2,250	3,084	3,119	3,611
Other business services	11,891	9,739	10,258	12,692	10,065
Personal, cultural and recreational services	51	20	20	21	23

Source: WTO Statistics, Merchandise Trade and Commercial Services.

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### (2) Transportation Share Rose Steadily, Reaching 54% of Imports

Travel share rose steadily except 2009 due to global financial crisis, reaching 54.3% of imports of services in 2012, a 4.0 percentage points above pre-crisis level in 2008. In the same period of 2008 to 2012, travel share remained relative stable at about 11-12% while share of other commercial services declined by 4.7 percentage points. Other business services' share was down significantly to 19.2%, a 7.9 percentage points drop (Table 7-2-8).

**Table 7-2-8 Category Share in Total Imports of Commercial Services in Thailand, 2008-2012**

Unit: %

Industries \ Year	2008	2009	2010	2011	2012
Transportation	50.27	46.77	50.10	51.42	54.29
Travel	10.95	12.21	12.56	11.00	11.67
Other commercial services	38.78	41.02	37.34	37.58	34.04
Communications services	0.48	0.82	0.67	0.77	0.88
Construction	1.72	2.15	1.59	0.59	0.43
Insurance services	4.46	4.51	4.83	5.30	5.81
Financial services	0.27	0.32	0.27	0.31	0.74
Computer and information services	0.12	0.14	0.14	0.15	0.10
Royalties and license fees	5.60	6.20	6.89	6.00	6.88
Other business services	26.02	26.83	22.91	24.42	19.16
Personal, cultural and recreational services	0.11	0.06	0.04	0.04	0.04

Source: WTO Statistics, Merchandise Trade and Commercial Services.

### (3) Financial Services, Insurance, and Royalties and License Fees Grew Substantially

Thailand importers saw growth slowdown in imports of services from 23.3%, 16.1% to 1.0% in 2010, 2011, and 2012 respectively. Financial services, royalties and license fees, and insurance were the bright spots with significant growth rate in 2012 at 144.0%, 15.8%, and 9.4% respectively, representing a combined share of 13.4% (Table 7-2-9).

**Table 7-2-9 Thailand's Import Growth Rate of Commercial Services, 2009-2012**

Unit: %

Industries \ Year	2009	2010	2011	2012	2008-2012
Total	-20.56	23.34	16.06	1.07	14.93
Transportation	-26.10	32.12	19.12	6.72	24.12
Travel	-11.39	26.84	1.65	7.26	22.55
Other commercial services	-15.98	12.29	16.81	-8.47	0.87
Communications services	35.16	1.69	33.55	14.43	110.05
Construction	-0.51	-8.82	-56.80	-27.27	-71.50
Insurance services	-19.64	32.19	27.22	10.79	49.73
Financial services	-5.69	2.59	33.61	144.03	215.45
Computer and information services	-9.09	24.00	22.58	-31.58	-5.45
Royalties and license fees	-12.08	37.07	1.13	15.77	41.11
Other business services	-18.10	5.33	23.73	-20.70	-15.36
Personal, cultural and recreational services	-60.78	0.00	5.00	9.52	-54.90

Source: WTO Statistics, Merchandise Trade and Commercial Services.

## 4. Indonesia Imports of Services: Current State and Trend

### (1) Other Commercial Services Play an Important Role in Import Services

Indonesia imports of commercial services reached US\$ 33,327 million in 2012, up 8.2% from 2011. Travel contributed US\$ 6,771 million or 20.3%. The two largest categories for services were other commercial services and transportation which accounted for 40.9% and 38.8% of imports respectively. The largest contributors to other commercial services were other business services (23.6%), royalties and license fees (5.4%), and insurance (3.3%). Other sectors had much smaller shares in commercial services imports, with each below 2.2% (Table 7-2-10).

**Table 7-2-10 Indonesia's Import Value of Commercial Services, 2008-2012**

Unit: US\$ million

Industries \ Year	2008	2009	2010	2011	2012
Total	27,994	22,636	25,599	30,788	33,327
Transportation	13,895	6,522	8,673	12,149	12,936
Travel	5,554	5,316	6,395	6,255	6,771
Other commercial services	8,545	10,797	10,532	12,383	13,620
Communications services	776	452	547	806	717
Construction	749	798	592	497	632
Insurance services	683	1,318	1,153	1,290	1,096
Financial services	342	405	450	581	516
Computer and information services	713	642	585	715	726
Royalties and license fees	1,328	1,530	1,616	1,788	1,800
Other business services	3,829	5,525	5,456	6,493	7,852
Personal, cultural and recreational services	126	126	133	212	281

Source: WTO Statistics, Merchandise Trade and Commercial Services.

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### (2) Other Commercial Services Became Dominant Sector Post Crisis

Other commercial services had commanded dominant share since 2008, excluding 2009 data distortion due to global financial crisis, reaching 40.9% of imports of services in 2012, a 10.4 percentage points above pre-crisis level in 2008. In the same period of 2008 to 2012, travel share remained relative stable at about 20% while share of transportation services declined by 10.8 percentage points (Table 7-2-11).

**Table 7-2-11 Category Share in Total Imports of Commercial Services in Indonesia, 2008-2012**

Industries	Year					Unit: %
	2008	2009	2010	2011	2012	
Transportation	49.64	28.81	33.88	39.46	38.82	
Travel	19.84	23.48	24.98	20.32	20.32	
Other commercial services	30.52	47.70	41.14	40.22	40.87	
Communications services	2.77	2.00	2.14	2.62	2.15	
Construction	2.68	3.53	2.31	1.61	1.90	
Insurance services	2.44	5.82	4.50	4.19	3.29	
Financial services	1.22	1.79	1.76	1.89	1.55	
Computer and information services	2.55	2.84	2.29	2.32	2.18	
Royalties and license fees	4.74	6.76	6.31	5.81	5.40	
Other business services	13.68	24.41	21.31	21.09	23.56	
Personal, cultural and recreational services	0.45	0.56	0.52	0.69	0.84	

Source: WTO Statistics, Merchandise Trade and Commercial Services.

### (3) Personal, Cultural and Recreational Services Continued to Record High Growth Rates

Indonesia importers saw growth slowdown in imports of other commercial services from 17.6% to 10.0% in 2011 and 2012 respectively. Personal, cultural and recreational services, construction, and other business services were the bright spots with significant growth rate in 2012 at 32.6%, 27.2%, and 20.9% respectively. However, personal, cultural and recreational services only represented a share of 0.69% in 2012 (Table 7-2-12).

**Table 7-2-12 Indonesia's Import Growth Rate of Commercial Services, 2009-2012**

Unit: %

Industries \ Year	2009	2010	2011	2012	2008-2012
Total	-19.14	13.09	20.27	8.25	19.05
Transportation	-53.06	32.98	40.08	6.48	-6.90
Travel	-4.29	20.30	-2.19	8.25	21.91
Other commercial services	26.35	-2.45	17.58	9.99	59.39
Communications services	-41.75	21.02	47.35	-11.04	-7.60
Construction	6.54	-25.81	-16.05	27.16	-15.62
Insurance services	92.97	-12.52	11.88	-15.04	60.47
Financial services	18.42	11.11	29.11	-11.19	50.88
Computer and information services	-9.96	-8.88	22.22	1.54	1.82
Royalties and license fees	15.21	5.62	10.64	0.67	35.54
Other business services	44.29	-1.25	19.01	20.93	105.07
Personal, cultural and recreational services	0.00	5.56	59.40	32.55	123.02

Source: WTO Statistics, Merchandise Trade and Commercial Services.

## 5. Singapore Imports of Services: Current State and Trend

### (1) Other Commercial Services Exceeded 50% of Service Imports

Singapore imports of commercial services reached US\$ 117,744 million in 2012, up 2.8% from 2011. Travel contributed US\$ 22,412 million or 19.0%. The two largest categories for services were other commercial services and transportation which accounted for 51.0% and 30.0% of imports respectively. The largest contributors to other commercial services were other business services (25.1%), royalties and license fees (14.0%), insurance (3.8%), and financial services (2.6%). Other sectors had much smaller shares in commercial services imports, with each below 1% (Table 7-2-13).

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**Table 7-2-13 Singapore's Import Value of Commercial Services, 2008-2012**

Unit: US\$ million

Industries \ Year	2008	2009	2010	2011	2012
Total	87,202	82,426	97,546	114,525	117,744
Transportation	30,275	25,438	29,752	34,392	35,319
Travel	15,196	15,685	18,700	21,437	22,412
Other commercial services	41,731	41,304	49,094	58,697	60,013
Communications services	1,466	-	-	-	-
Construction	347	425	515	768	836
Insurance services	2,530	2,774	3,868	4,473	4,473
Financial services	2,542	2,055	2,569	3,036	3,019
Computer and information services	1,069	-	-	-	-
Royalties and license fees	12,456	11,755	14,009	16,391	16,511
Other business services	21,041	21,444	24,124	28,736	29,580
Personal, cultural and recreational services	281	461	472	484	488

Source: WTO Statistics, Merchandise Trade and Commercial Services.

### (2) Other Commercial Services Became Dominant Sector

Other commercial services had commanded dominant share since 2008, reaching 51.0% of imports of services in 2012, a 3.1 percentage points above pre-crisis level in 2008. In the same period of 2008 to 2012, travel share increased 1.6 percentage points to 19.0% while share of transportation services declined by 4.72 percentage points to 30% (Table 7-2-14).

**Table 7-2-14 Category Share in Total Imports of Commercial Services in Singapore, 2008-2012**

Unit: %

Industries \ Year	2008	2009	2010	2011	2012
Transportation	34.72	30.86	30.50	30.03	30.00
Travel	17.43	19.03	19.17	18.72	19.03
Other commercial services	47.86	50.11	50.33	51.25	50.97
Communications services	1.68	-	-	-	-
Construction	0.40	0.52	0.53	0.67	0.71
Insurance services	2.90	3.37	3.97	3.91	3.80
Financial services	2.92	2.49	2.63	2.65	2.56
Computer and information services	1.23	-	-	-	-
Royalties and license fees	14.28	14.26	14.36	14.31	14.02
Other business services	24.13	26.02	24.73	25.09	25.12
Personal, cultural and recreational services	0.32	0.56	0.48	0.42	0.41

Source: WTO Statistics, Merchandise Trade and Commercial Services.

### (3) Construction Continued to Record Relatively High Growth Rates

Singapore importers saw growth slowdown in imports of other commercial services from 17.4% in 2011 to 2.8% in 2012. Construction was the bright spot with growth rate in 2012 at 8.9%, yet only representing a share of 0.67% in 2012 (Table 7-2-15).

**Table 7-2-15 Singapore's Import Growth Rate of Commercial Services, 2009-2012**

Industries	Year					Unit: %
	2009	2010	2011	2012	2008-2012	
Total	-5.48	18.34	17.41	2.81	35.02	
Transportation	-15.98	16.96	15.60	2.70	16.66	
Travel	3.22	19.22	14.64	4.55	47.49	
Other commercial services	-1.02	18.86	19.56	2.24	43.81	
Communications services	-	-	-	-	-	
Construction	22.48	21.18	49.13	8.85	140.92	
Insurance services	9.64	39.44	15.64	0.00	76.80	
Financial services	-19.16	25.01	18.18	-0.56	18.76	
Computer and information services	-	-	-	-	-	
Royalties and license fees	-5.63	19.17	17.00	0.73	32.55	
Other business services	1.92	12.50	19.12	2.94	40.58	
Personal, cultural and recreational services	64.06	2.39	2.54	0.83	73.67	

Source: WTO Statistics, Merchandise Trade and Commercial Services.

## 6. The Philippines Imports of Services: Current State and Trend

### (1) Travel Exceeded 44% of Service Imports

The Philippines imports of commercial services reached US\$ 14,093 million in 2012, up 16.8% from 2011. Other commercial services contributed US\$ 2,944 million or 20.9%. The two largest categories for services were travel and transportation which accounted for 44.3% and 34.8% of imports respectively. The largest contributors to other commercial services were other business services (10.9%), royalties and license fees (3.6%), insurance (2.6%), and telecommunication (1.4%). Other sectors had much smaller shares in commercial services imports, with each below 1.2% (Table 7-2-16).

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**Table 7-2-16 The Philippines Import Value of Commercial Services, 2008-2012**

Unit: US\$ million

Industries \ Year	2008	2009	2010	2011	2012
Total	8,348	8,679	11,129	12,066	14,093
Transportation	4,209	3,661	4,965	4,330	4,902
Travel	2,057	2,698	3,416	5,368	6,247
Other commercial services	2,082	2,320	2,748	2,368	2,944
Communications services	147	123	154	153	193
Construction	33	20	21	50	42
Insurance services	262	235	311	340	364
Financial services	82	125	74	132	113
Computer and information services	80	91	109	193	158
Royalties and license fees	382	421	445	442	504
Other business services	1,070	1,263	1,575	1,020	1,536
Personal, cultural and recreational services	26	42	59	38	34

Source: WTO Statistics, Merchandise Trade and Commercial Services.

### (2) Travel Share Rose Substantially and Became Dominant Sector

Travel had commanded dominant share since 2008, reaching 44.3% of imports of services in 2012, a 19.7 percentage points above pre-crisis level in 2008. In the same period of 2008 to 2012, transportation share dropped 15.6 percentage points to 34.8% and share of other commercial services declined by 4.0 percentage points to 20.9% (Table 7-2-17).

**Table 7-2-17 Category Share in Total Imports of Commercial Services in the Philippines, 2008-2012**

Unit: %

Industries \ Year	2008	2009	2010	2011	2012
Transportation	50.42	42.18	44.61	35.89	34.78
Travel	24.64	31.09	30.69	44.49	44.33
Other commercial services	24.94	26.73	24.69	19.63	20.89
Communications services	1.76	1.42	1.38	1.27	1.37
Construction	0.40	0.23	0.19	0.41	0.30
Insurance services	3.14	2.71	2.79	2.82	2.58
Financial services	0.98	1.44	0.66	1.09	0.80
Computer and information services	0.96	1.05	0.98	1.60	1.12
Royalties and license fees	4.58	4.85	4.00	3.66	3.58
Other business services	12.82	14.55	14.15	8.45	10.90
Personal, cultural and recreational services	0.31	0.48	0.53	0.31	0.24

Source: WTO Statistics, Merchandise Trade and Commercial Services.

### (3) Other Business Services Rose Fastest in 2012

Other business services rose 50.6% in 2012 and presented 52% of other commercial services. Compared to 2008, computer and information services was the only sector under other commercial services category saw share rise in 2012, albeit up slightly (0.16 percentage point), representing a share of 1.12% in 2012 (Table 7-2-18).

**Table 7-2-18 The Philippines Import Growth Rate of Commercial Services, 2009-2012**

Industries	Year					Unit: %
	2009	2010	2011	2012	2008-2012	
Total	3.97	28.23	8.42	16.80	68.82	
Transportation	-13.02	35.62	-12.79	13.21	16.46	
Travel	31.16	26.61	57.14	16.37	203.69	
Other commercial services	11.43	18.45	-13.83	24.32	41.40	
Communications services	-16.33	25.20	-0.65	26.14	31.29	
Construction	-39.39	5.00	138.10	-16.00	27.27	
Insurance services	-10.31	32.34	9.32	7.06	38.93	
Financial services	52.44	-40.80	78.38	-14.39	37.80	
Computer and information services	13.75	19.78	77.06	-18.13	97.50	
Royalties and license fees	10.21	5.70	-0.67	14.03	31.94	
Other business services	18.04	24.70	-35.24	50.59	43.55	
Personal, cultural and recreational services	61.54	40.48	-35.59	-10.53	30.77	

Source: WTO Statistics, Merchandise Trade and Commercial Services.

## 7. Taiwan Trade in Service Development Should Focus on Two Key Sectors: Other Business Services and Personal, Cultural and Recreational Services

Given the greater growth potential of emerging markets, especially Mainland China, largest trading partner of Taiwan, still growing services imports 18.2% in 2012, Asia should be Taiwan's target market to grow service exports as well as to diversify service exports exposure to developed markets. Based on the above analysis of major Asian trading partners' state and trend in service imports as well as global trade in services trend, Taiwan trade in service development should focus on two key sectors, that is other business services, and personal, cultural and recreational services.

### (1) Other Business Services: A Main Sector for Exports Expansion to Emerging Markets

Other business services sector represented a significant share of services imports in China (15%), Thailand (19%), Indonesia (24%), Singapore (25%) and The Philippines (11%) in 2012. Emerging markets are highly dependent on foreign supply of professional and technical services. At the same time, other business services sector has been the largest contributor to Taiwan's services exports (47% in 2012). Therefore, to open up emerging countries' service markets, Taiwan should focus on

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its other business services sector, which has been well developed with substantial exports expansion potential.

It deserves to be noticed that triangular trade and other trade related services are included in BoP by Taiwan Central Bank, which involve finance, management, marketing, patent and other technical services per Directorate-General of Budget, Accounting, and Statistics of Taiwan, while “other business services” in “WTO International Trade Statistics 2012” comprises trade-related services, operational leasing, and miscellaneous business, professional and technical services such as accounting, management consulting, advertising, market research, R&D and so on. Therefore, it is decided that triangular trade and other trade related services be included in “other business services” sector as professional and technical services, albeit no exact subsector matches in WTO.

### **(2) Personal, Cultural and Recreational Services: A Small Sector with Great Growth Potential**

Personal, cultural and recreational services comprise audiovisual services and other cultural, sporting, and recreational activities. The sector is small but has been growing very fast globally as well as in Taiwan, especially in related tourism, cultural and creative (C&C) industries, which are also promoted as the potential target subsector in trade related researches by Jing, et al. (2011) and Wang et al. (2012).

## **III Examination of Government Policies and Measures**

We will examine government policies and measures related to services, other business services sector, and personal, cultural and recreational services.

### **1. Taiwan’s Service Industry Development Programs**

#### **(1) Service Industry Development Plan (2009-2012) by Council for Economic Planning and Development**

##### **A. Vision**

To enable the service industry to become an engine for increasing added value, creating employment, raising quality of life, and promoting economic growth.

##### **B. Macroeconomic Targets**

The service sector’s nominal GDP to reach NT\$11 trillion in 2012; an average of 120,000 new service sector jobs to be created each year up to 2012; and Taiwan’s service exports to constitute 1.2% of global services trade.

##### **C. Development Strategies**

Those are (i) Enhancing the international competitiveness of Taiwan’s service industries; (ii) Bolstering R&D and innovation; (iii) Creating differentiated services; (iv) Strengthening talent cultivation and recruitment from abroad; (v) Improving service industry statistics; (vi) Promoting the development of emerging service industries, including tourism, cultural and creative (C&C)

industries, medical services, high-end agriculture, logistics, telecommunications, and technology services.

### **(2) “Speedily Promoting Service Sector’s Development-The 10 Key Service Industries” by Executive Yuan since Oct. 2009**

Specific promotion plans for the 10 key service industries was drafted to improve service sector's export competitiveness and created more than 180,000 jobs. This plan will also facilitate over NT\$400 billions of investment from the private sector and create more than NT\$1 trillion worth of output value. The 10 key service industries are as follows, the globalization of Taiwanese cuisine, medical travel, international logistics, pop music and digital content platform, MICE industry (meetings, incentives, conferencing, and exhibitions), international logistics, urban renewal, Chinese e-commerce, WiMAX, fund-raising platform for high-tech and innovative firms, and overseas student recruitment expansion.

### **(3) 2020 Industrial Development Strategy by MOEA (2011)**

Strategies for service industry including:

- A. Service industry globalization, brand building, channel expansion, and market development;
- B. Establish Taiwan as the choice of global franchise operation headquarters and the Asia-Pacific value-added logistics base.

### **(4) “Three Industries, Four Reforms” Action Plan by Executive Yuan (2012)**

Action plan to foster growth of Taiwan’s manufacturing, service, and traditional industry:

- A. Service-oriented manufacturing industry;
- B. Internationalized high-tech service industry (export oriented; ICT as model industry for developing export market and enhance international image of Taiwan’s service industry);
- C. Specialty oriented traditional industry.

### **(5) 2012 National Conference on Industrial Development by MOEA**

On grasping emerging market opportunity and boosting export competitiveness, consensus were reached to further strengthen emerging market research and overseas business intelligence, leverage on Taiwan’s service quality and ICT advantage to attract international partners and promote inter-sector collaboration for creation of new business opportunities, promote service brands, expand market channels, and enhance Taiwanese firms’ competitive advantages. MOEA expects the consensus reached in the conference will help achieve the goals in Taiwan industrial reconstruction and sustainable economic growth in the future.

### **(6) Blueprint of the Long-Term Development within the Service Industry by MOEA (2012)**

In order to reinforce the development of the service industry in Taiwan, the Blueprint is framed to focus on eight main service businesses and seven integrative business models in the service

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industry. The eight main service businesses include retail, health care h, logistics, consulting, IT services, design, advertising, and the conference and exhibition industry. As for the seven integrative business models, the policy will involve digital content, wireless broadband applications, nursing infrastructure and system establishment , intelligent automation, cloud computing, E-commerce, and energy services.

Along with the policy, the MOEA will also devote NT\$30 billion to support the adjustment of the industry structure, leading to GDP growth of 5.14%, or NT\$475.39 billion in 2020. This policy will work in large part by encouraging the service industry to create jobs, increasing by 0.166 million the employed population to 2.784 million, and supporting GDP growth in the near future.

### **(7) Revamp Traditional Industries Plan by Executive Yuan (2012)**

The plan will introduce new dynamics into traditional industries and help innovate marketing and create value through cross-sector integration, and establish pro-business environment. The Executive Yuan (the Cabinet) estimated that the plan as a whole will produce 25,000 jobs, boost exports by NT\$200 billion and attract investment of NT\$50 billion.

### **(8) Free Economic Demonstration Zone Plan by Executive Yuan (2013)**

The Free Economic Demonstration Zones will cover areas near the ports of Taipei, Keelung, Suao, Taichung, Kaohsiung and Anping, as well as Taiwan Taoyuan International Airport and Pingtung Agricultural Biotechnology Park. Under the project, restrictions on manpower, capital and merchandise flows in the targeted areas will be eased significantly to enhance business efficiency and attract domestic and foreign investment.

The first-phase Free Economic Demonstration Zone Plan is expected to increase private sector investment by NT\$20 billion (US\$ 670 million), raise national domestic product by NT\$30 billion and create 13,000 jobs by 2014. The second-phase of the project will involve tax incentives. The industries included are intelligent logistics, international medical services, value-added agriculture and industrial cooperation.

## **2. Taiwan's Service Sectors Development Schemes**

We here examine multiple government policies and measures discussed above specifically targeting “other business services” sector, including personal, cultural and recreational services (Table-7-3-1).

**Table 7-3-1 Taiwan's Service Sectors Development Schemes**

Relevant Projects	Capital	R&D	Guidance	Manpower	Marketing	Strategic Alliance	Package Plant Export	Branding	Award	Infrastructure/ Business Environment Building
Total	6	9	16	13	13	14	3	3	9	17
1. Taiwan Creative Design Plan	✓	✓		✓	✓			✓	✓	
2. Branding Taiwan Plan (2 <sup>nd</sup> Phase)			✓	✓				✓		
3. IT Service Industry Development Plan	✓		✓	✓	✓	✓			✓	✓
4. IT Service Industry Promotion Plan			✓		✓	✓				
5. Investment Promotion Plan for Strategic Service Industry	✓									
6. Talent Training Program for IT Application Service				✓						
7. Promotion Plan for Information and Communication Industries		✓		✓						✓
8. Intellectual Property Value Creation Plan			✓	✓	✓					✓
9. Promotion Plan for Supply Chain Integration and Application Upgrading in Communication Industry						✓	✓			✓
10. Wireless Broadband Application Services Promotion Plan						✓	✓			✓
11. Smart Living Application Promotion Plan		✓				✓	✓			✓
12. Cross-Industry E-learning Upgrading Plan		✓	✓		✓	✓				✓
13. Software Value Industry Promotion Plan			✓		✓					
14. Digital Content Industry Development Plan	✓	✓	✓	✓	✓					
15. Digital Content Application and Business Environment Promotion Plan									✓	
16. Health Care Industry Promotion Plan		✓	✓			✓				✓
17. Regional Industry Cluster Development Plan		✓	✓			✓				✓
18. Franchise Industry Upgrading Plan			✓	✓	✓	✓				
19. Commercial Design and Advertising Services Development Plan			✓	✓					✓	
20. Gourmet Taiwan Globalization and Gourmet Application of Science and Technology Program			✓		✓				✓	✓
21. Innovative Application of Commercial Internet Transaction Authentication Program										✓
22. Cloud Innovative Application of E-commerce and Infrastructure Building Program			✓						✓	✓
23. Supply Chain Restructuring Plan			✓	✓	✓	✓				
24. Globalization of Cold Chain Logistics Promotion Plan		✓				✓				✓
25. Promotion Plan of Management Consulting Service Technology				✓	✓	✓				✓
26. Project Vanguard for Excellence in Tourism			✓	✓	✓	✓			✓	✓
27. Cultural and Creative Industry Promotion Plan (2 <sup>nd</sup> Phase)	✓	✓	✓	✓	✓			✓	✓	✓
28. Industrialization of Originality Promotion Plan	✓					✓			✓	✓

Source: Lien, W. and J. Tsai (2013), Strategies of Trade in Services for SMEs.

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As can be seen from the table, of the total 28 schemes in force, 17 target pro-business environment and firms' competitiveness; 14, 13, and 13 relevant plans for strategic alliance, marketing, and talent cultivation and recruitment respectively; less than 10 relevant plans for financing, R&D, branding, etc. Some important observations can be made as follows:

### **(1) Most "Other Business Services" Sectors Have Not Yet Matured**

Most plans are targeting overall business environment and firms' (especially ICT sector) competitiveness. Other business services including personal, cultural and recreational services still lack sufficient support in basic infrastructure and talents to be competitive internationally.

### **(2) Limited Promotions Are Short-Term Tactics at Best**

To help promote service exports, many related measures focus on exhibitions and conferences to increase firms' visibility, the benefit of which tend to be short-term rather than long-term competitive advantages.

### **(3) Strategic Alliance Is the Key**

Firms in service industry are dominantly SMEs who normally lack the capital, technology, information, and talents of many large businesses with which they regularly compete internationally. One of the key elements in developing service exports, especially emerging markets expansion is for SMEs to find right partner to leverage complementary external resources through strategic alliances such as vertical or horizontal integrations, establish niche markets, provide customized services and make decisions with flexibility and swift adaptation

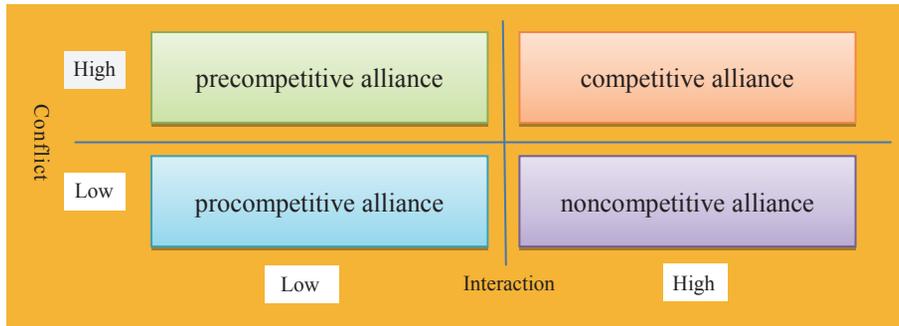
## **3. Strategic Alliance Is the Key to Strengthen Trade in Services**

We will review the definition and types of strategic alliance, and how it is used to strengthen trade in services through SME case studies.

### **(1) Strategic Alliance: Definition and Types**

A strategic alliance is an agreement between two or more parties to pursue a set of agreed upon objectives need (such as gain business, enter new markets, provide complementary services to each other, etc.) while remaining independent organizations, and often involves technology transfer (access to knowledge and expertise), economic specialization, shared expenses and shared risk.

Yoshino and Rangan (1995) classified strategic alliances into four distinct types – procompetitive, noncompetitive, competitive and precompetitive based on the combination of two factors: degree of cooperative interaction and degree of conflict potential. The extent of organizational interactions is high among competitive and noncompetitive alliances, and low among precompetitive and precompetitive alliances. The conflict potential among partners is high among precompetitive and competitive alliances and low among procompetitive and noncompetitive alliances (Figure 7-3-1).

**Figure 7-3-1 Strategic Alliance Matrix**

Source: Hsieh, W. and S. Ou-Yang (2012), Analysis of Cross-Industry Alliance in Tourism Industry.

### A. Pro-competitive Alliances

Pro-competitive alliances are generally inter-industry, vertical value-chain relationships, as between manufacturers and their suppliers or distributors. The strategic nature of their links is widely recognized. In such links, although firms work closely to develop or improve products and processes, the type of cooperation requires low levels of organizational interaction. Moreover, the firms tend not to be rivals.

### B. Noncompetitive Alliances

Noncompetitive alliances tend to be intra-industry links among noncompetitive firms, for example General Motors and Isuzu, which are jointly developing a small car that both will sell. The level of interaction in this cooperative effort is high. Neither views the other as a major rival. Given the partners' significant commitment of time and effort, neither is likely to seek to duplicate its efforts in another alliance. The firms are, therefore, unlikely to rank flexibility and protecting core competencies as high priorities. Learning, on the other hand, is likely to be very high on the agendas of the partner firms' managers although, in the same industry.

### C. Competitive Alliances

Competitive alliances are similar to noncompetitive alliances in terms of the level of organizational interaction but differ in that the partners are apt to be direct competitors in the final product market. The most notable example was Star Alliance among major airlines around the world. Such cooperation calls for intense interaction between the paired firms, even though they are direct rivals, with an implicit high potential for conflict. Adding value is likely to be important, but not the highest strategic priority. Hence, protection of core strategic competencies is critical. Learning, given the opportunity for it, is also apt to be ranked high by managers.

### D. Precompetitive Alliances

Precompetitive alliances typically bring together firms from different, often unrelated industries to work on well-defined activities such as new technology development. Franz Porcelain and Taiwan Tobacco and Liquor Corp.'s cooperation is an example. The cooperating firms tend to value learning and maintain strategic flexibility, a key management concern. Moreover, as product development

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proceeds and commercialization nears, the competitive element may begin to color the relationship, with each firm trying to gain insight into the core competencies of the other, rendering protection of core strengths another critical strategic management objective in precompetitive alliances.

### (2) Strategic Alliance: Key Success Factors

Strategic alliance lies between M&A and organic growth (Porter and Fuller, 1985). There is inherent ambiguity in strategic alliance because (A) partner firms remain independent after the alliance, often cooperating and competing at the same time, (B) managers who negotiate the alliance are not often the ones who manage the alliance, and (C) the partner firms may often differ in respect of the commitment they demonstrate to the alliance.

Mutual trust and doubt are the two ends of a pole with which managers maintain balance while walking on the tight-rope of strategic alliance. Without adequate trust, no strategic alliance could be a success (Tang et al., 2006; Chen, 2008; Fan and Chen, 2008; Chen et al., 2009).

Trust establishment and ambiguity management are at the heart of alliance management. Special attention needs to be paid to (A) choose the right partner who is successful in related areas, trustworthy, and value goodwill, develop shared strategic intent, and demonstrate commitment to one's partner to establish trust early on, (B) manage information flows in a tactful way that allows speedy exchange of information and prevent the disclosure of sensitive information to one's partner, (C) make the incentive right and the reward systems fair and reshape when needed, (D) manage ambiguity and conflict - traits and behavioral patterns that are essential to be successful members of an alliance include flexibility, teamwork, willingness and ability to learn from others, negotiating skills, and so forth.

### (3) Strategic Alliance: Case Studies

#### A. Procompetitive Alliance: Hyweb Alliance

A strategic alliance led by Hyweb Technology Co., Ltd. (Hyweb), Hyweb Alliance is the leading total payment solution provider for banking institutions in the Asia Pacific. It comprises Hyweb, SYSTEX, Castles Technology, Syscom Group, Paysecure Technology Co., Ltd., and Digisoft Corp.

With the vertical and horizontal integrations of the core technologies, products, and services, the alliance is able to provide total payment solution covering the entire process for cards issuers (mostly banks), merchants (mostly retailers) and card users from application, credit approval (for individual), merchants acquiring and approval (for firms), POS installation, card making and issuance, transaction authorization, clearance, billing, and collection. Important technologies and systems include front and back office hardware and systems, Loyalty System, Stored-Valued Card, E-Purse for Chip Card and Credit Card and highly dependable Client to Client Security (data security, network security, etc.). As such, backed by self-developed core technologies that are easily scalable, Hyweb Alliance is capable of offering competitive priced, low risk, and low cost total solution, including services such as account management, merchant management, customer relation management system, consulting, maintenance, etc.

Since the establishment, Hyweb Alliance has reached several milestones, including over NT\$300 million export amount; Loyalty System overtaking Hong Kong (Octopus) and Singapore competitors (EZ-Link) as market share leader in Thailand, contracting six financial institutions including Siam Commercial Bank (the largest commercial bank in Thailand), TSC-CP Group (2nd largest card issuer), and so on; Loyalty System, Stored-Valued Card, E-Purse and other services beating competitors (IBM, Digital-China, etc.) in Mainland China, signing clients including BOCCC (Bank of China Credit Center), CMB (China Merchant Bank), Shanghai Starbucks, etc.

### **B. Noncompetitive Alliance: Taiwan Tourist Shuttle (TTS)**

TTS is a noncompetitive alliance between transportation firms and travel services to offer convenient travel service connecting main tourist attractions in Taiwan. TTS currently serves the following counties: Yilan, Taoyuan, Miaoli, Changhua, Nantou, Chiayi, Tainan, Pingtung and Taitung. Each county includes various stops at scenic spots and different package options.

Statistics showed that 20% of visitors who used the package service were from outside Taiwan. A survey among passengers using the Taiwan Tourist Shuttle Bus showed that the satisfaction rate was 90% for the new service. According to Minister of Transportation and Communications, Mao Chikuo, a round-trip tour to Sun Moon Lake in Nantou county including access to the Sun Moo Lake cable car, the round-the-lake bus, a boat tour and discount coupons for scooter or bicycle rental will cost NT\$599 (approximately US\$20).

The Taiwan Tourist Shuttle Bus service is also a response to reducing carbon emissions by encouraging tourists to travel by public transportation rather than by driving.

### **C. Competitive Alliance: Taiwan Elite Alliance (TEA)**

TEA, establish in July 2000, is a competitive alliance among five star hotels, casual dining restaurants, and car rental companies across Taiwan offering high quality dining and entertainment experience. TEA aims to expand domestic tourism market, minimize counterproductive price competition among partners, and provide high-end and high quality dining and entertainment experience through shared resources, cooperation, and long term goal of "one top hotel in every county or city." Partners include three Evergreen Hotels (Keelung, Taipei and Taichung), Evergreen Plaza Hotel (Tainan), Janfusun Prince Hotel (Yunlin), Ambassador Hotel Kaohsiung (Kaohsiung), Caesar Park Hotel Kenting (Pingtung), Hotel Les Champs, Farglory Hotel (Hualien), Naruwan Hotel & Resort (Taitung), and rental car companies.

### **D. Precompetitive Alliance: International Certification Counseling Alliance (ICC)**

International Certification Counseling Alliance, a precompetitive alliance brings together firms with expertise in international certification counseling, management consulting, and energy saving technology, has become the industry's leading source of training and counseling for compliance with quality and environmental standards, focusing on ISO 14001 (environmental management system, EMS) and ISO 14064 (international standards for greenhouse gas emissions). Partners include Kind Consulting, Vision Consulting Group, Thoth Management Services, SWAT Energy Technology, and TisaMax.

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The alliance values learning (internal sharing meetings, talent training, etc.) and maintain strategic flexibility with about 20% of counseling business obtained through collaboration among partners.

### 4. Key Factors to Form Strategic Alliances among SMEs

Below are a summary of key factors for strategic alliance cases among SMEs discussed above (Table 7-3-2).

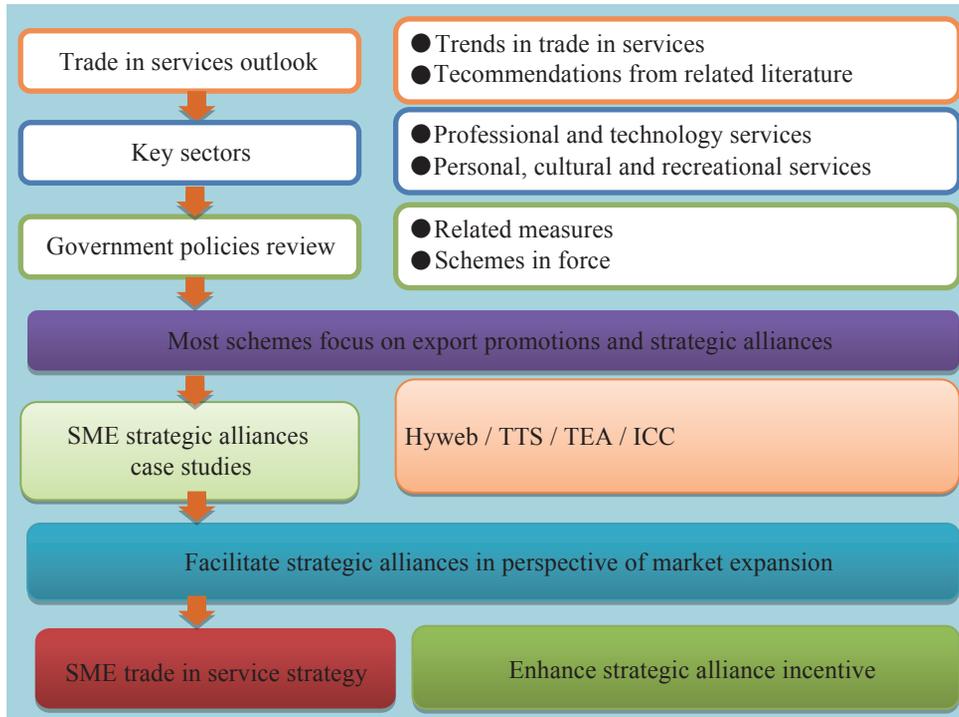
**Table 7-3-2 Key Factors to Form Strategic Alliances – Case Studies**

Key Factors	Hyweb	TTS	TEA	ICC
Right Partner	1 <sup>st</sup> phase success since 2006 leading to forming of strategic alliance	Common goals	Intense interaction between the paired firms in same industry with similar size and strength	Partnering firms with success experience
Trust	Trust established in initial phase	Manage information flows tactfully	Firms in high end market with great reputation	Lead firms have good reputation
Manage Ambiguity	Years of experience in cooperation and labor division	Promoted and supervised by government	Through agreement and coordination	Promoted by government with limited supervision
Fair Reward System	Clear labor division; low conflict	Clear labor division; low conflict	Clear market division; low conflict	Clear labor division; low conflict

Source: Lien, W. and J. Tsai (2013), Strategies of Trade in Services for SMEs.

## IV Structure to Craft Trade in Service Strategy

Based on the analysis of major Asian trading partners' state and trend in service imports as well as global trade in services trend in Section I, Taiwan trade in services development should focus on two key sectors: other business services (a.k.a. professional and technology services) and personal, cultural and recreational services. Section II indicates that government service export policies schemes should be more oriented toward nurturing service talents and facilitating strategic alliances for SMEs, on top of short term oriented export promotion measures. Combined with further case studies in Section III, an integrated structure to craft the trade in service strategy is shown in Figure 7-4-1.

**Figure 7-4-1 Structures to Craft the SME Trade in Service Strategy**

Source: Lien, W. and J. Tsai (2013), Strategies of Trade in Services for SMEs.

## 1. Enhance Strategic Alliance Incentive

To enhance strategic alliance incentive for SMEs, especially in two target sectors - professional and technology services and personal, cultural and recreational services, several key areas need to be addressed.

### A. Market Expansion Incentive for SMEs in Professional or Technology Services

Currently, various government schemes assist SMEs through counseling units, which often are established leading firms in specialized areas with advanced technology and ample resources that most SMEs lack. While counseling units could be of great help to SMEs in operation, technology, and finance, they could also be direct competitors to SMEs in the same professional services market. Government need to address this inherent ambiguity in the system and enhance SME's incentive for potential market expansion, by ensuring and facilitating mutual benefits for both sides in market shares, technology transfer, and cost efficiency.

### B. Reduce Uncertainties of Government Funding Assistance and Promote Long-Term Goals

Most government schemes assist SME strategic alliances through capped matching grants in 2-3

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years subject to change by annual review. While the capped matching design could reduce the risk of moral hazard, the short duration of funding may limit the SMEs' ability to develop competitiveness in the long run and make them focus on short term benefit of the assistance. To maximize the benefit of the assistance, the duration could be lengthened with growing match grants annually and capped at same amount in aggregate, subject to periodic reviews, to reduce funding uncertainty and promote long term benefit. As such, SMEs will be incentivized to invest more and build on long-term core competency.

### C. Taiwan Tourism Market Differentiation: A Global Perspective

Taiwan's tourism industry output increased significantly in recent years amid forceful government promotion. However, tourist attractions and activities suffered high degree of homogeneity, with most crowded ideas copied everywhere, such as old streets culture, hot air balloons, including the six travel themes promoted by the government in similar design of routes and itineraries. Hence lack of inspirational appeal to international tourists while limiting value-added pricing opportunity. Therefore, government should sharpen its focus to ensure resources are integrated and directed to clearly defined strategic priorities with a global perspective to (i) leverage Asian tourism boom, (ii) ride the Chinese wave, making Taiwan an indispensable experience of Chinese trip for foreign tourists, (iii) differentiate in positioning its unique and rich history, culture, and world class landmarks, and (iv) focus on couple of big ideas of inspirational appeal to international tourists. Some globally successful travel promotions that deserve case studies are Peru's Lost City of Incas, Brazil's Carnival, Hong Kong's Shopping Paradise, and Macao's Gaming and Entertainment.

### D. Invest in Cultural and Creative (C&C) Industries with Long-Term Commitment

Taiwan, through decades of intense development and accumulation, is still a leading soft power in the Greater China region in terms of arts, pop culture, and various creative industries. However, this advantage is not sustainable without government's long-term commitment of support. Although there is no quick fix to nurture and lift C&C industries and its effectiveness is hard to quantify, there is no denying that C&C elements are Taiwan's critical competitive advantage and a core appeal to foreign tourists. Therefore, government needs to invest in C&C industries with long-term budget commitment in addition to usual investment in hardware facilities.

## 2. Improving Service Industry Statistics

It's been a government priority to implement the international alignment of service trade statistics and strengthen service industry database that is far from complete. The government can start with several emerging markets of great growing potential, use current Balance of Payments (BoP) as a base to review, expand, and establish a complete service industry statistics database for these markets, and actively upgrade the quality and timeliness of the data.

### 3. Local Markets Information Integration

Most Taiwan service firms are domestic oriented and lack the knowledge of export markets, such as regulations, hidden rules, and spending habits that raise barriers to entry. Due to the complex nature of market data and multiple sources of information, the government should integrate relevant information in a unified way that make the information presentable, useful, and timely with built in auditing mechanism to ensure data quality.

### 4. Enhance Performance Evaluation Mechanism

Most government policies and measures are supposed to help firms in various ways with focus on build marketing capabilities and value-added services or products. However, it's not easy to assess the actual effectiveness of these schemes, especially in terms of value added professional services, which could be a much longer term process compared with manufacturing industries. Even so, performance evaluation mechanism needs to be enhanced to ensure effective use of government resources. For the time being, closely tracking the entire counseling and execution process is a feasible evaluation focus.

### 5. Lower Trade Tariffs and Avoid Non-tariff Barriers

Taiwan's economy is highly dependent on exports. Facing the global trend of regional economic integration, Taiwan should take advantage of ECFA and FTAs as soon as possible to lower trade tariffs and avoid non-tariff barriers, which is vital to strengthen service export markets and SMEs' competitiveness. In 2013 the Cross-Strait Agreement on Trade in Services, one of the follow-up agreements under ECFA, was signed between Taiwan and Mainland China. This new agreement stipulates in writing the various matters related to gradually reducing or eliminating restrictions on trade in services across the Taiwan Strait. It is expected to help Taiwan service firms expand their market share in Mainland China, lessen the competitive pressure on Taiwan's SMEs in service industry, and give Taiwanese providers access to preferential treatment that exceed the conditions for entering the Chinese services market under its WTO commitments.

Under the pact, which includes four chapters and 24 articles, 64 Taiwanese industries will be opened to Chinese investment, including transportation, tourism and traditional Chinese medicine, while China will open up 80 industries to Taiwan, including finance, retail, electronics, publishing and travel sectors.

Services now account for more than 70% of Taiwan's GDP while for Mainland China the ratio is under 50%, reflecting the relative maturity of Taiwan's market for services. Given the vital influence of culture and localization on services, Taiwan's service providers have a lot more room to develop in the Mainland's services market than Western providers do.

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A post-signing impact study by the Chung-Hua Institution of Economic Research commissioned by the Ministry of Economic Affairs released on July 16 forecast that the pact would (1) lift GDP by between 0.025 - 0.034 percentage points, (2) provide over 11,000 new service sector jobs over the next decade, (3) service exports increase US\$378 million (up 1.61%) and service imports increase US\$62 million (up 0.30%), and (4) service output increases US\$390 - 428 million (0.10 - 0.11%).





# Part Three

## Government SME Policies and Prospects



- Chapter 8 Providing SME Financing and Investment Capabilities**
- Chapter 9 Upgrading, Transforming and Enhancing R&D Capabilities**
- Chapter 10 Strengthening Startup Capabilities and Promoting Incubator and Accelerator Programs**
- Chapter 11 Revitalizing Local Industries by In-depth Development, Marketing and Expansion**
- Chapter 12 Other Resources and Measures to Support SMEs**

*Many SMEs in Taiwan possess unique technology and innovative products, but lack the scale, capital, technology, and talents of many large businesses with which they regularly compete. Taiwanese government has been working actively to establish effective policy measures to facilitate the development of SMEs and resolve the hurdles facing SMEs.*

*Multiple policy measures were taken by relevant government departments to assist SMEs in funding and credit guarantee, marketing, technology upgrading and transformation, start-up promotion, incubating and acceleration mechanism, free trade policy, improved legal and regulatory environment. In addition, Taiwan has for many years been an active participant in the SME-related meetings and activities undertaken by international organizations, such as Asia Pacific Economic Cooperation (APEC) and the International Small Business Congress (ISBC). Part Three reviews the important measures and examines their goals, implementation and results.*



# CHAPTER 8

## Providing SME Financing and Investment Capabilities

Many SMEs in Taiwan possess unique technology and innovative products, but lack the scale, capital, technology, and talents of many large businesses with which they regularly compete. Because of their small size, operational weaknesses, volatile cash flow and lack of financial transparency, SMEs generally find it very difficult to obtain funding either from the capital markets or venture capital due to unproven business models and / or lack of track records, or from banks due to unstable financial performance or cash flow and lack of tangible assets that could be used as collateral. This situation has a direct negative impact on the SMEs' ability to grow, and there is thus a clear need for the government to provide more in the way of financing guidance and credit guarantees.

In order to provide comprehensive assistance for SME development, and achieve a further strengthening of financing channels, the Ministry of Economic Affairs (MOEA) has also been working actively to provide innovative new value-added services with respect to SME credit guarantees, investment and guidance, thereby giving SMEs a wider range of financing channels to choose from.

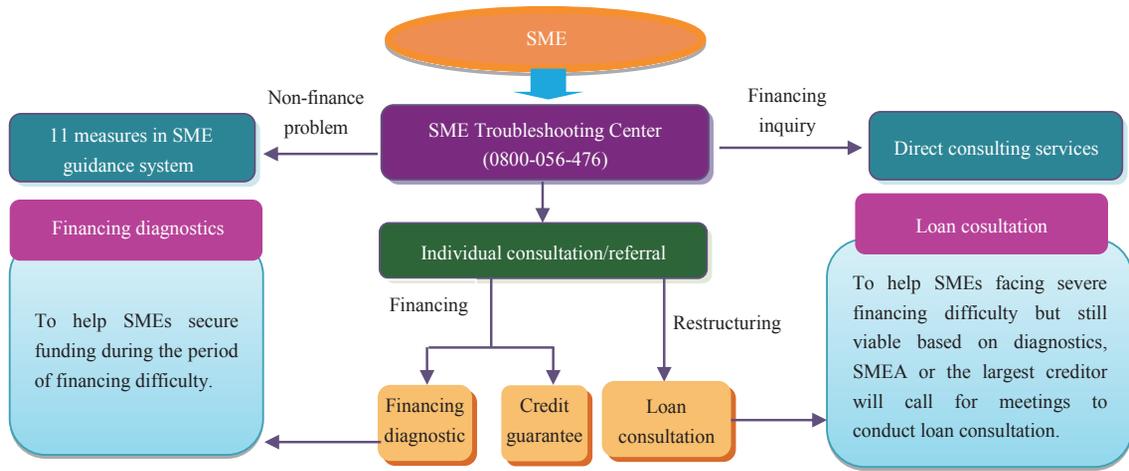
To elaborate on the content mentioned above, this chapter is divided into three sections. Section I discusses government's measures to strengthen SME financing capabilities. Section II focuses on SME credit guarantees; Section III covers government's measures to strengthen SME investment capabilities.

### I Providing Financing Service and Assistance

#### 1. Providing SMEs Financing Service 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 provides quick and effective assistance in a wide range of areas, including financing diagnostics and consulting, financing and loans related referral, guidance, refinance, extension, line of credit, and so on for both borrowers and creditors to enhance SMEs' financing capacity and risk management. The consultation mechanisms are outlined in Figure 8-1-1.

**Figure 8-1-1 Finance and Financing Consultation Mechanism**



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2013.

## 2. 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 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 related to financing guarantees, investment and financial management. SMEs can use the Contact Windows to obtain comprehensive financial information, and to find out about the various types of low-interest loans that the government makes available to SMEs, thereby helping solve SMEs' financing problems. On the other hand, SMEs can provide feedback through the Window to the government for policy formulation.

## 3. Setting up the SME Financing Services 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 and the creditors. The SME Financing Services Platform formally commenced operations on April 1, 2009. As of 2013, a total of 26 banks have joined the platform.

## 4. 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. In 2013, altogether, 24 different types of policy loan are available in 11 categories including 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.

## 5. Plan for Increasing Loans to SMEs by Domestic Banks

To encourage the development of a long-term partnership relationship between SMEs and banks, and thus help SMEs obtain working capital, the Financial Supervisory Commission (FSC) decided that implementation of the Plan for Increasing Loans to SMEs by Domestic Banks should continue into a eighth stage, from January 1, 2013 to December 31, 2013, with the target of raising domestic banks' outstanding loans to SMEs by at least NT\$240 billion by the end of 2013, of which 50% to 90% of the loan amount are guaranteed.

By the end of 2012, the aggregate SME loan balance of domestic banks was NT\$4,447.5 billion, increased by NT\$379.8 billion (up 9.34%) from end of 2011. The range of SMEs that are eligible for assistance under this scheme was expanded by deeming that small commercial enterprises as defined by Article 5 of the Commercial Registration Law that conform to the criteria for SME Credit Guarantee Fund credit guarantees can be classed as SMEs; in addition, a new "Special Award for Contributions to Balanced Regional Development" has been instituted.

## 6. The Taiwan Small Business Integrated Assistance Center (SBIAC) – Providing Specialist Financial Management Support Services

The Taiwan Small Business Integrated Assistance Center (SBIAC) was founded in 1982 through the provision of donations by seven financial institutions – the Bank of Taiwan, Land Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank, Chang Hwa Commercial Bank and Taiwan Business Bank – with the aim of strengthening SMEs' managerial capabilities and competitiveness through the provision of comprehensive guidance, assistance with financing, advice on improving financial management, and assistance with the cultivation of specialist talent, in line with government strategy regarding SME development. The SBIAC provides a comprehensive range of guidance and funding support services for SMEs with significant development potential that have experienced difficulty in obtaining financing from financial institutions.

## 7. Young Entrepreneur Financing Loans

The MOEA launched the Young Entrepreneur Financing Loans in August 2012. Young entrepreneurs aged between 26 and 45 who are eligible for the Young Entrepreneur Financing Loans can apply

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for this start-up loans at preferential interest rates when they are getting their new businesses off the ground, and benefit from the provision of direct credit guarantees up to the 90%-95% range by the SME Credit Guarantee Fund.

## II SME Financing and Credit Guarantees

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. SME Credit Guarantee Fund: Principles, Operation, and Functions

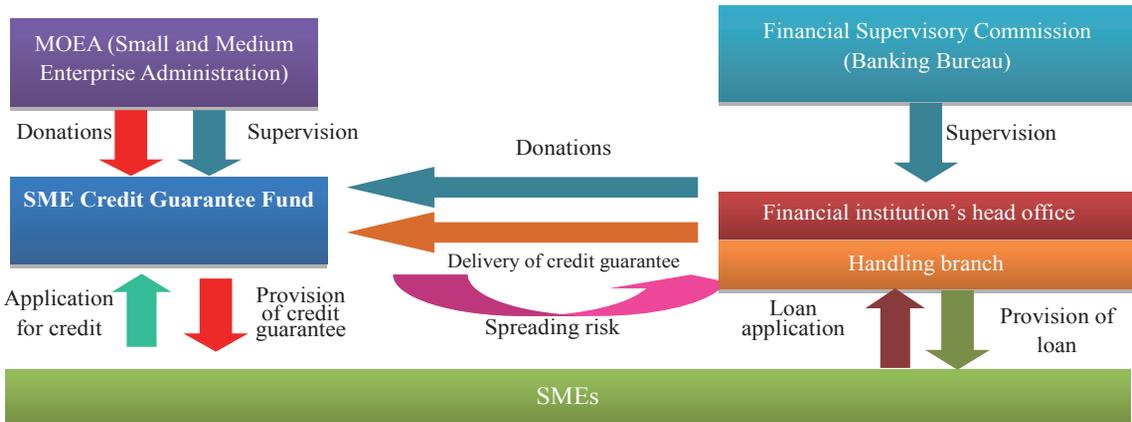
The main purpose that the SME Credit Guarantee Fund was established to provide credit guarantees to SMEs, and to work closely with financial institutions in the development of financing guidance services for SMEs, helping SMEs obtain the funding they need from financial institutions and thereby contributing 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) Helping SMEs 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. Establishment and Operation of the SME Credit Guarantee Fund, and Application for Credit Guarantees

The mechanisms for the establishment and operation of the SME Credit Guarantee Fund involved the allocation of a supporting budget by the government and the signing of contracts with financial institutions whereby they agree to provide additional funding to boost the Fund's ability to provide credit guarantees, and to share some of the potential loss (Figure 8-2-1), thereby enabling the Fund to continue providing guarantees and helping SMEs that have significant development potential but lack sufficient collateral secure the financing they need from financial institutions.

As of the end of June 2013, cumulative government subsidy amounted to NT\$88.593 billion, or 79.45% of the total subsidy; signed financial institutions' cumulative subsidy amounted to NT\$22.411 billion, or 20.10% of the total subsidy.

**Figure 8-2-1 Establishment and Operation of the SME Credit Guarantee Fund**

Source: SME Credit Guarantee Fund, 2013

Application for a credit guarantee can be made either via a financial institution, or directly to the SME Credit Guarantee Fund, or a dedicated window, depending on the requirements of the individual enterprise making the application.

### (1) Application via a Financial Institution

The SME Credit Guarantee Fund has signed credit guarantee agreements with 40 leading Taiwanese financial institutions. Business enterprises can submit their application for a credit guarantee at any of over 3,000 branches belonging to these 40 financial institutions throughout Taiwan; the financial institution in question will then pass the application on to the SME Credit Guarantee Fund.

To improve overall service quality and create a more user-friendly online handling environment, the SME Credit Guarantee Fund has restructured the existing “authorized guarantee” and “special project guarantee” systems so that applications received via financial institutions are now handled by a single, unified contact window; the new credit guarantee online processing system was launched on July 1, 2012.

### (2) Application Made Directly to the SME Credit Guarantee Fund

In line with government policy regarding industrial development and the strengthening of SME financing, SMEs with significant R&D, operational or market development potential and SMEs recommended by government agencies or cultivation units may now apply directly to the SME Credit Guarantee Fund for credit guarantees, which they can then use to secure financing from financial institutions.

### (3) Application via a Dedicated Window

To assist a specific industry (such as Cultural and Creative industry), a related government institution provides a dedicated window, via which an eligible SME in the industry can apply for a credit guarantee, with preferential terms.

## 3. The Benefits Achieved in Terms of SME Funding

After 39 years of hard work, the SME Credit Guarantee Fund has achieved impressive results, and the total volume of credit guarantees provided has grown rapidly and reached record high.

### (1) Help SMEs Secure Funding

As of the end of June 2013, the SME Credit Guarantee Fund had helped a total of 337,781 enterprises. The total number of credit guarantee provided by the Fund through financial institutions was over 5.08 million with a cumulative credit guarantee volume of NT\$7,666.4 billion for loans of NT\$10,652.4 billion; The total number of credit guarantees provided through financial institutions for SMEs was over 5.01 million with a cumulative credit guarantee volume of NT\$7,547.1 billion for loans of NT\$10,488.2 billion. Table 8-2-1 and Table 8-2-2 show only the performance in recent years.

**Table 8-2-1 The Performance of the SME Credit Guarantee Fund in Credit Guarantee Provision, 2007 - June 2013**

Year \ Item	No. of Credit Guarantee Recipients	No. of Credit Guarantee Provided by the Fund	Combined Value of Credit Guarantees (NT\$ millions)	Total Amount of Financing Secured (NT\$ millions)	Outstanding Credit Guarantees at Year-end (NT\$ millions)	Outstanding Financing at Year-end (NT\$ millions)
2007	154,859	238,801	290,611	495,257	358,998	554,129
2008	147,452	237,446	330,757	523,151	328,988	501,395
2009	139,755	254,807	475,248	631,207	393,928	532,439
2010	135,821	312,593	692,598	863,787	489,577	625,493
2011	136,244	342,796	808,426	1,011,834	554,123	699,851
2012	139,095	370,144	911,183	1,142,475	610,065	767,883
Jan. – Jun. 2013	135,599	192,247	503,654	627,837	645,592	809,528

Note: The number of credit guarantee recipients listed above is the total for that fiscal year; it does not include the following types of guarantee recipient: credit guarantees for tertiary education student loans, which the SME Credit Guarantee Fund has been handling on behalf of Taipei City Government, New Taipei City Government, Taichung City Government, Tainan City Government and Kaohsiung City Government; credit guarantees for overseas study loans, which the Fund has been handling; credit guarantees for young people's overseas working holidays, which the Fund has been handling.

Source: SME Credit Guarantee Fund.

**Table 8-2-2 Provision of Credit Guarantees to SMEs by the SME Credit Guarantee Fund, 2007 – June 2013**

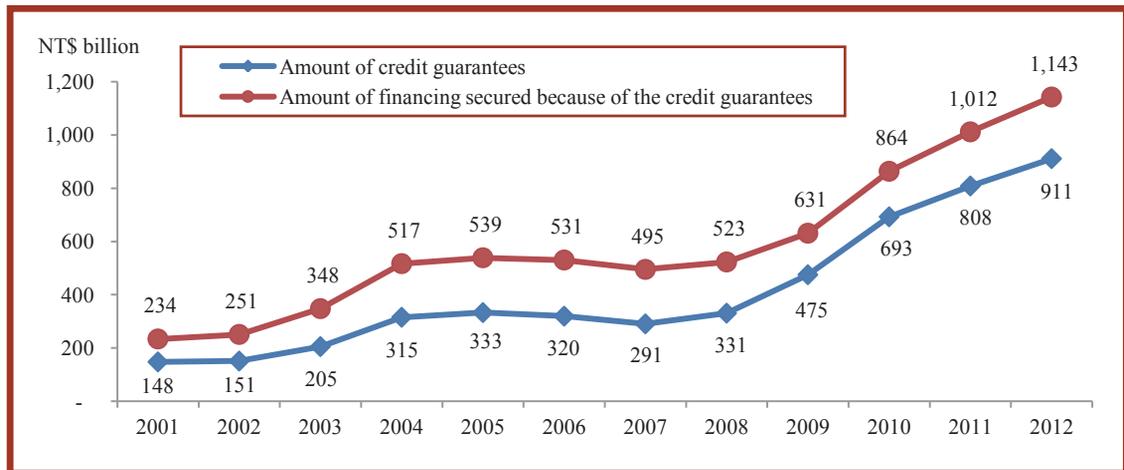
Year \ Item	No. of Credit Guarantee Recipients	No. of Credit Guarantee Provided by the Fund	Combined Value of Credit Guarantees (NT\$ millions)	Total Amount of Financing Secured (NT\$ millions)	Outstanding Credit Guarantees at Year-end (NT\$ millions)	Outstanding Financing at Year-end (NT\$ millions)
2007	147,227	236,409	288,210	492,721	348,553	542,550
2008	139,768	235,020	327,830	519,654	318,705	489,946
2009	130,269	248,374	462,030	613,141	376,768	511,394
2010	124,932	305,463	676,592	842,801	468,750	600,562
2011	124,640	336,973	800,382	1,001,720	536,400	679,336
2012	126,864	364,829	904,700	1,134,424	593,698	748,809
Jan. – Jun. 2013	123,467	189,186	499,951	623,153	629,126	790,239

Source: SME Credit Guarantee Fund.

## (2) Reducing the Negative Impact of the Global Economic Downturn on SMEs

The downturn in the global economy often leads financial institutions to adopt cautious lending policies. Over the years, whenever Taiwan's economy was depressed, the SME Credit Guarantee Fund stepped up its support for SMEs, helping mitigate the negative impact that SMEs experienced during a downturn and in the early stages of the recovery (Figure 8-2-2).

**Figure 8-2-2 Provision of Credit Guarantees by the SME Credit Guarantee Fund from 2001 to 2012**



Source: SME Credit Guarantee Fund.

## (3) SME Credit Guarantee Fund Has Great Impact on the Growth of SMEs

The vast majority of SMEs that received credit guarantees from the SME Credit Guarantee Fund finds that, within a few years, they were able to raise money on the capital markets or obtain loans directly from banks. Furthermore, as of June 2013, 2,535 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 796 have secured a stock market or OTC listing.

As of June 2013, 63% winners of the Employment Contribution Award, National Award of Small and Medium Enterprises, Little Giant Award, Small and Medium Enterprise Innovation Research Award, and National Quality Award had previously been recipients of credit guarantees from the SME Credit Guarantee Fund

## 4. New Measures Being Implemented by the SME Credit Guarantee Fund

To help SMEs and micro-enterprises obtain the working capital they need, and to reinvigorate the provision of small-value commercial loans at the local level, in addition to working with other organizations to provide Firefly Counterpart Guarantee Fund credit guarantees, the SME Credit Guarantee Fund is also playing its part in the MOEA's SME guidance policy through the active

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implementation of various new credit guarantee initiatives in 2012, including the Young Entrepreneur Financing Loans, Micro Business Loans, Supplier Financing Guarantee Project, SME Export Financing Guarantee Project, and Low Income Household Self-reliance Loan that is co-sponsored by NPO (Non-profit Organization) and the SME Credit Guarantee Fund.

### (1) The Young Entrepreneur Financing Loans

Young entrepreneurs aged between 26 and 45 who are eligible can apply for this start-up loans at preferential interest rates and benefit from the provision of direct credit guarantees up to the 90%-95% range by the SME Credit Guarantee Fund. As of June 2013 (starting from August 2012), the SME Credit Guarantee Fund had helped a total of 809 loans, amounted to a total of NT\$418 million.

### (2) Micro-business Loans

As of June 2013 (starting from October 2012), the SME Credit Guarantee Fund had helped a total of 1,491 loans, amounted to a total of NT\$2,179 million.

### (3) Supplier Financing Guarantee Project

As of June 2013, the SME Credit Guarantee Fund had helped a total of 1,012 loans, amounted to a total of NT\$1,325 million.

### (4) SME Export Financing Guarantee Project

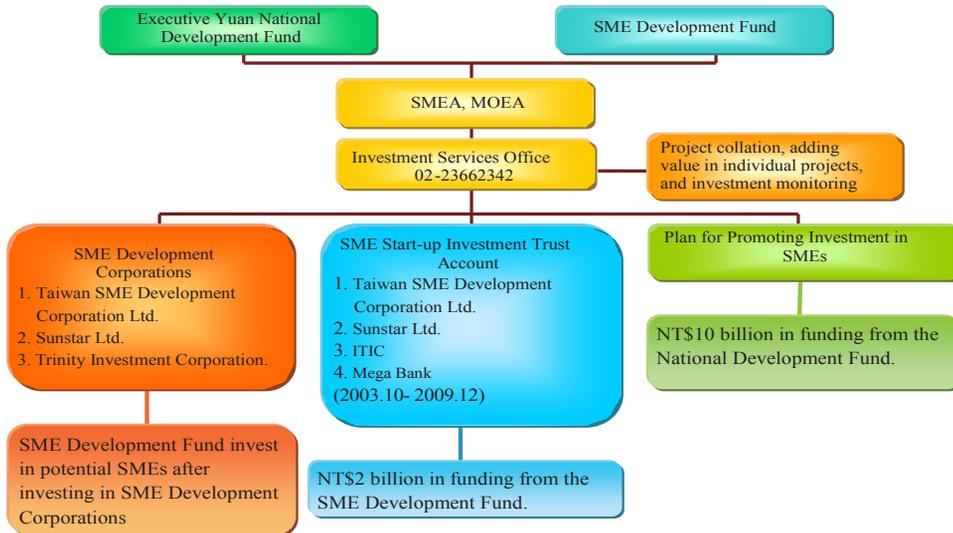
As of June 2013, the SME Credit Guarantee Fund had helped a total of 6 loans, amounted to a total of NT\$14.66 million.

### (5) Low Income Household Self-reliance Loan

As of June 2013, the SME Credit Guarantee Fund and NPO had helped a total of 214 loans, amounted to a total of NT\$98.09 million.

## III 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 Startup 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 is illustrated below (Figure 8-3-1):

**Figure 8-3-1 Framework for Promoting Investment in the SME Sector**

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2013.

## 1. Establishing the Investment Services Office

To ensure more efficient implementation of investment initiatives, the Small and Medium Enterprise Administration (SMEA) established the Investment Services Office in September 2007. It was intended that the Office would provide support for the agencies commissioned to implement the Plan for Strengthening Investment in SMEs and the SME Startup Investment Trust Account project, through the provision of “brains trust” consulting services and administrative support services. The Investment Services Office has been providing comprehensive guidance service for the companies charged with providing guidance for SMEs and incubation centers, and has been supporting the matching of domestic and overseas venture capital with business enterprises in Taiwan, while also serving as a platform for coordination and communication between the investment management companies involved in implementing investment projects and the SMEs taking part in the projects. The clients of the Office are as follows: (1) Investment funds’ entrusted agencies including National Development Fund, Executive Yuan, and the SME Development Fund Management Committee; (2) SMEs who need fund; (3) Professional management companies.

## 2. 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, and the remaining three years being devoted to the disposal of remaining investments. The

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formal launch of the Plan for Promoting Investment in SMEs took place on August 30, 2007.

Originally, under the Plan for Strengthening Investment in the SME Sector, venture capital firms were invited to invest in SMEs with significant growth potential at a 1 to 1 ratio with the Executive Yuan National Development Fund. In September 2010, the implementation measures for the Plan for Strengthening Investment in the SME Sector were revised, with adjustments made to the capital provision ratio, with the aim of promoting SME development, making it easier for early-stage SME startups to secure funding, and supporting the Executive Yuan's strategy of promoting service sector development to create more job opportunities in Taiwan. The adjustments are as follows:

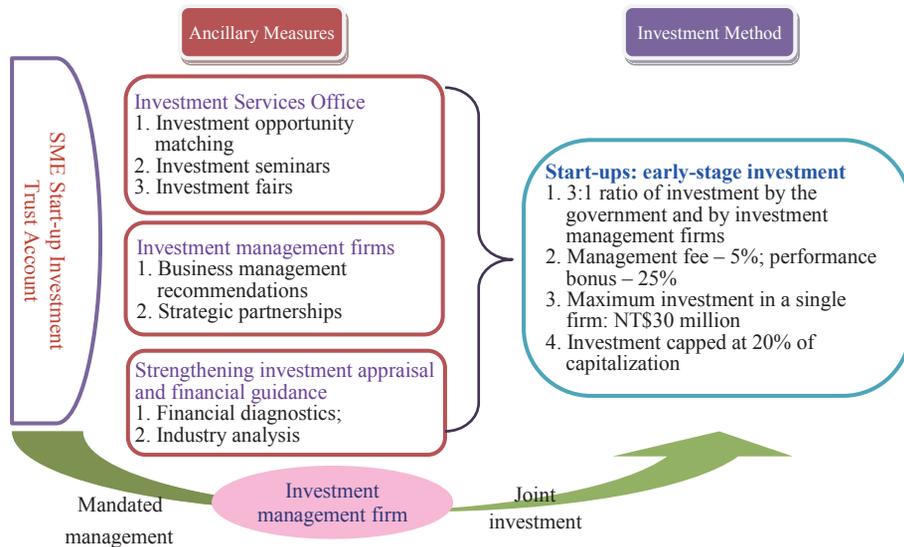
- (1) For enterprises at the seed-capital / startup stage, the capital provision ratio was set at a ratio of NT\$3 from the Executive Yuan National Development Fund for every NT\$1 provided by the investment management firm.
- (2) For enterprises in the cultural and creative industries, the capital provision ratio was set at a ratio of NT\$3 from the Executive Yuan National Development Fund for every NT\$1 provided by the investment management firm.
- (3) For enterprises in key service industries, the capital provision ratio was set at a ratio of NT\$2 from the Executive Yuan National Development Fund for every NT\$1 provided by the investment management firm.
- (4) For enterprises that have added at least 30 new employees (in Taiwan) during the year prior to appraisal by the professional management firm, the capital provision ratio was at a ratio of NT\$2 from the Executive Yuan National Development Fund for every NT\$1 provided by the investment management firm.

It is anticipated that the measures outlined above will give investment management firms more incentive to invest in emerging industries, encouraging private-sector firms to support government policy by investing in those industries the development of which the government is seeking to prioritize. As of the end of December 2012, investment had been secured for a total of 119 enterprises, with the National Development Fund providing a total of NT\$3,795.78 million in investment and investment management firms providing NT\$3,050.80 million, for a combined total of NT\$6,846.58 million.

### 3. The Plan for Strengthening Investment in SMEs – Early-Stage Investment in Startups

To achieve ongoing improvement in the ease with which SME startups can secure early stage financing, SMEA has used the Plan for Strengthening Investment in SMEs to launch the SME Startup Investment Trust Account initiative. Through this project, the Administration has arranged for investment management firms to provide matching funds for joint investment in SME startups. The measures being implemented under the SME Startup Investment Trust Account project are outlined below (Figure 8-3-2).

**Figure 8-3-2 SME Startup Investment Trust Account Project as Applied to Investment in Strategic Service Industries**



Source: Small and Medium Enterprise Administration, MOEA, 2013.

#### 4. Establishment of the SME Startup 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 Startup Investment Trust Account, with the funds in question to be entrusted to the custody of designated banks. Investment from the SME Startup Investment Trust Account began in October 2003.

As of the end of 2012, the SME Startup Investment Trust Account had invested in 80 SMEs. The total investment by the SME Development Fund came to NT\$1,639.51 million with the actual verified investment of NT\$1,518.30; the management companies provided a further NT\$1,679.21 million. The cumulative investment came to NT\$3,197.71 million.

#### 5. The National Development Fund's Plan for Promoting Investment in Strategic Service Industries

To stimulate investment in the strategic service industries to promote service industries and employment, service exports, and the financing of SMEs in service industries, on May 2012, the National Development Fund approved the Plan for Promoting Investment in Strategic Service Industries. The Fund was allocated NT\$10 billion for investment in strategic service industries, such as information services, Chinese e-commerce, digital content, cloud computing, the MICE industry, gourmet Taiwan, international logistics, healthcare, and design services.

This plan is expected to be implemented over a period of 13 years, with the actual investment

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taking place during the first ten years, and the remaining three years being devoted to the disposal of remaining investments. The capital provision ratio was set at a ratio of NT\$3 to NT\$5 from the National Development Fund for every NT\$1 matching investment.

### 6. 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 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 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. (SME Development Fund investment totaling NT\$69.9 million); (3) Trinity Investment Corporation (SME Development Fund investment totaling NT\$55 million).

As of the end of December 2012, the SME Development Fund had funded 278 SMEs, with a total of NT\$4,296.6 million.

# CHAPTER 9

## Upgrading, Transforming and Enhancing R&D Capabilities

This chapter is divided into four sections to discuss various government measures to help SMEs upgrade, transform, and enhance their R&D capabilities as well as their corresponding accomplishments. Section I discusses IT strategy for SMEs; Section II examines SMEs' quality enhancement and competitiveness; Section III covers guidance to SMEs on energy conservation and reduced carbon emissions; Section IV analyzes technology upgrade and R&D capacity.

### I IT Strategy for SMEs

#### 1. Promoting Digital Applications and Transformation for SMEs

In 2005 MOEA (Ministry of Economic Affairs) launched the “Bridging Industry Digital Divide Project” focusing 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 to increase the ability of micro-enterprises in rural communities to conduct digital business, incubate talents, and further extend online opportunities and improve competitiveness.

2013 saw the launch of the “Digital Inclusion for Small and Medium Enterprises Project.” From “Digital Divide” to “Digital Inclusion” represents an in-depth thinking change. This project aims at encouraging the owners of SMEs to integrate their business into today's digital economy and help traditional business in remote or rural areas use information technology to improve their business. More than that, the project aims at assisting groups like middle-aged or senior women and aborigines to improve their livelihood through using information technology. The main areas of emphasis in the project are outlined below (plan website: <http://e98.sme.gov.tw/Plan>).

- (1) Digital Application: Tailored training to help SMEs build and use web pages, blogs, social media tools, such as Facebook to enhance their networking, digital marketing, and e-commerce capability.
- (2) E-enablement and Marketing: Identifying SMEs that already have significant e-enablement potential and providing guidance service and experience sharing to help them achieve advanced level of e-enablement management and marketing capability.
- (3) Advanced Counseling: Help SMEs with significant potential upgrade their business models from e-enablement, operation, value added product development, and marketing (physical and virtual); advanced counseling through case study and sharing.

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- (4) SME E-cluster: Promote SME clusters through integrated resources of IT, e-enablement, services and marketing to achieve synergy in exploring digital business opportunities.

### 2. The Promotion of SME International E-commerce Program

“The Promotion of SME International E-commerce Program” implemented by the SMEA (SME Administration) aims to help SMEs enhance their international e-commerce capability, such as cooperation with international B2B and B2C platforms, digital marketing talents cultivation, and product development. In 2012, the program helped SMEs integrate high quality products and develop 80 new export markets, such as Mauritius, Malta, El Salvador and Croatia. In 2013, the program will focus on (1) international e-commerce marketing and service business models that fit SMEs in export markets, (2) SMEs counseling, case study, and share of experience (plan website: <http://info.moeasmea.gov.tw>).

### 3. Promoting Cloud Computing Extension Services to Stimulate Industrial Upgrading and Transformation

The SMEA, MOEA has established the SME Cloud Computing Promotion Service Center under the Cloud Computing Industry Development Plan to help SMEs in Taiwan make more effective use of cloud computing-based services, with emphasis on driving Taiwan’s development of cloud computing technology R&D, operational efficiency, and the development of innovative cloud computing-based business models.

The government has identified a number of key high-value-added application fields in which it will be providing subsidies to encourage information service providers to step up the development of “total solutions” that integrate cloud computing technology innovation, system innovation and service innovation, thereby helping transform service models, meet the shared cloud service needs of SMEs (such as business software, personal mobile commerce, e-commerce, etc.), speed up the creation of new cloud-based service models and stimulate the growth of the cloud computing value chain, building a new paradigm and achieving across-the-board diffusion, and in so doing permitting the development of new markets, new applications and even new industries, with a consequent increase in business opportunities (plan website: <http://cloud.moeasmea.gov.tw>).

### 4. Promotion of Value-Added ICT Application

To encourage SMEs to make more effective use of ICT (information and communications technology) to strengthen their innovation capability, the SMEA, MOEA has launched the SME ICT Innovation Upgrading Plan, which involves integrating smart technology with innovative value-added creation and working to strengthen network and cluster linkages; the administration is encouraging leading industry clusters and bellwether firms, who have great potential in market expansion of their high value added products or services, to develop cutting-edge smart ICT applications that can facilitate value-added integration of value chains and processes, technology and

services, thereby enhancing the capabilities of industry as a whole through integration, knowledge sharing, scale, and moving upward along the value chain.

## **5. Taiwan E-learning and Digital Archives Program (TELDAP) – SME Online University**

Taiwan' SME Online University has been recognized as the first e-learning website developed for SMEs in Asia. Boasting more than 1,100 free online courses in six major categories, including ICT, human resource, finance, marketing, entrepreneurship, and comprehensive knowledge, the SME Online University has served over 470,000 SME employers and employees since its launch in 2003. Traffic to the site has climbed steadily, with 12 million visitors and an average of 40 minutes per visit as of the end of 2012.

The learning at the SME Online University is free. Anyone who could access to the internet via his or her subscribed ISP is eligible for enrolling as a student of the University.

In addition to the courses, there are many learning facilities and services for the online learning students as well as a physical university. Such as University Book Store, the SME Online University provides voice book reviews for 260 current business book titles for members to download. There are 257 business celebrity speech videos available for members to use under TELDAP, SME e-learning service expands the application of e-learning in formal education and lifelong learning to nurtured SME talents (plan website: <http://www.smelearning.org.tw>).

## **6. Promote ICT Applications for Manufacturing Industries: Moving Upward along the Value Chain from OEM toward ODM and OBM**

The manufacturing industries ICT value-added application plan launched by IDB (Industrial Development Bureau), MOEA, focuses on helping manufacturing industries move upward along the value chain from OEM model toward ODM and OBM through ICT applications and pro-innovation and pro-business environment.

In view of the less promising outlook of OEM business, companies are expected to increasingly engage in activities beyond manufacturing. Entering into ODM is a step towards this trend. Prototype creation, detailed product design and development of product concepts, the core activities of ODM, may prove feasible for Taiwanese companies to master as those activities rely largely on one's expertise in the manufacturing process. But moving up the front-end of the value chain will involve devoted personnel to these newly added activities.

In order to avoid over-reliance on buyers, achieve product differentiation and nurture customer loyalty, Taiwanese manufacturers may choose to adopt OBM, stepping into the back-end of the value chain. Rather than just expanding the range of manufacturing-related services into ODM, these companies will try to capture greater profits by building their own brand names and the marketing and distribution capability. However, OBM is a difficult business model, and the tenet of success

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is the commitment to invest in the brand over the long term. Given a lack of brand development expertise and financial resources, Taiwanese companies can incubate their brands in some small pilot markets. After becoming successful, the brands may be promoted in other potential markets, especially the emerging markets, which are more receptive to new brands.

The plan will (1) provide up to NT\$20 million subsidy in two years in manufacturing upgrade through ODM and OBM model transformation, R&D, and ICT application, and (2) introduce successful ICT application experience from foreign firms in service industry, and (3) assist in technology transfer to shorten the learning curve for Taiwan manufacturing transformation.

### 7. Promoting Overseas Chinese-Language E-commerce

Taiwan's e-commerce sector has enormous development potential, deriving competitive advantage from its innovative business models, unique products, strong ICT capabilities, and the influence of Chinese culture on Taiwanese lifestyles. The Department of Commerce, MOEA has therefore decided to implement the Overseas Chinese-Language E-commerce Plan – Integrated Physical and Virtual Channels, with the aim of promoting sales of Taiwan's products and virtual services in the global ethnic Chinese language market. The Plan involves the provision of assistance to help Taiwanese companies solve the problems related to money flow, distribution, and product certification, and to help cultivate international e-commerce talent, thereby helping build Taiwan into an “innovation laboratory” for e-commerce. The key items for implementation include: (1) helping firms make effective use of e-commerce to develop the China market; (2) putting in place the basic infrastructure needed to support cross-strait e-commerce linkage; and (3) promoting cross-strait business matching.

In 2013, at least three firms who are experienced in overseas Chinese-language e-commerce and capable of counseling will be picked and subsidized by NT\$300,000 – 500,000; each will serve as a counselor to over 20 firms with products of Taiwan specialties.

From 2010 to 2012, over 400 firms obtained counseling and exported products to Mainland China through the integrated physical and virtual channels of the Overseas Chinese-Language E-commerce Plan. At least 130 firms will be counselled in 2013 to development Chinese-Language E-commerce markets such as Mainland China and Malaysia through the integrated physical and virtual channels.

### 8. Promote Smart Shopping Services

In 2013, MOEA joined forces with the Institute for Information Industry, International Integrated Systems Inc. and UDN Digital Co., Ltd. to launch smart shopping services. Pilot projects were implemented in Taipei 101 Mall and Kaohsiung City's Dream Mall in June.

Taipei 101 Mall's smart shopping experience includes a range of novel features. Shoppers can use their cell phones to access a mini-shopping directory. After stipulating a price threshold for a particular item, the interactive guide will show where matching items can be found and display them on screen, saving the effort of running around looking for them. A Wi-Fi positioning service will help shoppers locate their parked cars when they leave and the system can provide traffic information and

recommend which exit to take.

When it comes to dining at a popular restaurant like Din Tai Fung, the intelligent network can integrate information about times, weather conditions and queue numbers to give expected waiting times. Suggestions for nearby attractions to while away the intervening minutes are also provided.

At Kaohsiung's Dream Mall, customers can take advantage of the network's mobile shopping facility. By sweeping the cell phone over the product's barcode, items can be picked up at a designated information desk 30 minutes after payment, eliminating the need to push a shopping trolley or lug bags around.

## II Enhance SMEs' Quality and Competitiveness

Competition from suppliers in developing Asia, especially the Chinese mainland, has been rising, initially in terms of price, later in quality and other aspects over time. Taiwan exporters are therefore continually compelled to develop strategies that help them stay ahead of competitors. SMEs must improve the overall quality of their products and services by shifting the whole value chain upward. Among others, this upward shift involves offering better designs and features, building brands, using environmentally friendly materials, improving warehousing and logistics, as well as strengthening marketing and distribution.

### 1. Upgrading SME Quality

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 innovation, industrial guidance, personnel training and promotion. The industrial guidance portion focuses on SME short-term quality service diagnosis, top-quality enterprise guidance for successful SMEs (such as winners of National SME Award, the Rising Star Award, the SME Innovation Research Award), general enterprise guidance and industry cluster guidance. Personnel training includes (1) organizing quality management awareness and application promotion seminars; (2) international certification series, business management quality series, key industry management practices, tourism and leisure services series and other online courses; (3) tailor-made corporate internal training programs to meet the manpower development needs of SMEs (plan website: <http://smeq.moeasmea.gov.tw/mp?mp=00601>).

### 2. Helping SMEs Innovate and Transform Themselves through Quality Enhancement, and Strengthen Their Overall Competitiveness

To help SMEs strengthen their quality-related basic capabilities and ability to make effective use of collaborative logistics, so that quality can serve as the foundation for enterprise transformation and innovation, SMEA has been collating information relating to quality standards and rules in Taiwan and overseas, with the aim of enabling SMEs to achieve breakthroughs in terms of products,

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technology and markets. In 2012, SMEA implemented the SME Innovation and Transformation Strategy, with the goal of using quality improvements, industry cluster and network development, the adoption of hi-tech, value-added applications, and responsiveness to “green” trends, to strengthen SMEs’ innovation capabilities. The main areas addressed and the key points of the promotional efforts are (1) SME counseling and diagnosis on business analysis, competitiveness enhancement, and use of resources from government measures; (2) strengthening quality-related basic capabilities, conforming to international certification requirements, building model enterprises with an outstanding reputation for quality, and achieving high-level quality that has a real impact on moving upward along the value chain; (3) helping SME innovate and transform through quality management and the right business model in particular value added activities (R&D, design, production, logistics, distribution, branding, services, etc.); (4) talent cultivation.

### 3. Promoting 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 to drive business opportunities and give SMEs a chance to upgrade their technological capabilities, the SMEA has implemented the System Supply Chain Value and Quality Efficiency Enhancement Guidance Project.

The Project covers (1) quality enhancement reference books for both SMEs and their counselors; (2) SME quality training; (3) platform for international quality certification, and self-diagnosis system; (4) examples for supply chain cooperation and value enhancement.

### 4. Promoting Innovation and Integration Services for SME 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, SMEA launched Innovation and Integration Services for SME Clusters to provide (1) technology, product and management guidance for intensive SME clusters, (2) guidance to help SMEs in service industry clusters adopt innovative technology, and (3) guidance to help SMEs in manufacturing clusters adopt innovative services.

### 5. Using Intellectual Property (IP) to Create Value for SMEs

The SMEA, MOEA has been implementing the SME Innovation IP Value Creation Plan, to help SMEs that have been undertaking technology innovation to gain economic value from their intellectual property (IP), and to evaluate the potential for diversified IP utilization.

Under this plan, experts provide individual firms with guidance regarding their IP organization, and SMEs are encouraged to attach more importance to IP. The guidance provided under the Plan helps SMEs reduce the time and cost needed to complete R&D projects. It aims to achieve coordinated linkage and effective evaluation guidance service with respect to the entire IP

value chain, including IP management and protection, IP acquisition and technology transfer, IP distribution and utilization, etc.

The plan's main work items include (1) operation of the SME IP Value-added Service Center, to help optimize SMEs' IP-related capabilities; (2) planning the development of IP project guidance mechanisms, to enhance SMEs' ability to utilize IP effectively; (3) building the necessary legal and regulatory framework and policy environment; (4) counseling on IP evaluation, acquisition, commercialization, and management.

## **6. The Emerging SME Innovation-based Value Added Service Plan**

To encourage Taiwan's SMEs to develop service innovation and create new value, thereby raising their competitiveness, the SMEA, MOEA implemented the Emerging SME Innovation-based Value-added Service Plan.

The implementation measures adopted for this plan include (1) practical guidance, which comprises showing firms how to adopt a service-oriented mindset, (2) stay abreast of changes in consumer needs, and (3) keep their finger on the pulse of the market. This will help firms explore the new sources of demand and new business opportunities that service innovation can provide access to; they can then go on to undertake service design and make effective use of technology in the development of high-profitability business models and service systems. At the same time, the sharing of service innovation case studies and the arranging of business matching collaboration can help encourage more firms to participate actively and enthusiastically in service innovation.

## **III Guidance to SMEs on Energy Conservation and Carbon Emissions**

### **1. 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;
- (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;

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- (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.

### 2. 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, Project for Energy Saving and Carbon Emissions Reduction Consulting for SMEs has been initiated with the following key tasks:

- (1) Providing consultation and recommendations on improving production efficiency, carbon footprint and energy consumption;
- (2) Guidance for energy-saving technology and reduction management;
- (3) Demonstration of guidance for industries;
- (4) Cultivating green elites.

### 3. Promoting SME Green Giant for Green Business Opportunity

To help SMEs capture green business opportunities, SMEA, MOEA launched SME Green Giant Plan. Key tasks are (1) providing guidance on compliance with green product standards and certification, international green product directives and the green procurement requirements of major international manufacturers; (2) providing comprehensive and in-depth counseling to SMEs on green supply chain and related green product standards, certification, and laws; (3) tailored training and case studies; (4) establishing green environment and energy conservation platform (plan website: <http://green.pidc.org.tw>).

### 4. Taiwan Industrial Greenhouse and Energy Reduction Services Corps

In order to provide greater assistance to industries in energy conservation and carbon reduction, costs reduction, and response to international environmental guidelines/standards, the IDB, MOEA has formed the Taiwan Industrial Greenhouse and Energy Reduction Services Corps. It offers guidance and counseling on green technologies, diagnosis tools, case studies, industrial collaboration, and talent cultivation (plan website: <http://www.ftis.org.tw/tigers/index.asp>).

## IV Enhancing SME R&D Capabilities and Technology Upgrade

In order to encourage businesses to invest in R&D to enhance core strengths in international competition, MOEA has offered many guidance measures and funding sources for innovative R&D. These are expected to increase the input of R&D, upgrade the industry and improve the competitiveness of the country.

### 1. Improving the Working Environment for SMEs, Promoting Sustainable Growth

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; (2) Guidance on the industrial park safety and health mutual aid system (SHMAS); (3) Guidance on risk management; (4) Research on regulations and monitoring of international safety and health trends; (5) Other policy awareness promotions and campaigns.

### 2. Instant Technical Assistance to SMEs

In order to help SMEs upgrade and transform, the IDB has implemented the Instant Technical Assistance Program of SME 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 can be enhanced. In 2012, a total of NT\$111 million subsidy was offered to 753 SMEs (of 2,290 applicants) for technology upgrading and transformation, resulting in NT\$1,056 million output increase and NT\$528 million cost saving (plan website: <http://proj2.moeaidb.gov.tw/itap/index.php>).

### 3. Conventional Industry Technology Development (CITD)

Most Taiwanese exporters have traditionally engaged in OEM, under which products ordered are designed mainly by customers who usually own a brand name. Suppliers only focus on the manufacturing process, and the keys to success are low cost and high flexibility in response to customer demand. However, competition from suppliers in developing Asia, especially the Chinese mainland, has been rising, initially in terms of price, later in quality and other aspects over time. Taiwanese SMEs are therefore continually compelled to develop strategies that help them stay ahead of competitors.

CITD 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. 2013 CITD

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budget is NT\$326 million. The features of the program include (plan website: [http://www.moea.gov.tw/Mns/doi/content/Content.aspx?menu\\_id=5375](http://www.moea.gov.tw/Mns/doi/content/Content.aspx?menu_id=5375)):

- (1) Product development: maximum amount subsidized per case is NT\$2 million.
- (2) Product design: maximum amount subsidized per case is NT\$500,000.
- (3) R&D alliance: (A) maximum amount subsidized per case is NT\$10 million; (B) maximum amount granted is NT\$2.5 million to the leading enterprise and NT\$2 million each for other individual companies.

### 4. 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 by MOEA. Through grants and subsidies provided by SBIR, the risks and costs borne by SMEs engaging in innovation and R&D activities will be reduced. The program encourages SMEs to carry out active innovation and helps expand private-sector investment in R&D so that the results and achievements will help the country further its economic development.

From the inception of the SBIR program in 1999 until June 2013, a total of 5,003 cases of innovation and R&D projects were approved and implemented, with government subsidies exceeding NT\$17.8 billion. 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 (plan website: <http://www.sbir.org.tw/SBIR/Web/Default.aspx>).

### 5. Industrial Technology Development Program (ITDP)

By means of government subsidization, the ITDP is able to enhance the enterprises' willingness to engage in technology R&D that is forward-looking but high-risk, and make a long-term R&D deployment in advance. In addition to inducing the industry to engage in R&D activities, the industrial TDP also encourages the enterprises to increase and accumulate the value of intellectual properties, cultivate and promulgate R&D personnel, start up new business units or new companies, and engage in innovative product development and services, which all serve to boost the competitiveness of the enterprises. 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 June 2013, 1,007 projects had been approved, with 1,563 enterprises participated in, and approximately NT\$50.4 billion had been invested by the enterprises, with nearly 19,000 R&D professionals involved therein. On average, a production value of NT\$11.35 was created per NT\$1 funded by the government (plan website: <http://innovation1.tdp.org.tw>).

## 6. Innovative Technology Application and Service (ITAS)

Since 2008 MOEA has been in support of the “twin engines” economic development requirements of high-value-added 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.

## 7. Assistance to SME Technology Development by Partnering with Universities and Research Institutions

In order to help SMEs transform and innovate, and adopt the new ways of thinking that will be needed to cope with the ever changing global environment, in 2008 the Department of Industrial Technology (DOIT), MOEA began implementation of multiples technology development programs (TDP), such as the Plan for the Provision of Assistance to SME Technology Development by the University Sector and the Southern Taiwan Alliance of Researchers and Scholars, to help Taiwanese industry upgrade itself by making effective use of the extensive R&D capabilities of the universities and other research institutions. Expert diagnostic service is provided to help enterprises develop their R&D activity, and 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.

As of May 2012, nearly 3,713 SMEs had benefited from the Plan for the Provision of Assistance to SME Technology Development by the University Sector. University and college experts had helped provide timely solutions to over 13,300 problems; assistance had been provided to help secure SME participation in 175 government research projects, involving a total of over NT\$700 million in R&D funding; SMEs had been helped install R&D equipment worth a combined total of over NT\$3.5 billion; SMEs had been helped secure orders worth approximately NT\$4 billion, and more than 3,000 new jobs had been created.

In 2013, the Southern Taiwan Alliance of Researchers and Scholars selected ten industries to support for their value added transformation, including chemical machinery and equipment manufacturing, printing equipment, mechanical equipment manufacturing, yachts, appliance, industrial rubber products manufacturing, textile, kitchen and lighting, ceramic products, and food production machinery manufacturing.

## 8. Assist Service Sector Innovation and R&D Program (SIIR)

In order to foster the development of the commercial services industry and encourage enterprises to engage in research on “new service products,” “new business models” and “new marketing models” or the development of “new business application technologies,” the Department of Commerce has initiated the SIIR 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 (plan website: <http://gcis.nat.gov.tw/neo-s/Web/Default.aspx>).

### **9. Subsidies for Development of Agricultural Technology, Brands and Innovative Business Models in the Agricultural Sector**

To encourage business enterprises in the agricultural sector to invest in R&D and in the commercialization of technology-intensive products, in 2007 the Council of Agriculture began to accept applications from agricultural firms under the Agricultural Sector Technology R&D Subsidy Plan, with the aim of reducing the level of risk that agricultural sector enterprises are exposed to when they engage in R&D, thereby speeding up the commercialization of new technology and the enhancement of the overall competitiveness of the agricultural sector as a whole. Subsidized applicants must be agricultural sector enterprises engaged in the development of key agricultural technologies, agricultural brand development, the development of innovative new business models, or other R&D-related activities that can contribute to enhancing the innovation capability of the agricultural sector. The amount of the subsidy available is capped at 50% of the total cost of project implementation.

# CHAPTER 10

## Strengthening Startup Capabilities and Promoting Incubator and Accelerator Programs

To further the development of a high-quality environment for new business creation in Taiwan, and facilitate the identification of promising early-stage start-ups so that they can be matched with “angel” investors and benefit from regional industrial resources, while at the same time putting in place a comprehensive support network, the Small and Medium Enterprise Administration (SMEA), Ministry of Economic Affairs (MOEA) launched the Startup Taiwan program in 2012. The key theme is “refining the incubation process to speed up the achievement of excellence,” and which embodies three key strategies: (1) “Stimulating innovative ideas and strengthening the start-up function;” (2) “Improving incubation to speed up new business growth;” and (3) “Optimizing the support network for new businesses.” Due to the accelerated pace of globalization, industrial evolution and the flow of capital, excellent technology, sound business model, and cost advantage alone are not enough to excel without the “speed” which is becoming an important competitive edge. Business accelerator, or acceleration program (such as TechStars) has become a global trend.

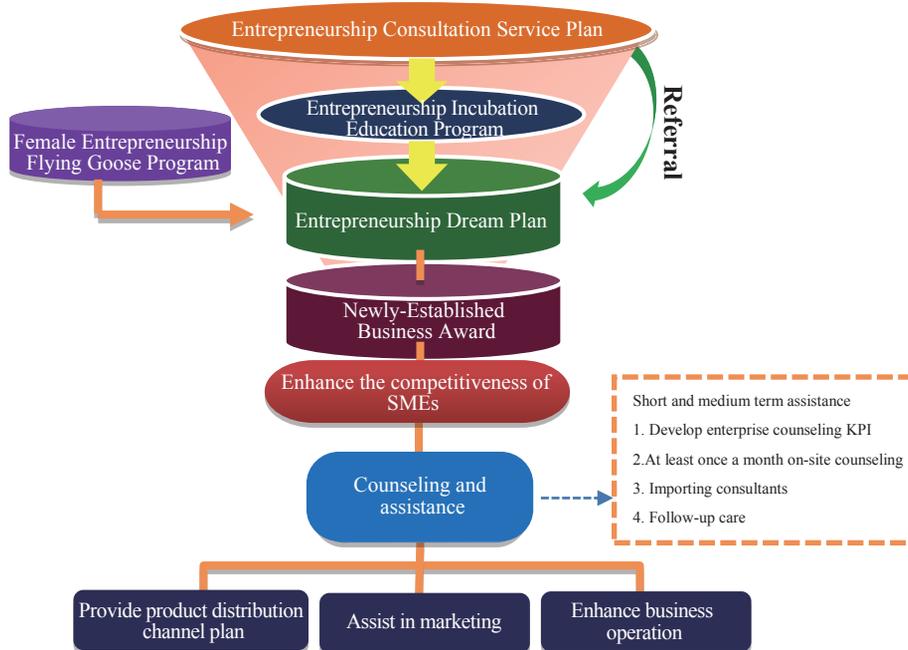
A business acceleration program usually lasts between 3-6 months. The emphasis of the business accelerator is on rapid growth, and to sort out all organizational, operational, and strategic difficulties that might be facing the business. It can be understood as a holistic business advisory service, often bearing strong resemblance to traditional management consulting practices, but adjusted to fit SMEs. While incubators help companies stand and walk, accelerators teach companies to run.

This chapter consists of three sections. Section I discusses entrepreneurship counseling mechanism; Section II focuses on the incubation center and its functions; Section III covers government counseling projects for female entrepreneurs.

### I Stimulating Innovative Ideas and Strengthening the Startup Function

In 2013, SMEA, MOEA integrated incubation resources and entrepreneurship counseling services to promote Taiwan's entrepreneurial services engine, and actively optimize the business environment for startups. The overall entrepreneurship counseling execution mechanism is shown in Figure 10-1-1.

**Figure 10-1-1 Entrepreneurship Counseling Execution Mechanism**



Source: Small and Medium Enterprise Administration, MOEA, 2013.

## 1. Entrepreneurship Consultation Services

SMEA, MOEA launched Entrepreneurship Consultation Service plan in 2013 to help potential entrepreneurs stimulate innovative ideas, to provide business information and advisory services, and to prepare them before starting new businesses, thus increasing the success rate. The plan will facilitate domestic entrepreneurial innovation, spread innovation awareness and shape entrepreneurial society. Main Services are as follows: (1) free counseling service; (2) using Idea Factory model and Startup Idea Show to share ideas, resource, and enhance execution capability; (3) entrepreneurial experience sharing, such as seminars and international entrepreneurship forum; (4) startup knowledge bank and Startup Taiwan Newsletter; (5) Startup Product Show to increase visibility and business / investor matching opportunity for entrepreneurs; (6) international community link, including ICSB (International Council for Small Business), GEW (Global Entrepreneurship Week) and GEM (Global Entrepreneurship Monitor), to strengthen entrepreneurial culture and international participation.

## 2. Entrepreneurship Incubation Education Program

The entrepreneurship incubation education program offers education and training opportunities for members of the public interested in setting up their own business, and for startup owners, through organizing basic entrepreneurial skills courses, industry-specific courses, entrepreneur “boot camps,” and the SME Online University digital learning portal site. It helps both existing and would-

be entrepreneurs keep pace with new trends and access the latest information of management, technology, funding and international business startup, thereby enabling entrepreneurs to make effective use of their own operational characteristics and sources of competitive advantage to enhance their market competitiveness. A diversified range of innovative educational methods are used to provide multi-faceted support, increasing the success rate for new startups and stimulating the growth of entrepreneurial drive in society as a whole, while also effectively promoting the concept of lifelong learning and stimulating knowledge-intensive business startup. Three main categories of the program are as follows: (1) entrepreneurship incubation courses for existing and would-be entrepreneurs, with priority treatment for economically disadvantaged people and aborigines; (2) industrial forums on competition, benchmarks, sharing and teaching from industrial elites; (3) start-up counseling website on SMEA services, startup funding, young entrepreneur financing, and so on.

### 3. Entrepreneurship Dream Plan

Entrepreneurship Dream Plan, a startup service network, is to help firms with strong potential increase the visibility of products and services, expand more business cooperation opportunities and create a new vision of the business. The ultimate goal is to shape the benchmark of entrepreneurial companies and to assist in its sustainable operation. The service content is as follows: (1) the use of startup consultants to help firms that have been in existence for less than three years evaluate their business model and development strategy, thereby helping them stay competitive in business; (2) layered counseling for startups, including general counseling, mentorship, and team member type consultation; (3) product exhibitions and international commercial exhibitions; (4) multi-media marketing and promotions; (5) entrepreneurship awards.

## II Incubation Center: Incubator and Accelerator Programs

To help SMEs get established, undertake innovation and grow at various stages, 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.

### 1. Incubation Center: Current State and Its Approaches

An incubation center is a facility that cultivates new businesses, new products and new technologies, and helps SMEs 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 startup 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.

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### (1) Incubation Centers: Current State

- A. As of 2012, there were over 130 incubation centers in Taiwan, located in 20 different counties and cities. Of this total, 76 incubation centers received subsidies from the SMEA in 2012; the combined total of subsidies received was NT\$157 million.
- B. Four incubation centers operated by SMEA since 2002 are as follows (Table 10-2-1). Another incubation center - the Hsinchu Biomedicine Industrial and Incubation Center will be opened and expected to operate directly under SMEA by the end of 2014.

**Table 10-2-1 Four Incubation Centers Operated by SMEA**

Names and Specialized Areas		2012 Achievement
<p>Nankang Software Incubation Center</p> <ul style="list-style-type: none"> <li>E-commerce, embedded systems, software, network communications</li> </ul>	<p>Kaohsiung Software Incubation Center</p> <ul style="list-style-type: none"> <li>Digital content, software, technology services</li> </ul>	<ul style="list-style-type: none"> <li>Cultivated firms: 168 (104 start-ups)</li> <li>Total investment: NT\$471 million</li> <li>New jobs: 1,900</li> </ul>
<p>Nankang Biotech Incubation Centre</p> <ul style="list-style-type: none"> <li>Pharmaceuticals, medical equipment, healthcare, agricultural biotechnology</li> </ul>	<p>NCKU Incubation Center</p> <ul style="list-style-type: none"> <li>Biotechnology and health care, green energy and environmental protection, precision machinery</li> </ul>	

Source: Small and Medium Enterprise Administration, MOEA, 2013.

#### C. Performance of all Incubation Centers (Table 10-2-2)

- (i) In 2012, of over 130 incubation centers in Taiwan, 76 of them received subsidy. 2 firms that had been cultivated in incubation centers had secured stock market or OTC listing. Taiwan's incubation centers had successfully cultivated 2,065 SMEs, and increased the total capital by NT\$5.72 billion. The ratio of increased capital over subsidy reached 37.63.
- (ii) By the end of 2012, SMEA provided total funding of NT\$2,500 million to incubation centers. Of over 130 incubation centers in Taiwan, 103 of them received subsidy. 51 firms that had been cultivated in incubation centers had secured stock market or OTC listing. Taiwan's incubation centers had successfully cultivated 5,620 SMEs, and increased the total capital by NT\$70.1 billion. The total number of people working at firms located in incubation centers was 99,788; total number of patents secured by firms located in incubation centers over the years was 3,312; there had been 1,559 instances of technology transfer. The ratio of increased capital over subsidy reached 30.33.

**Table 10-2-2 Incubation Center Performance: 1997-2012**

Item \ Year		2006	2007	2008	2009	2010	2011	2012	1997~ 2012
Input	SMEA subsidy (NT\$ millions)	164	172	176	175	170	141	152	2,500
	No. of Incubated SMEs	1,286	1,356	1,433	1,633	1,885	1,954	2,065	5,620
Output	No. of Incubated start-ups	475	577	671	835	1,131	1,226	1,250	2,502
	Employees	25,316	27,133	35,345	28,038	31,038	30,489	34,185	99,788
	Patents	400	416	402	484	317	361	206	3,312
	Technology transfers	205	149	181	270	162	195	84	1,559
	Ratio of increased capital over subsidy	32	30	37.5	36.57	31.76	45.11	36.43	30.33
	Increased capital (NT\$ millions)	5,300	5,200	6,600	6,400	5,400	6,363	5,720	75,820
	Number of stock market or OTC listing.	4	5	7	5	3	3	2	51

Source: Small and Medium Enterprise Administration, MOEA, 2013.

## (2) Incubation Center Approaches

### A. Adjusting Subsidy (Grants) Policy and Developing Areas of Specialty

The number of incubation centers in Taiwan has been growing steadily. In order to meet the needs of various industries, incubation centers are, increasingly, providing a wider range of services. They are being encouraged to develop their own unique business models and core competencies, to be able to provide effective support for the development of start-up “bright spots.” From 2012, SMEA adjusted its subsidy (grants) policy, using Basic plus Specialization Subsidy (Grants) as the main approach, supporting both basic operation and specialized incubation. An incubation center whose development plan is approved can receive a basic subsidy of NT\$1 million. Having secured sufficient funding to maintain normal operation, the center then submit proposal for value-added operation and related business plans, based on its own individual development strategy, positioning, strengths and core cultivation area. A center can apply for value-added specialization subsidies of up to NT\$4 million to help it focus on internationalization guidance, financial guidance and support, market development support, etc.

### B. Creating a Friendly Investment Environment through the Growth of “Soft Landing” Incubation Centers

As regards efforts to get incubator centers in Taiwan to adopt international best practice, the government has been working actively to help incubator centers secure “Soft Landing” certification from the National Business Incubator Association (NBIA) in the U.S., and has signed related MoUs with the Asian Association of Business Incubation (NBIA), and the European Business and Innovation Centre Network (EBN).

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The “Soft Landing” certification issued by the NBIA relates to services that help foreign enterprises locate themselves in one’s own country. Securing NBIA “Soft Landing” certification demonstrates that an incubator center is qualified to undertake this form of “international” incubation. Currently, there are a total of 22 incubator centers in the world with “Soft Landing” certification, of which 3 are Taiwan’s incubation centers (Jiaotong University, Nankang Software, and Nankang Biotech Incubation Centers), second only to the U.S.

### C. Promoting Adoption of the Incubator Mark System

Currently, most of the incubator centers in Taiwan cover a wide range of different fields. The government is working actively to promote the adoption of a new “incubator mark” system which will encourage incubator centers to align themselves more closely with the needs of the industry, and to develop resources that will enable them to differentiate themselves from other centers; the establishment of a unique “service brand” will help incubator centers enhance their specialist capabilities, such as local niche incubators, incubators by region or industry, and leading global incubators.

## 2. Building Innovative, Core SMEs through Incubator and Accelerator

### (1) Incubator and Accelerator

In 2012, SMEA actively promoted “Startup Taiwan” plan, integrating regional industries and incubation resources, to provide a comprehensive “one-stop shopping” incubation services (including accelerator) (Figure 10-2-1).

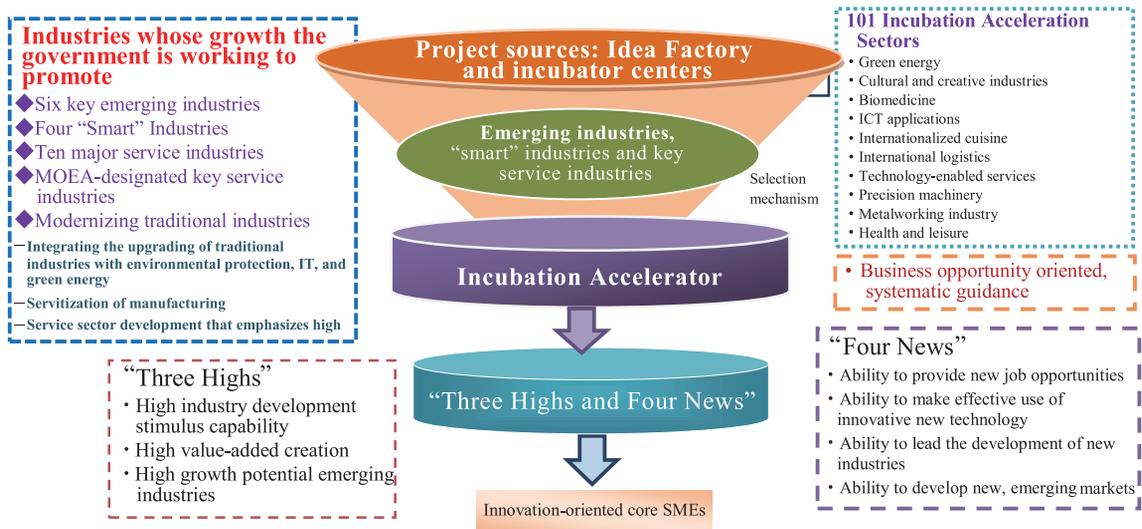
There seems to be a considerable amount of confusion about the differences between business accelerator and business incubators. Many people use the terms interchangeably, but there are a number of elements that distinguish one from the other. At the same time, there is indeed overlap across incubator and accelerator services, both helping firms grow by providing guidance and mentorship, which explains much of the confusion. Incubator programs last for varying durations and include several forms of mentorship and support, and nurture the business for the time it takes for it to get on its feet, sometimes for many years. On the other hand, an acceleration program usually lasts between 3-6 months. The emphasis of the accelerator is on rapid growth, and to sort out all organizational, operational, and strategic difficulties that might be facing the business. It is a holistic business advisory service, often bearing strong resemblance to traditional management consulting practices, but adjusted to fit SMEs. “Startup Taiwan” plan integrates these two programs as follows.

An “Idea Factory” uses a selection mechanism to evaluate the potential of innovative startup ideas, and then provides the necessary environment and support at every stage from initial conception through sample fabrication to prototype creation. It then leverages the capabilities of a team of expert consultants to provide a comprehensive, “one-stop shopping” range of services that include technology evaluation, R&D input support, market research and business environment analysis, incubation guidance, international business matching and assistance with securing venture capital funding, so as to help speed up the commercialization of the original innovative concept.

As regards the “Incubation Accelerator,” once a startup has passed selection, it begins to receive business opportunity-oriented and systematic guidance provided by experts, with a “one-stop shopping” service that covers technology appraisal, R&D input assistance, market research and business environment analysis, incubation guidance, international business matching and assistance with securing venture capital funding, with the aim of enhancing the success rate for new startups, and realizing the ideal of accelerating the transformation of innovative ideas into new technology, the transformation of new technology into new products, and the successful commercialization of those new products.

The wealth of new ideas created in the Idea Factory or in incubator centers can be brought into the Incubation Accelerator for the provision of business-opportunity-oriented and systematic guidance, so that the startups in question can grow and become more competitive, eventually being transformed into “innovation-oriented core SMEs” that embody the “Three Highs” and “Four News” (Figure 10-2-1).

**Figure 10-2-1 The Methods Adopted to Cultivate Innovation-oriented Core SMEs**



Source: Small and Medium Enterprise Administration. MOEA. 2012.

## (2) Emerging Industry Accelerator

From 2013, SMEA launched Emerging Industries Accelerator Program focusing on cloud computing, ICT, biomedicine, precision machinery, green energy, cultural and creative industries, and so on. SMEA also established international incubation cooperation platforms in the U.S., Europe, and Asia. It will select 50 high quality firms with great potential from over 200 incubated firms for the Accelerator Program. The accelerator will provide 1,200 hour intensified consultation and offer target acceleration service for SMEs moving toward medium to large scale from mentoring, funding, to networking. The goal of the program is to bring increased investment of over NT\$800, and help over 20 firms join supply chain of the large enterprises, obtain international orders, and facilitate

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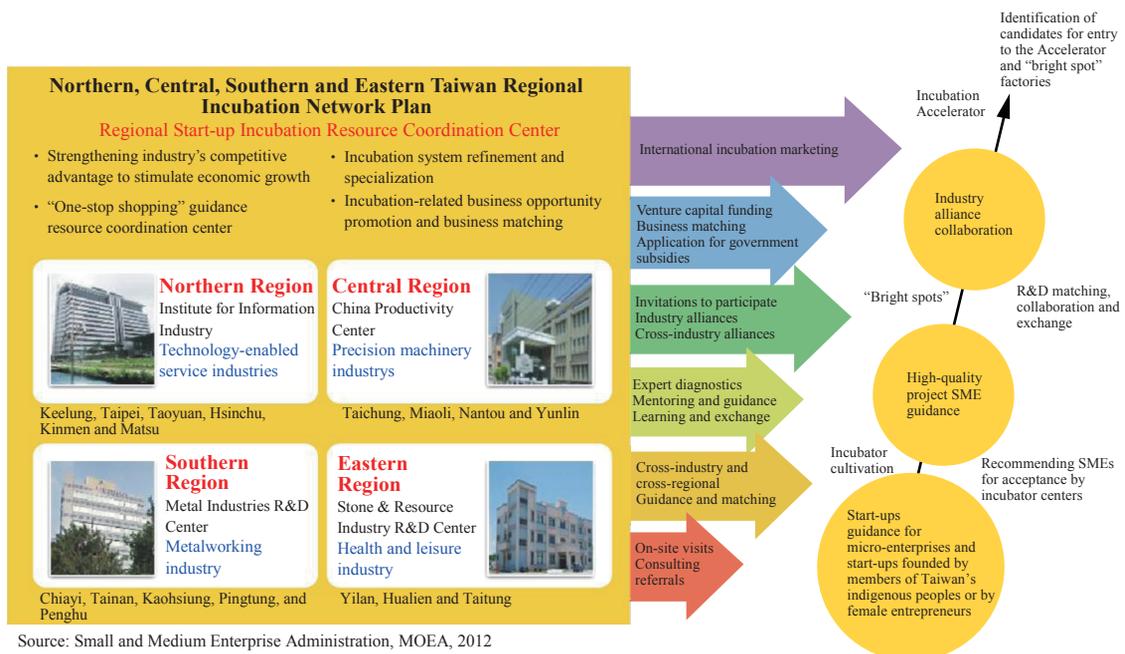
international cooperation over NT\$50 million.

### (3) Establishing Regional Incubation Center by Integrating Regional Incubation Networks

In order to help realize the government’s new economic policy, with its emphasis on supporting SME development as part of the process of industrial restructuring, in 2012 MOEA began implementation of the Startup Taiwan initiative, which will contribute to the progress of Taiwan’s economy towards new milestones in its development. The existing Northern, Central, Southern and Eastern Taiwan SME Startup and Innovation Service Centers, which had previously focused on supporting the dominant industries in their respective regions, will be working as incubation networks and coordinate the cultivation of startups that embody regional characteristics, while carrying out an “inventory-taking” of the distribution and state of development of key industries in each region.

These efforts will be supported by the establishment of a startup resource integration center and business matching center, with incubation centers being to serve as contact windows for liaison with regional industries, and with effective use being made of the Idea Factory and Incubation Accelerator to provide entrepreneurs and startups with an environment in which they can experiment and grow. Efforts will be focused on (A) innovation features in government’s key industries such as ICT application, green energy, cultural and creative industries, biotech, technology-enabled services, precision machinery, intelligent life, health and leisure; (B) regional resource integration center; (C) international incubation cooperation with Mainland China (such as Xiamen, Quanzhou, and Chongqing incubation centers), and establishing incubation service platforms in U.S., Vietnam, Malaysia, Indonesia, and so on.

**Figure 10-2-2 Regional Incubation Networks in Northern, Central, Southern and Eastern Taiwan**



### 3. Promotion of SME Innovative Services Certification Subsidies and Grants

In line with the national industrial development and technology policy, in 2010 the SMEA began to promote the SME Innovative Service Certification (Subsidy and Grant) plan. 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.

In 2012, in line with the government's key policy objectives and efforts to provide support for a larger number of SMEs, the scope of subsidy provision under the Startup Taiwan initiative was expanded to include startup guidance, design, marketing, new product launch planning, etc. In addition, the criteria for subsidy awards were relaxed so that firms that were not located in incubator centers (and had not previously "graduated" from incubator centers) could apply. At the same time, efforts are being made to make it easier for small enterprises, micro-enterprises, recent startups and firms that have never participated in a government subsidy program before to submit applications, with the aim of benefiting as many SMEs as possible and helping them enhance their innovation capabilities and competitiveness, and also facilitate the efficient transfer of university and research institute R&D resources to industry, so that industry and the university and research sector can work together to build first-class innovation capabilities. The plan (subsidies or grants) covers (1) new products (services) R&D related to customized planning or evaluation activities; (2) R&D process or reconstruction; (3) strategic planning for technology R&D or acquisition; (4) measurement and verification services for innovative product or technology; (5) technology feasibility studies, or intellectual property related planning services; (6) innovative technology commercialization or strategic planning services for industrialization; (7) entrepreneurship and innovation counseling and trial production processes; (8) design, marketing, new products planning services; (9) other customized value-added technology planning services approved by review committee.

## III Female Entrepreneurship Counseling

### 1. Female Entrepreneurship Flying Goose Program

In 2013, MOEA launched the 2013 Flying Goose Program to help more female entrepreneurs with incubation services, such as incubation courses, team member type consultation, startup funding, and so on increase the success rate of female-owned startups, and enhance their operational efficiency and competitiveness.

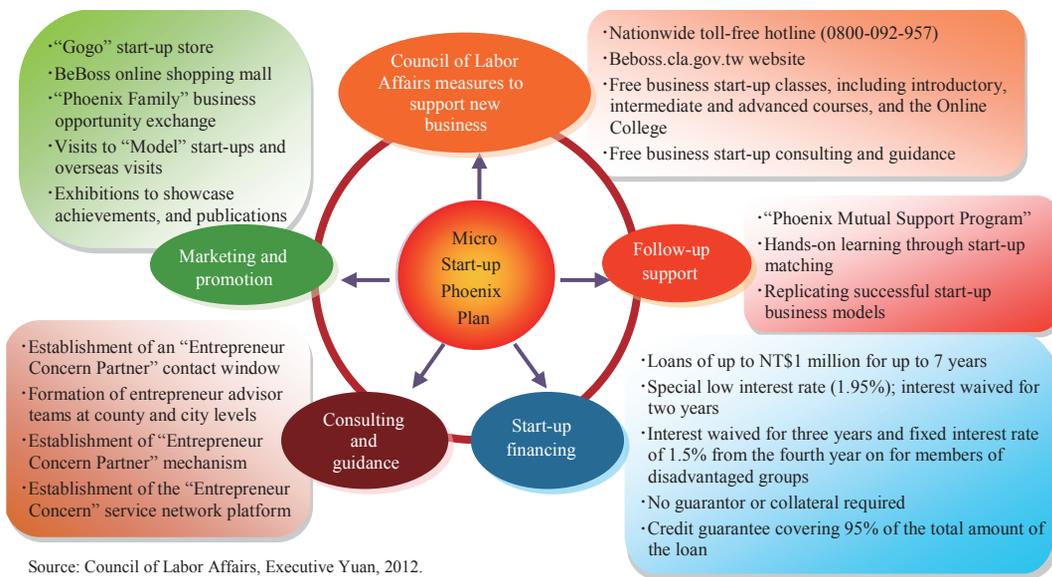
### 2. Female Entrepreneurial Elite Plan

In 2012, a Female Entrepreneurial Elite Plan was launched as part of the Startup Taiwan initiative. This sub-plan is being integrated with other startup guidance resources to create a comprehensive service mechanism for female entrepreneurs. The goal is to (1) cultivate the development of female entrepreneurship "bright spots," and establish models of successful female-owned business; (2) strengthen the dissemination of female entrepreneurs' successful experience to promote entrepreneurial activities among women.

### 3. Council of Labor Affairs Measures to Support New Business Startup – the Micro-startup Phoenix Plan

The Council of Labor Affairs launched the Micro-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 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 10-3-1.

Figure 10-3-1 Micro-startup Phoenix Plan – Implementation Measures



### 4. Financing Support for Female Entrepreneurs

Funding is the most vital resource for female entrepreneurs. The following types of low-interest loans are available to women:

- (1) Young Entrepreneur Loans: To be eligible, candidates must be aged between 20 and 45, and must be the registered owner, or shareholder in a company or other business enterprise that has been in existence for less than five years. For more information, please go to: <http://sme.moeasmea.gov.tw/SME/main/loan/ARM01.PHP>.
- (2) Phoenix Micro-enterprise Loans: To be eligible, candidates must be women aged between 20 and 65 who have undergone a government training course within the past three years and received startup consulting and guidance, and whose enterprise employs less than 5 people (excluding the business owner). The individual loans is capped at a maximum of NT\$1 million up to 7 years; interest is waived for the first two years of the loan period,

with the loan rate equal to two year postal saving rate plus 57.5 basis points (borrowers pay additional 50 basis points of credit guarantee fee per year). In the case of business owners whose households are classed as “households with special circumstances,” who have been victims of domestic violence, occupational injury or crime, who belong to a low-income household or a household that has been severely affected by a natural disaster, who have been negatively impacted by trade liberalization, who are the sole breadwinner for their family, or who are members of another disadvantaged group, interest will be waived for the first three years, and the annual interest rate for the fourth and subsequent years of the loan period will be set at 1.5% (with the difference being made up by the Council of Labor Affairs).



# CHAPTER 11

## Revitalizing Local Industries by In-depth Development, Marketing and Expansion

Over the last few years, the government has been actively working to promote the development of “local cultural industries.” The Small and Medium Enterprise Administration (SMEA), Ministry of Economic Affairs (MOEA) launched the One Town One Product (OTOP). Selected products can be exhibited in OTOP centers and fairs organized by SMEA to promote these quality products into domestic and international markets. Many websites were set up to market Taiwanese town products.

Other promotional plans include Plan for Helping Local Cultural Industries to Create Value, ICT Plan to revitalize regional economies through value-added creation, the Creative Lifestyle Industry Development Plan launched by the Industrial Development Bureau (IDB), and Local Industry Development Fund Plan (with NT\$1 billion budget set in FY2009 by the Executive Yuan). These projects seek to promote the development of local tourism, innovation and new business models, to encourage SMEs to actively participate in local cultural industry R&D, and to revitalize local economies by strengthening the competitiveness of local industries.

This chapter is divided into three sections. Section I discusses the framework of cultivation mechanism in promoting local specialty oriented Industries; Section II focuses on strategies and measures to help specialty oriented local industries build marketing and market development capabilities; Section III covers key government’s strategies and measures in promoting business opportunities for SMEs.

### I Local Industry Cultivation

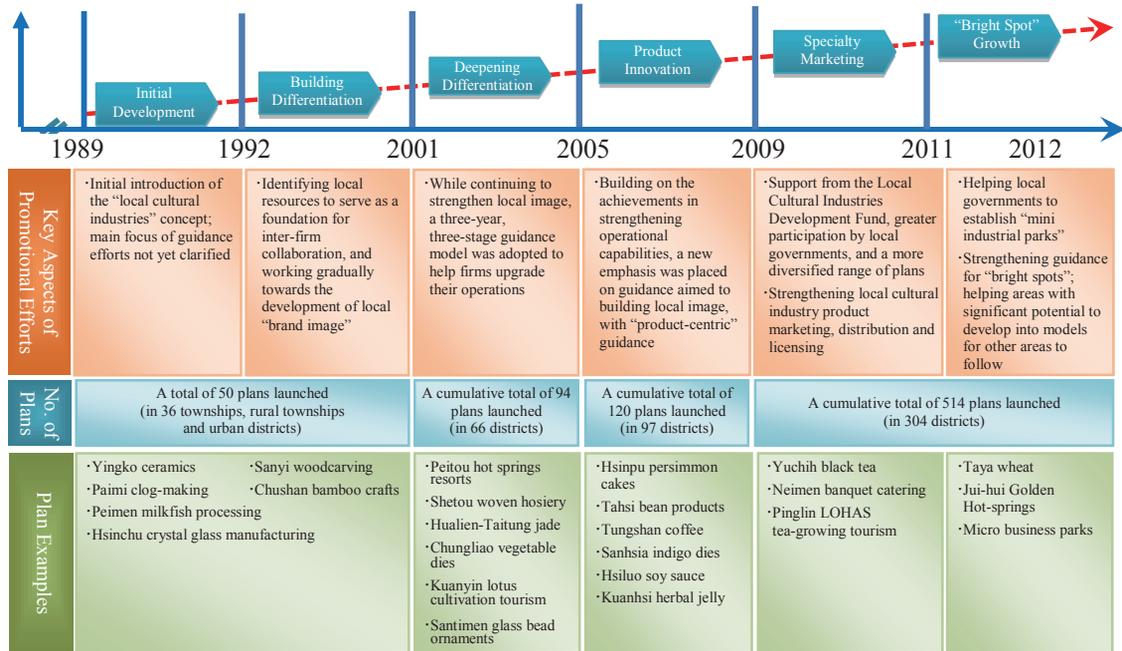
#### 1. The Development of Local Cultural Industry Cultivation Strategy

The term “local cultural industries” is normally used to refer to local industry clusters that have evolved in a particular township, rural township, city or community and which are engaged in manufacturing or service provision involving special local products with particular historic or cultural significance, or uniqueness, and making use of local materials, natural resources and traditional handicraft techniques, as well as local labor. “One Town, One Product” (OTOP) local cultural industry products can be divided into six broad categories including processed food products, cultural and handicraft products, innovative lifestyle products, local cuisine, agro-tourism, and traditional festivals and cultural traditions.

In 1989, the SMEA, MOEA began to allocate resources to support the development of local cultural industries. Over the years, the support and guidance measures have focused on different aspects of local cultural industry development, as shown in Figure 11-1-1.

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**Figure 11-1-1 Timeline of the Development of Local Cultural Industries in Taiwan**

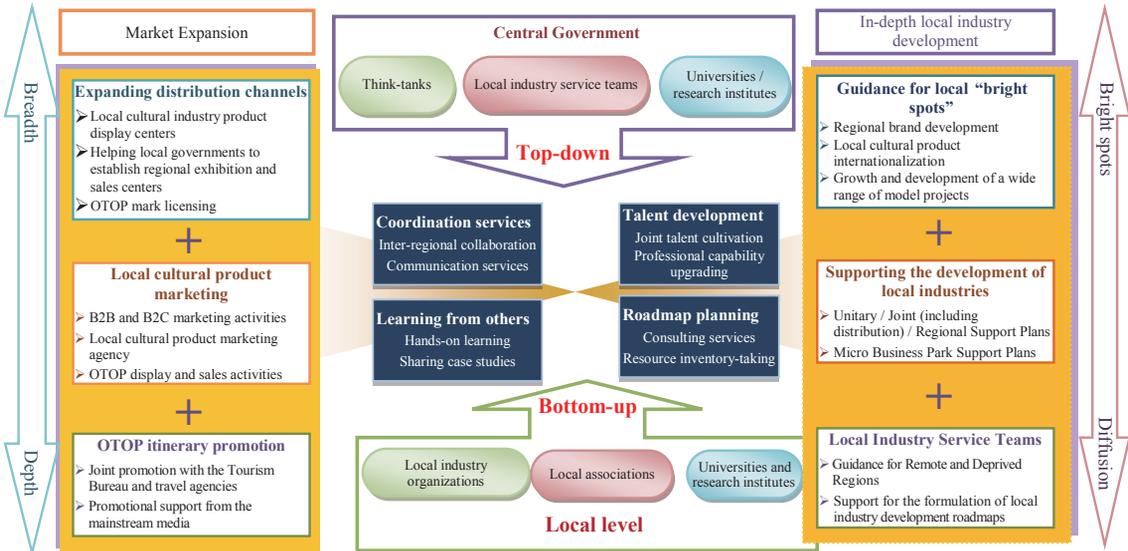


Source: Small and Medium Enterprise Administration, MOEA, 2013.

## 2. The Architecture and the Utilization of the Local Industry Development Fund

In 2012, SMEA, MOEA began implementation of a new Local Cultural Industry Guidance Plan based on the vision of building competitive Taiwanese local cultural industries, and with the objectives of revitalizing local economies and creating jobs in local communities. The main emphasis in terms of guidance is on helping domestic local cultural industries strengthen the development of industry organizations, enhance firms' operational capabilities, improve the visual appearance of local communities, encourage local industries to internationalize, build "bright spot" local cultural industries that can serve as a model for others, strengthen the economic potential of local cultural industries, and promote job creation at the local level.

In 2009, the Executive Yuan established the Local Industry Development 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 transform the face of Taiwan's local communities, encourage people to move back to their home areas from the big cities and from overseas, create new job opportunities, and imbue local economic development with new vigor. The promotional framework and strategies of the Local Industry Development Fund are outlined in Figures 11-1-2.

**Figure 11-1-2 Promotion Framework and Strategies: Local Industry Development Fund**

Source: Small and Medium Enterprise Administration, MOEA, <http://fund.sme.gov.tw>.

The types of subsidies are as follows:

- (1) Individual funding support projects: The proposals are submitted by city and county governments covering only a single urban district, city, township or rural township. The total funding per project is capped at NT\$6 million over a three-year period. Plans are to be implemented over a period of 3 years.
- (2) Integrated funding support projects: The proposals are submitted by city and county governments covering 3 or more urban districts, cities, townships or rural townships. The total funding per project is capped at NT\$15 million over a three-year period (however, for distribution channel type project - capped at NT\$20 million over a three-year period). Plans are to be implemented over a period of 3 years.
- (3) Regional funding support projects: The proposals covering the regional development plan are submitted by the central government. The total funding per project is capped at NT\$ 15 million over a three-year period. Plans are to be implemented over a period of 3 years.

### 3. “Bright Spot” Guidance

In 2009, SMEA, MOEA launched the Local Industry Development Fund Plan, the objective of which was to support the development of local “bright spots,” through the model “local government authorities submit applications, and commissions service providers in the central government offer guidance.” It was anticipated that the creating of local cultural industry “bright spots” would contribute to the ongoing development of local industries, while also enhancing their overall production value, strengthening the image of local cultural industries and their appeal as tourist attractions, and helping

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build strong “town brands” that can boost international visibility, strengthen local competitiveness, and serve as a model for other regions and other industries to follow.

### 4. Factory Tourism Guidance Plan and Evaluation

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 (plan website: <http://taiwanplace21.org>).

## II Strengthening SME Marketing Capability

### 1. Local Cultural Industries Guidance Plan on Marketing

Taiwan OTOP is a guiding program aimed at promoting and developing local cultural industries. Based on the municipal units of township and city, products that are historic, cultural, or unique in the local communities are deemed as the local specialty products; therefore, the scope covered is broad and products including processed foods, living crafts, creative living products, rural leisure, creative gourmet, and festival events. Now, a total of 286 featured towns have been successfully coached as some famous examples, such as Tachia Taro, Luku Hsiao-Pan-Tien and Chungliao Plant Dye.

In FY2013, Local Specialty Product Marketing Plan of the Taiwan One Town One Product policy has several main projects to implement including: (1) conducting Taiwan’s local specialty product licensing service, providing consumers convenience with identification of high-quality specialty products; (2) collecting, voting, selecting, and marketing specialty tourist routes and itineraries; (3) uncovering high quality OTOP enterprises and specialty tourist itineraries and products; organizing competition for OTOP Design Award, OTOP Tourist Routes Award, etc.; (4) maintaining and managing OTOP products service value-added network, including information services such as price inquiry, OTOP products and manufacturers, information updates by store operators and counselors; (5) setting up “Taiwan’s Local Specialty Products Boutique,” a collection of Taiwan’s most exquisite souvenirs, fine crafts, and cultural and creative products, in Taipei 101 Mall, Sun Moon Lake in Nantou and Taichung High Speed Rail Station; (6) organizing marketing and sales events for specialty products, linking to local events / holidays and related SMEA guidance plans; (7) market expansion for Taiwan specialty products through international networks and platforms.

OTOP program is implemented with techniques and integration of innovation that result in new products and services. Hence the added-value of local industry is increased which drives growth and development for local cultural industry. The government sees the soft power of Taiwan companies’ innovation and design by providing relevant counseling program that assists the industries to use

their innovative aspiration and aesthetics to tell stories for the products and to add points for the brand, thereby to increase added-value for industries.

With the long-term counseling and cultivation from the SMEA, the local cultural industries gradually exhibit unique and refined new image, presenting both cultural and fashion taste that highlight the touching Taiwan OTOP style.

## 2. Marketing Guidance for SMEs to Explore Business Opportunities

Recognizing the urgent need for more marketing guidance resources for Taiwan's SMEs, in 2012 SMEA, MOEA began implementation of the SME Marketing Value Creation Plan, with the aim of providing guidance measures to help SMEs grow and transform themselves. The Administration has also set up an SME Marketing Service Center to provide "one-stop service," including consulting service, resource referral, information collation, planning management and follow-up services, so as to help SMEs overcome the challenges they experience with respect to marketing. One point particularly worth noting is that, in order to speed up the development of new business opportunities by SMEs, SMEA has invited a group of over 30 experienced marketing consultants – specializing in the fields of branding strategy, product development and distribution channel development – to form three "Marketing Service Flagship Teams."

- (1) Branding Strategy Marketing Service Flagship Team: Focusing on consumer behavior research, market surveys, brand positioning, etc.
- (2) Product Development Marketing Service Flagship Team: Focusing on product development, graphic design, packaging design, pricing strategy, marketing activities, etc.
- (3) Distribution Channel Development Marketing Service Flagship Team: Focusing on sales, distribution, retail outlet planning, etc.

In order to help SMEs solve a wider range of marketing-related problems, SMEA has arranged for the SME Marketing Service Center to establish a toll-free consulting service hotline (0800-017-868), with expert advisors available to provide marketing-related consulting services. SMEA has also developed a special app that can be used to download marketing resources handbooks, marketing service team information, information about overseas trade fairs and other marketing opportunities, etc., with the aim of helping SMEs access up-to-date information about the latest SME Marketing Value Creation Plan activities.

## 3. The Project to Promote Most-Valued Products in Emerging Markets (MVP)

Emerging markets possess a rapidly growing middle class that is looking for a high-quality but affordable lifestyle. This "good enough" consumption model, with its emphasis on reasonably-priced luxury and value-for-money, is creating new market opportunities. In 2010, the Ministry of Economic Affairs (MOEA) launched the Project to Promote Most-Valued Products in Emerging Markets (MVP), which was implemented over a three-year period (2010 – 2012), targeting emerging markets such as China, India, Indonesia and Vietnam.

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To implement the MVP project, the MOEA coordinated the Bureau of Foreign Trade, adopting a four-pronged approach (market demand, innovative R&D, product design, and international marketing) and a framework based around three key axes – innovative R&D and production platforms, integrated international marketing platforms, and environment-building platforms – to help provide enterprises with coordinated guidance and support that addresses technology, production, design, branding and marketing related issues, to help them develop business opportunities in emerging markets. As part of MVP, the Bureau of Foreign Trade launched the Emerging Market Integrated Marketing Communication Project, targeting emerging markets such as China, India, Indonesia and Vietnam (<http://www.taiwanexcellence.com.tw>). Its main working tasks in 2013 are: (1) organizing marketing and sales events for Taiwan’s high quality products; (2) assisting in building distribution channels; (3) conducting advertising and communication domestically and internationally; (4) managing websites and digital marketing; (5) setting up Taiwan pavilion in international professional exhibitions in target markets; (6) boosting the overall image of Taiwanese industry; (7) conducting visibility survey, promotion, and market research.

### 4. Argo Tourism Development Plan

Agro-tourism has not only seen a boom in Taiwan, but also become a hot selling point in the international market. For example, Taiwan’s agro-tourism attracts more than 100,000 visitors from neighboring Singapore and Malaysia each year. Taiwan’s agro-tourism has become highly competitive because it offers food, accommodation and play, with the help of government’s integrated overall planning.

The Council of Agriculture, Executive Yuan has actively implemented the agricultural policy of “health, efficiency and sustainable management” to reconstruct wealthy and beautiful rural villages. The government has not only taken care of vulnerable farmers and guided rural youth to return home and work for their communities, but also created enriched leisure farms and promoted local leisure farm products, local gourmet, industrial culture, souvenirs and Argo- tourism brands (plan website: <http://www.taiwanfarm.org.tw>).

## III Helping SMEs Develop New Business Opportunities by Matching and Communication

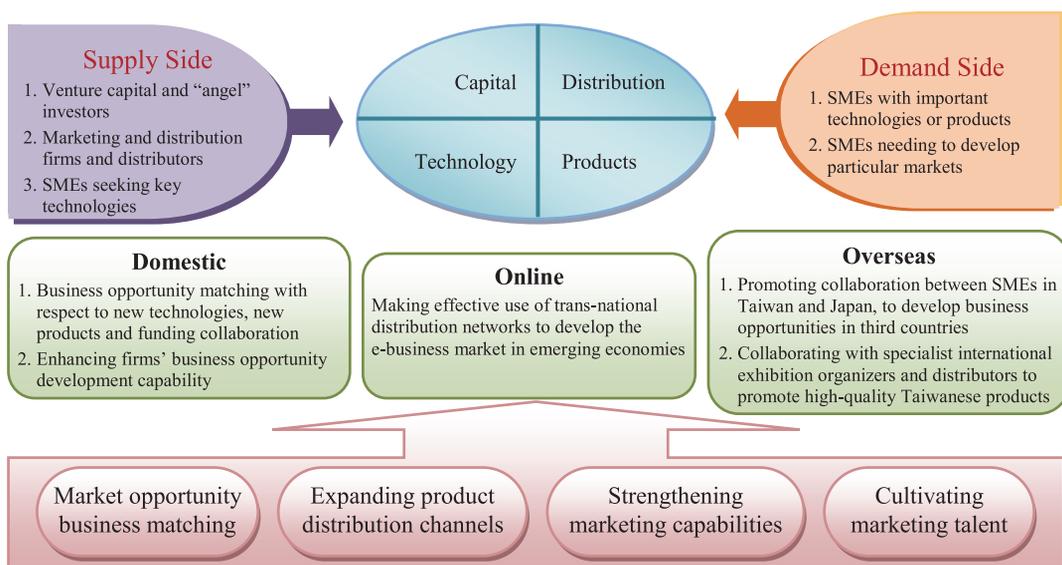
The SMEA, Bureau of Foreign Trade, Commerce Department, and other government departments and agencies have formulated a number of business development and marketing plans to help Taiwan’s SMEs develop new business opportunities at home and expand into overseas markets. The aim of these projects is to 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 2011-2012, focusing on the provision of assistance for market development and the provision of assistance in exploring business opportunities.

## 1. Promoting Business Matching and Technology Exchange

To help enterprises in both traditional industries and emerging hi-tech industries develop the Taiwanese domestic market and access information related 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 can 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.

In 2012, SMEA, MOEA launched an initiative to help SMEs develop new business opportunities, with the vision of enabling SMEs to get more value from their marketing activities. The project incorporates strategies for business matching, distribution channel development, marketing capability enhancement, cultivation of marketing expertise, etc. 2012 main implemented projects were: 1) providing business opportunity matching platform; 2) creating exhibition and promotion opportunities for new technologies and new products, and assisting SMEs in new product matching, new technology matching, and funding matching. (<http://www.technomart.org.tw/chi/index.php>). The framework for SME business opportunity development and the implementation strategies are shown in Figures 11-3-1 and 11-3-2 below.

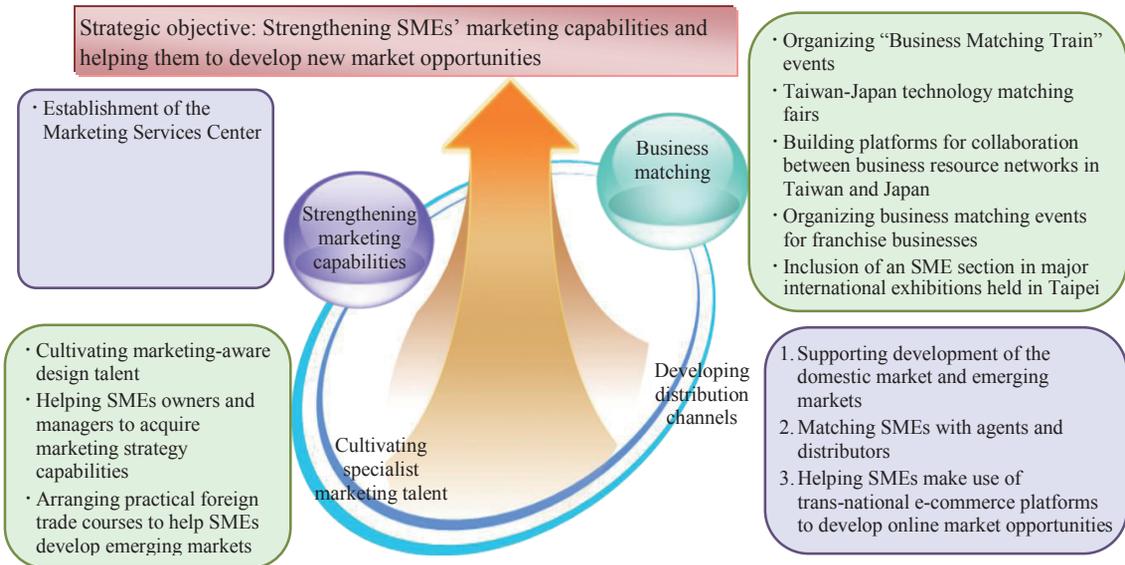
**Figure 11-3-1 Framework for Promoting Business Opportunity Development by SMEs**



Source: Small and Medium Enterprise Administration, MOEA, 2012.

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**Figure 11-3-2 Strategies for Helping SMEs Develop New Business Opportunities**



Source: Small and Medium Enterprise Administration MOEA, 2012.

## 2. Promoting Collaboration between Taiwanese and Japanese SMEs

Developments in recent years have created excellent opportunities to further deepen the already strong and longstanding industrial co-operation between Taiwan and Japan. These include the signing of a Cross-Straits Economic Cooperation Framework Agreement (ECFA) in 2010 and the signing of a Taiwan - Japan investment protection agreement near the end of 2011. In January 2012, the Executive Yuan approved the Taiwan - Japan Industrial Co-operation Bridge - Building Plan, paving the way for closer industrial ties between SMEs in Taiwan and Japan, focusing on the key industries whose growth the two countries are seeking to promote, and aiming to create a win-win situation through the development of a new model for Taiwan-Japan SME collaboration, so that Taiwanese and Japanese firms can work together to develop the China market and build a new Asian "Triangle of Gold."

A number of measures were implemented under the plan to boost Taiwan-Japan collaboration in the SME sector including Taiwan-Japan SME Cooperation and Exchange Plan and the establishment of Taiwan-Japan SME Cooperation and Exchange Promotion Platform, served as a service window and to integrate Taiwan-Japan SME exchange channels, as well as the setting up of a venture capital fund to provide related financing and to encourage cooperative research and development efforts (<http://www.tjsme.org.tw>). 2012 main implemented projects include:

- (1) Establishment of Taiwan-Japan SME Cooperation and Exchange Promotion Platform: Providing business intelligence, source of cooperation cases, matching information, and website maintenance;

- (2) Strengthening Taiwan - Japan SME regional clusters cooperation and industrial resource networking;
- (3) Organizing Taiwan - Japan SME business matching activities: To promote substantive and practical collaboration between Taiwanese and Japanese enterprises;
- (4) Provision of follow-up and counseling regarding business matching opportunities, and trends in third-country markets and to integrate their capabilities with those of Taiwanese firms and build trans-national supply chains and trans-national industry clusters, and to enhance the success rate of Taiwan -Japan SME cooperation in technology, marketing, and funding.

### **3. Help Brand Building for Market Expansion and Competitiveness**

To enhance Taiwan's industrial upgrade and transformation, market development and international competitiveness, the Industrial Development Bureau (IDB), MOEA in 2013 launched Branding Taiwan Plan - Phase II, an ongoing strategy to foster the growth and success of Taiwan's commercial brands in international markets. The Plan will help industries increase brand penetration in overseas markets, enhance international visibility for Taiwan brands, and infuse Taiwan's economy with renewed vision and pride (<https://www.branding-taiwan.tw>). The key projects include: (1) customized guidance and counseling based on types of brand development, including benchmark model enterprises with established global brands such as Inter-brand's Taiwan Top 20 Global Brands (Acer, HTC, Asus, etc.), enterprises with global branding potential, and enterprises who intend to develop their own brands need basic counseling and cultivation at early stage; (2) whole value chain one-stop brand cultivation for selected key industries; (3) funding assistance for global promotion of self-owned brands; (4) brand management talent training; (5) forward looking consumer behavior research and analysis.

### **4. Help Competitive Service Industries Develop Global Market**

The Bureau of Foreign Trade, MOEA has selected Medical Tourism, Cultural and Creative (including crafts and digital content), Information Services, Franchise / Chain Store, Management Consulting, and so on, as key service industries to promote international expansion (<http://sv.taiwantrade.com.tw>). Main projects include: (1) enhancing service industries' global competitiveness through seminars, forums, international marketing talent training; (2) inviting international services buyers to Taiwan, enhance international collaboration, and facilitating strategic alliances; (3) assisting enterprises in seeking international collaboration, and expanding footprint in target markets; (4) organizing overseas promotion and exhibition in target markets.

### **5. The Creative Lifestyle Industry Development Plan**

The Industrial Development Bureau, MOEA launched the Creative Lifestyle Industry Development Plan to help domestic industries transform and upgrade themselves, create new jobs, help enterprises

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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 (<http://www.creativelife.org.tw>). Main projects include: (1) selecting bright spot creative industries; (2) counseling for promoting consumer experience through design, survey, services, and technology; (3) promoting creative lifestyle features; (4) deepening industrial collaboration and exchange.

# CHAPTER 12

## Other Resources and Measures to Support SMEs

Based on the Article 4, the Act for Development of Small and Medium Enterprises (SMEs), in formulating policy, the government shall aim at furtherance of improvement and development of the business operations of SMEs without unfair treatment in respect of financial and taxation systems and other related matters. The government has also tried to enhance policy effectiveness by learning and sharing internationally, to enhance the global visibility of SMEs through expanding the substantial exchange and collaboration with the international community, and to help SMEs in finance and human resource.

This chapter comprises four sections. Section I outlines the active role of Ministry of Economic Affairs' (MOEA) in organizing and participating in international affairs and activities of SMEs in 2012-2013. Section II presents statistics regarding the utilization of government resources to assist SMEs, such as government procurement and SME financing. Section III examines the important regulatory adjustments undertaken by the government in 2012. Section IV covers SME talent cultivation.

### I Participating in International SME Meetings and Events

Taiwan has for many years been an active participant in the SME-related meetings and activities undertaken by international organizations such as Asia Pacific Economic Cooperation (APEC), the International Small Business Congress (ISBC), the International Council for Small Business (ICSB), the Asian Association of Business Incubation (AABI), and National Business Incubation Association (NBIA), and uses these events and activities as an opportunity to share Taiwan's experience in SME development with other countries. In recent years, Taiwan has also been actively involved in international collaboration with regard to SME incubation and industry-university collaboration, which provide opportunities for the exchange of ideas and for collaborative growth, while also contributing to the development of a more international outlook and bilateral exchange.

#### 1. Participating and Hosting International Conference in 2012

##### (1) Hosting SME International Conference in Taiwan

###### A. Hosting Five APEC SME Events during July 10-13, 2012

As the chair of the APEC SME Working Group in 2012, Chinese Taipei hosted the following five events during July 10-13, 2012, bringing together over 500 leading experts, industry leaders and government officers to exchange their views and experiences on SME-related issues.

- (i) APEC SME Workshop on Transporting Goods and Services Reliably and Cost-Efficiently;

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- (ii) The APEC Symposium on Promoting Business Continuity Plans to Enhance SMEs' Participation in Global Production Chains; (iii) APEC Focal Point Network and Expert Meeting (on improving SME disaster resilience); (iv) APEC Task Force of Emergency Preparedness Steering Committee (co-host with APEC Task Force of Emergency Preparedness); (v) APEC Seminar on Business Ethics in Biotech and Pharmaceutical Industry (co-host with United States Department of Commerce).

### B. Hosting 2012 Conference on Enhancing SMEs' Internationalization

Over 150 SME owners, officials, and interested individuals attended the conference to exchange ideas and views in both width and depth seeking to enhance their understanding on the latest trends and development of SMEs in the era as businesses face opportunities and challenges brought by globalization.

### C. Hosting 2012 Global Entrepreneurship Week (GEW)

More than 20,000 people attended the a series of events during November 12-18, 2012, with many of the attendees being young entrepreneurs, students, incubator experts, venture capitalists, and government leaders, including GEW representative Marianne Hudson, EBN (European Business & Innovation Centre Network) representative Lennard Drogendijk, and GMA (Global Management Associates) Chairman Dr. Harry G. Harris. The GEW connected well to MOEA's "Startup Taiwan" resource, with main theme of "Young, Energy, Startup - YES Taiwan."

## (2) Participation in 2012 APEC and ICSB SME Related International Conferences

### A. 19th APEC Ministerial Meeting (AMM), August 3, 2012

Taiwan participated in the meeting in Russia and its APEC Startup Accelerator (ASA) initiative was well received and included in AMM Statement, and in the Declaration of the APEC Economic Leaders' Meeting in September, 2012.

### B. Chinese Taipei Assuming Chair of the APEC SME Working Group (SMEWG)

Chinese Taipei assumed chair of the APEC SME Working Group in its 34th and 35th meetings in 2012, and completed its strategic plan for the period of 2013-2016. APEC Secretary-General Noor highly commended on Chinese Taipei's important contributions to APEC SME Working Group in 2011-2012.

### C. ICSB (International Council for Small Business) Conference

The 57th ICSB Conference was held from June 10 to June 13, 2012 in Wellington. Dr. Robert Sun-Quae Lai of Taiwan (Director General of MOEA) attended the conference in his capacity as Chairman of the APEC Small and Medium Enterprise Working Group (SMEWG) and Executive Director of the APEC SME Crisis Management Center. Dr. Lai also attended several of the supporting conferences and forums, where he discussed the content of the multi-year Improving Natural Disaster Resilience of APEC SMEs to Facilitate Trade and Investment plan that Taiwan has been implementing.

### (3) Promoting SME International Exchange and Collaboration

#### A. Achievements

Promoted Taiwan SME Memorandum of Cooperation with India, and with El Salvador; participated bilateral annual ministerial meetings, such as with India and The Philippines; promoted plurilateral and multilateral cooperation, such as TPP, WTO, and between Taiwan and New Zealand.

#### B. Joint Incubation Cooperation MOU with EBN

Taiwan signed Joint Incubation Cooperation MOU with EBN (European Business & Innovation Centre Network) for one year on November 14, 2012, to develop the cooperation in entrepreneurship incubation, industry-academia collaboration, and business matching.

#### C. Reception of Foreign Visiting Groups of 39

In 2012, over 369, including three ministerial-level officials (or above) and other officers and experts, visited Taiwan and MOEA to know more about Taiwan SMEs' state, government SME policy measures, innovation and incubation centers, SME financing, and other related assistance measures.

### (4) 2012 SME Achievement of Globalization

#### A. Academic Achievements

2012 achievements include (i) 75 special reports on Taiwan SME development and research in SME related global conferences; (ii) 8 issues of APEC SME Monitor (Mandarin and English) on crisis prevention and management, funding, strategies, policy measures, global trends, etc.

#### B. Economic Benefits

Connecting GEW series well to MOEA's own incubation and other activities; achieving economy of scale through cost efficiency and increased participation.

#### C. Social Impacts

The achievement in enhancing global visibility of Taiwan's innovation and entrepreneurship is that in 19th APEC Ministerial Meeting (AMM), Taiwan's APEC Startup Accelerator (ASA) initiative was well received and included in AMM Statement, and in the Declaration of the APEC Economic Leaders' Meeting in September, 2012.

#### D. Special Performance

- (i) Taiwan assumed the Chair of the APEC Small and Medium Enterprise Working Group (SMEWG) in 2011 and 2012;
- (ii) Dr. Robert Sun-Quae Lai from Taiwan assumed the Chair of the APEC Small and Medium Enterprise Working Group (SMEWG) and Executive Director of the APEC SME Crisis Management Center. He completed the strategic plan for the period of 2013-2016, which was well received by SMEWG. APEC Secretary-General Noor highly commended on Chinese Taipei's important contributions to APEC SME Working Group in 2011-2012.

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- (iii) In 19th APEC Ministerial Meeting (AMM), Mr. Johnny Yeh, Director-General of SMEA, reported Taiwan's APEC Startup Accelerator (ASA) initiative, which was well received and include in AMM Statement, and in the Declaration of the APEC Economic Leaders' Meeting in September, 2012.

## 2. Participating and Hosting International Conference in 2013

### (1) Participating the 22nd EBN Annual Congress in 2013

For further implementation of the Joint Incubation Cooperation MOU signed in 2012 between SMEA and EBN, on May 27, 2013, the Industrial Technology and Research Institute (ITRI), National Chiao Tung University (NCTU), Chung Yuan Christian University (CYCU), jointly signed a Memorandum of Understanding (MOU) with Taiwan Globalization Network (TGN) in the Hague City of the Netherlands. The MOU calls for the immediate establishment of cooperative platforms for incubation centers and is meant to support incubation center startups enter the international market, help supply the production demand of the European market, and expand market potential.

The Director-General of SMEA Mr. Johnny Yeh and a delegation of incubation center professionals also attended the 22nd EBN Annual Congress from May 29 to 31 in Londonderry City in Northern Ireland. This year's theme called "Digital, Cultural, and Social Innovation" aims to integrate resources and map out a plan for future incubation cooperation. Over 500 innovation incubation professionals attended the Congress. Mr. Yeh made a speech on "Looking for Global Opportunities: Cooperate with Startup Taiwan Accelerator." Before the Congress, the Taiwan delegation and TGN jointly hold the Taiwan Business Day at The Hague. The theme of Taiwan Business Day was "How Could Smart, Innovative SMEs Enter New Markets Successfully." Taiwan Business Day also sought to act as a forum for exchange for Taiwan and European companies to enter into business cooperation. The new MOU signed between the three institutions from Taiwan and TGN is meant to accelerate such cooperation.

### (2) Hosting APEC startup Accelerator Leadership Summit 2013

APEC Startup Accelerator Leadership Summit 2013 is an exclusive, invitation-only platform for startups throughout the Asia-Pacific region to form business relationships with global key players in Silicon Valley and throughout the world.

The event was held on August 13-14 Taipei, Taiwan. 30 startups and 200 top executives/officials from the APEC region will be invited to challenge current assumptions regarding how public and private sectors collaborate to build sustainable startup ecosystems in the APEC region and to recognize how startups can more effectively find new markets, customers, business models, revenues, and profits. The other event hosted by Taipei, Taiwan was Global Incubation Week, which lasts for two weeks in August 2013, starting from "APEC Train-the-Trainer Workshop" on August 5-9, followed by Startup Taiwan Global Incubation Press Conference on August 12, APEC Startup Accelerator Leadership Summit on August 13-14, Emerging Industry Accelerator International Forum on August 15, and ASEAN Markets Illustration and Fund Matching Meeting on August 16.

## II Statistics on Government Resources Allocated to SMEs

It is explicitly stated in the Act for the Development of SMEs that the government should clearly specify in the SME White Paper the amount of resources allocated to SMEs. 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. In 2012, total government resources allocated to SMEs amounted to NT\$ 815.181 billion. However, statistics on government guidance resources and financing are limited to those from agencies at the central government level. The details are explained as follows.

### 1. Government Procurement from SMEs Reached NT\$781.7 Billion

According to Government E-procurement System statistics on awarded contracts, in 2012 the amount contracted or subcontracted by SMEs in government procurement totaled NT\$781.67 billion, a substantial increase of NT\$85.76 billion from the NT\$695.92 billion in 2011. However, all government procurement totaled NT\$1.24 trillion in 2012, decreased from the NT\$1.40 trillion in 2011.

### 2. Assistance to SMEs Totaled NT\$30.2 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.

As for government agencies with a substantial involvement in providing guidance to SMEs, the amount was NT\$37.44 billion in 2012, of which NT\$27.58 billion was allocated to SMEs, representing 73.65% in the final accounts (Table 12-2-1). When viewed by government agency, the Department of Industrial Technology was ranked first with NT\$11.90 billion in terms of allocation to SMEs, followed by the SMEA, with NT\$6.86 billion. However, this includes the NT\$5.7 billion of government contributions to the SME Credit Guarantee Fund. The next highest was the Bureau of Foreign Trade, with NT\$ 4.41 billion.

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**Table 12-2-1 MOEA Resources and Funding Allocated to SMEs**

Units: NT\$thousand; %

Organizer	Fiscal Year Final Accounts		Total Amount Allocated to SMEs		Increase (Decrease) (%) ③=②-①
	2011	2012	2011 ①	2012 ②	
Small and Medium Enterprise Administration (including SME Development Fund)	7,725,941	6,857,301	7,725,941 (100.00)	6,857,301 (100.00)	-868,640 (0.00)
Industrial Development Bureau (industrial technology guidance and industrial park development and management fund)	6,445,686	5,943,436	4,268,158 (66.22)	3,937,526 (66.25)	-330,632 (0.03)
Bureau of Foreign Trade (overseas marketing guidance and trade promotion fund)	4,559,671	5,002,088	3,949,102 (86.61)	4,410,084 (88.16)	460,982 (1.55)
Department of Commerce (promotion of trade modernization and commercial technology development)	1,311,215	1,167,415	536,193 (40.89)	471,275 (40.37)	-64,918 (-0.52)
Department of Industrial Technology (DOIT)	17,049,070	18,442,370	12,007,677 (70.00)	11,899,750 (64.52)	-107,927 (-5.48)
<b>Total</b>	<b>37,134,810</b>	<b>37,443,757</b>	<b>28,487,071 (76.71)</b>	<b>27,575,936 (73.65)</b>	<b>-911,135 (-3.07)</b>

Notes: Figures in parentheses represent the percentages in the final accounts.  
Source: Various government agencies.

In 2012, in addition to the relevant government resources allocated to SMEs by agencies such as the MOEA, 40 financial institutions also contributed a total of NT\$21.47 billion to the Small and Medium Enterprise Credit Guarantee Fund of Taiwan to enhance the Fund's strength. Training expenses of the Council of Labor Affairs for SMEs totaled NT\$0.11 billion. Therefore, total public and private sector guidance resources available to SMEs totaled NT\$30.17 billion in 2012.

### 3. Providing SMEs with Special Loans Totaling NT\$3.3 Billion

Eligible SMEs in Taiwan have access to the following six types of special loans including: 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); and Micro Business Startup Phoenix Loans (Council of Labor Affairs). A total of NT\$3.34 billion in government-funded SMEs loans was made available in 2012 (Table 12-2-2).

**Table 12-2-2 Special Loans to SMEs Funded by the Government in 2012**

Unit: NTS million

Name of Loan	Eligible Applicant	Structure	Status	
			Total Loan Amount	Government Funding
SME Upgrade Guidance Loan	SMEs	Each loan is funded by the Development Fund, Executive Yuan (25%) and lending institution (75%)	5,081	1,270
Youth Entrepreneurship Guidance Loan	Youth aged 20-45 engaging in business start-ups	Each loan is funded by lending institution alone or lending institution along with Development Fund, Executive Yuan.	2,395	538
SME Development Fund Special Loan	SMEs	SME Development Fund	547	547
Assistance for SMEs to Take Root Special Loan	SMEs	Earmarked funds from CEPD Long-term Fund	4,543	561
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	410	410
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	300	12
<b>Total</b>			<b>13,276</b>	<b>3,338</b>

Source: Various government agencies.

### III Important Regulatory Adjustments Undertaken by the Government in 2012

The main results achieved in FY2012 in the government's efforts to improve the legal and regulatory environment for SMEs are outlined below.

#### 1. Implementation Results in FY2012

In order to help create a first-class environment in which SMEs can grow and prosper, the SMEA, MOEA strives to function as a bridge for communications through which SMEs and government agencies can coordinate the making of necessary changes to laws and regulations. The Administration has worked to establish a comprehensive set of legal and regulatory adjustment mechanisms, and has formulated standard operating procedures covering every stage from the collection and evaluation of data relating to problems affecting the legal and regulatory environment, through the establishment of a legal and regulatory monitoring center, to follow-up work. In FY2012, the Administration handled a total of 72 cases in this area, including visits to industry associations and individual SMEs, referrals and petitions submitted from the various SME guidance systems, proactive examination of the draft versions of new legislation when it is first announced, collection of data regarding

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relevant news items, and handling of legal and regulatory adjustment cases. A total of 39 cases were from proactive examination. The largest number of cases came from visits to industry associations. There were 14 unit regulation moves totaling 61 items (18 new items and 43 revised ones). As part of its efforts to enhance SMEs' legal awareness, the Administration has compiled the "What the Revised Personal Data Protection Act Means for SMEs" handbook, and the "Consumer Protection Handbook"; it is anticipated that these publications will help strengthen SMEs' legal and regulatory "general knowledge," thereby boosting their competitiveness.

### 2. Studies on Legal and Regulatory Issues Relating to SMEs, 2012

Research and analysis of legal and regulatory issues relating to SMEs which was undertaken in FY2012 addressed the following areas: impact of minimum wage adjustment on SMEs; legal environment for entrepreneurship incubation; female-owned SME definition, etc. The main research results were as follows:

- (1) Impact of minimum wage adjustment on SMEs: If the minimum wage is raised from the NT\$103 to NT\$115 (hourly), based on 2010 data assessment, 138,115 part-time workers will benefit, and enterprises will incur additional labor cost over NT\$296 million each month, with SMEs' share of cost increase at about NT\$212 million per month. If minimum wage is raised above the minimum insured salary threshold, the enterprises' statutory labor costs will be increased even more. Think tanks recommend that minimum wage adjustment should be objective and rigorous, and should not hurt incentive for full-time workers. Corresponding measures are recommended with the raise of minimum wage, such as labor expense subsidies to enterprises, and remove of minimum insured salary threshold for some part-time staff (but not the maximum number of working hours) to avoid incentivizing some people working for more than one company, thus affecting the labor stability and the hiring decisions, and Taiwan's investment environment.
- (2) Legal environment is complex and lack of general clarity for the development of social enterprises (a social enterprise is an organization that applies commercial strategies to maximize improvements in human and environmental well-being). Social enterprises are important members in economic system, and also serve as indispensable justice impetus for social development. United States and South Korea have established the relevant legal structure to promote social enterprise. Taiwanese social enterprises face many challenges under the current legal system. Modification of current SME Development Act and SME definition to fit social enterprises can only solve part of the problem. A sound legal structure for social enterprises requires cross-departmental efforts and commitment. The relevant legal structure for social enterprises in United States and South Korea could be valuable sources for Taiwanese government.
- (3) The government need to integrated incubation resources and entrepreneurship counseling services to promote Taiwan's entrepreneurial services engine and networking, and to

actively optimize the business environment for startups. By the end of 2012, there are over 130 incubation centers in Taiwan. The degree of professional segmentation is low, mainly due to lack of specific legal basis. A special chapter for incubation is recommended to add to the current SME Development Act, incorporating the definition of incubation center, grants and subsidies, tax, and so on.

- (4) New procurement terms are recommended to add to SME Development Act to help and promote female-owned SMEs.

### 3. Regulatory Adjustment Outlook

MOEA will continue to implement item No. 1, Article 12 of the SME Development Act to actively promote SME regulations adjustment analysis, and to reduce regulations that are unfair or improper. The policy measure outlook is as follows:

- (1) Enhancing industrial regulation coordination and service network; integrating inputs from SMEs;
- (2) Integrating regulatory adjustment platform to improve effectiveness of regulatory examination;
- (3) Strengthening the regulatory adjustment coordination and industry-government-academia communication;
- (4) Strengthening the understanding of e-commerce operation regulations;
- (5) Strengthening education by case studies and implementing consumer protection.

## IV Talent Cultivation for SMEs

### 1. Entrepreneurship Incubation and Talent Training for SMEs

In order to solve the talent shortage problem, the SMEA allocated a generous budget to bring together experts from industrial, academic and research communities to initiate and execute projects for training qualified personnel. The following is a list of training programs carried out by various government agencies.

#### (1) SME Online University

SME Online University, which was founded in August 2006 by SMEA, MOEA, currently provides over 1,000 courses in six major faculties: information technology, financial management, marketing and distribution, entrepreneurship incubation, human resources and general knowledge. The cumulative number of course participants has reached 3.5 million; some 750 SMEs have adopted the website as their in-house training platform. In the future, the SME Online University will offer clouding service (<http://www.smelearning.org.tw/>).

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### (2) Nurturing SME Business Leaders

The business executive training program is to help business executives working in SMEs build global vision, leadership skill, and effectively adapt to the rapid pace of change in the political, economic, social and technological environments. 140 outstanding business leaders will be selected for the two-stage training in 2013, “Executive Courses” for stage one, and “SME Executive Seminars” for stage two (<http://open.moeasmea.gov.tw/moeasmea/wSite/mp?mp=00501>).

### (3) Develop Management Professionals

The SME management training programs include SME second-generation successor training, female SME executive training, senior management training, training-the-trainers, and strategic human resource management and development training (<http://www.smenet.org.tw/>).

### (4) Industry-University Collaboration on the Cultivation of Financial Talent

SMEA has implemented the Innovation-Oriented SME Financial and Accounting Information Application Development – Industry-University Collaboration Plan for Manpower Cultivation, such as SME financial talent training-the-trainers class and SME financial talent cultivation class (<http://www.iaci-sbiac.org.tw/docList.aspx?id=62>), working together with other organizations to strengthen trainees’ financial capabilities, and ensuring that all of these programs dovetail with the SME Financial Specialist Certification System, so as to cultivate the financial expertise that SMEs need, while also helping students enter the job markets successfully on graduation training.

### (5) SME Management Consultant Cultivation

The SMEA, MOEA has organized the SME Management Consultant Training Course. The course content covers everything from practical business administration to business strategy formulation, with a modular course structure that includes modules on marketing management, service flow, human resources management, enterprise management skills, diagnostic guidance skills, strategic marketing, value management, enterprise resource integration and transformation, etc. It was anticipated that this two-stage (stage one: training courses; stage two: business diagnosis), systematic training would cultivate management consultants who are familiar with modern management techniques and possess a global outlook, and who can provide effective guidance to help SMEs improve their managerial performance (<http://www.bmca.org.tw>).

### (6) Cultivation of Quality Management and Green Talent

SMEA promotes programs to cultivate quality management and green talent, such as SME quality management enhancement plan, SME quality and innovation transformation counseling, micro-enterprise and sole proprietorship counseling.

### (7) Entrepreneurship Incubation

Various programs which target on assisting entrepreneurs, would-be entrepreneurs, and especially young entrepreneurs in fulfilling their dreams of starting enterprises by providing systematic / phased assistance and consultative services, and creating a knowledge database website for startup

enterprises to boost the success rate and encourage individuals to start SMEs and facilitate economic growth. Programs include entrepreneurship incubation courses, industrial startup forum, and so on (<http://www.527188.com.tw>).

### **(8) Cultivation of Female Entrepreneurs**

In 2013, MOEA launched the 2013 Flying Goose Program to help more female entrepreneurs with incubation services, such as incubation courses, team member type consultation, startup funding, and so on increase the success rate of female-owned startups, and enhance their operational efficiency and competitiveness (<http://sme.moeasmea.gov.tw/SME/>). In 2012, a Female Entrepreneurial Elite Plan was launched as part of the Startup Taiwan initiative. This sub-plan is being integrated with other startup guidance resources to create a comprehensive service mechanism for female entrepreneurs. The goal is to (A) cultivate the development of female entrepreneurship “bright spots,” and establish models of successful female-owned business; (B) strengthen the dissemination of female entrepreneurs’ successful experience to promote entrepreneurial activities among women.

## **2. Professional Training Programs for Various Industries - Industrial Development Bureau, MOEA**

In FY2013, the Industrial Development Bureau, MOEA will be implementing 19 talent cultivation projects. The scope of the Bureau’s in-service training and cultivation classes covers: the chemical industry, the cultural and creative industries, the smart electronics industry, the food processing industry, the textile industry, the information and communications technology (ICT) industry, the IT application services industry, the green energy industry, the networking and communications industry, the digital content industry, the machinery manufacturing industry, the medical devices manufacturing industry, and the pharmaceuticals production equipment manufacturing industry (<http://proj.moeaidb.gov.tw/training/index.asp>).

## **3. R&D and Technology Management Talent Training – Department of Industrial Technology, MOEA**

### **(1) Training Cross-Sector International Management Talent**

The program will continue to run from 2010 to 2013 with a training approach that consists of domestic and overseas training sessions. 98 trainees will be selected in 2013 across industries, such as ICT, digital content, green energy, and precision machinery, for 90 hour course (eligible for master degree credits). Further selected trainees will have overseas training, jointly subsidized by SMEA (covering training tuition and air tickets) and enterprises (covering other expenses) (<http://www.mmot.org.tw>).

### **(2) Training R&D Management and Business Strategy Professionals (Cross-Sector Innovation Management Course)**

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

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business strategies and on the enhancement of key practices in management operating performance. The program has three stages: domestic training courses, international seminars, and overseas group training. SMEA subsidizes overseas training tuition and air tickets (<http://rd.cpc.org.tw/RD/web/Default.aspx>).

### 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. The work items implemented included as follows:

#### (1) Orientation Training

The orientation training consists of international enterprise training class (in Hsinchu) and international trade training class (in Taipei). It provides training for talents in international business and trade, which is divided into foreign languages, international trade, overseas study and other courses.

#### (2) In-service Training

The in-service training consists of Post-Masters international marketing class (Taipei), Bachelor and Masters-level business English classes (Taipei), international trade special seminar (nationwide), various short course language classes (Taipei and Hsinchu), and so on. TAITRA has been commissioned to implement an Exhibition Talent Cultivation and Certification Plan, to cultivate specialist talent for the exhibition and conference industry (nationwide) (<http://www.iti.org.tw/main.php>).

### 5. Service Talent Cultivation – Department of Commerce, MOEA

In 2012, Department of Commerce, MOEA promoted various talent cultivation plans for service industries, such as (1) franchise and chain store talent courses and counseling; (2) emerging advertisement and commercial trend courses (<http://gcis.nat.gov.tw/ad/Web/Default.aspx>); (3) logistics talent courses and subsidies (<http://ub.sce.pccu.edu.tw/bin/home.php>); (4) gourmet Taiwan globalization talent cultivation courses (<http://www.gourmettw.com>).

### 6. Industry-Specific Masters Degree Courses – Ministry of Education

Industry-specific Masters Degree courses are tailored to meet the needs of industry. The business enterprise(s) and university concerned submit a joint curriculum proposal to the Ministry of Education. If the proposal is approved, the university in question can then launch an industry-specific Masters Degree program, to help cultivate the Masters-level human talent that firms need. The range of industry sectors for which industry-specific Masters Degree courses are available or

planned covers: (1) Electromechanical engineering; (2) Optoelectronics; (3) ICT; (4) Cultural and creative industries; (5) Biomedicine (including biotechnology and pharmaceuticals manufacturing); (6) Finance (including wealth management); (7) Food, textiles and other manufacturing industries; (8) Service industries; (9) Other. Students need to sign the training contract that requires the students serve at least two years in sponsored enterprises when they enroll in the industry-specific Masters Degree program (<http://imaster-moe.iiiedu.org.tw>).



# Appendix





# APPENDIX A

## Act for Development of Small and Medium Enterprises

Publically 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

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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.

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### 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

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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 exempt 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.

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### 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 advertizing 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.

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### 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 parties) 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

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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:

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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 and Enterprise Size, 2010-2012**

Units: enterprises; %

Industries	Size	Total		SMEs		Large Enterprises	
			Share		Share		Share
Total	2010	1,277,585	100.00	1,247,998	97.68	29,587	2.32
	2011	1,310,791	100.00	1,279,784	97.63	31,007	2.37
	2012	1,337,890	100.00	1,306,729	97.67	31,161	2.33
Agriculture, Forestry, Fishing and Animal Husbandry	2010	11,386	100.00	11,344	99.63	42	0.37
	2011	11,611	100.00	11,568	99.63	43	0.37
	2012	11,868	100.00	11,817	99.57	51	0.43
Mining and Quarrying	2010	1,391	100.00	1,370	98.49	21	1.51
	2011	1,266	100.00	1,245	98.34	21	1.66
	2012	1,226	100.00	1,203	98.12	23	1.88
Manufacturing	2010	134,994	100.00	129,983	96.29	5,011	3.71
	2011	141,103	100.00	135,768	96.22	5,335	3.78
	2012	142,918	100.00	137,436	96.16	5,482	3.84
Electricity and Gas Supply	2010	424	100.00	293	69.10	131	30.90
	2011	425	100.00	294	69.18	131	30.82
	2012	451	100.00	320	70.95	131	29.05
Water Supply and Remediation Services	2010	7,172	100.00	6,894	96.12	278	3.88
	2011	7,259	100.00	6,930	95.47	329	4.53
	2012	7,426	100.00	7,127	95.97	299	4.03
Construction	2010	95,657	100.00	94,415	98.70	1,242	1.30
	2011	100,230	100.00	98,988	98.76	1,242	1.24
	2012	104,394	100.00	103,130	98.79	1,264	1.21
Wholesale and Retail Trade	2010	662,467	100.00	646,101	97.53	16,366	2.47
	2011	668,996	100.00	651,955	97.45	17,041	2.55
	2012	678,054	100.00	661,201	97.51	16,853	2.49
Transportation and Storage	2010	31,166	100.00	30,181	96.84	985	3.16
	2011	31,420	100.00	30,405	96.77	1,015	3.23
	2012	31,707	100.00	30,662	96.70	1,045	3.30
Accommodation and Food Services	2010	117,521	100.00	117,207	99.73	314	0.27
	2011	123,237	100.00	122,862	99.70	375	0.30
	2012	126,894	100.00	126,499	99.69	395	0.31

**Table C-1 Number of Enterprises by Industry and Enterprise Size, 2010-2012 (Continued)**

Units: enterprises; %

Industries	Size	Total		SMEs		Large Enterprises	
			Share		Share		Share
Information and Communication	2010	16,555	100.00	15,862	95.81	693	4.19
	2011	16,906	100.00	16,201	95.83	705	4.17
	2012	17,526	100.00	16,823	95.99	703	4.01
Finance and Insurance	2010	16,100	100.00	14,035	87.17	2,065	12.83
	2011	16,131	100.00	13,918	86.28	2,213	13.72
	2012	16,410	100.00	14,165	86.32	2,245	13.68
Real Estate	2010	23,176	100.00	21,975	94.82	1,201	5.18
	2011	26,300	100.00	25,108	95.47	1,192	4.53
	2012	28,460	100.00	27,180	95.50	1,280	4.50
Professional, Scientific and Technical Services	2010	37,146	100.00	36,505	98.27	641	1.73
	2011	38,752	100.00	38,054	98.20	698	1.80
	2012	40,214	100.00	39,549	98.35	665	1.65
Support Services	2010	27,999	100.00	27,683	98.87	316	1.13
	2011	29,115	100.00	28,750	98.75	365	1.25
	2012	29,968	100.00	29,563	98.65	405	1.35
Education	2010	1,137	100.00	1,130	99.38	7	0.62
	2011	1,275	100.00	1,267	99.37	8	0.63
	2012	1,432	100.00	1,421	99.23	11	0.77
Human Health and Social Work Services	2010	394	100.00	386	97.97	8	2.03
	2011	391	100.00	382	97.70	9	2.30
	2012	417	100.00	407	97.60	10	2.40
Arts, Entertainment and Recreation	2010	22,397	100.00	22,301	99.57	96	0.43
	2011	22,682	100.00	22,579	99.55	103	0.45
	2012	22,511	100.00	22,407	99.54	104	0.46
Other Services	2010	70,503	100.00	70,333	99.76	170	0.24
	2011	73,692	100.00	73,510	99.75	182	0.25
	2012	76,014	100.00	75,819	99.74	195	0.26

Note: 1. The industries are classified according to the 9<sup>th</sup> revision of Industry Classification Standard by DGBAS.

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.

# 2013 White Paper on SMEs in Taiwan

**Table C-2 Total Sales Value by Industry and Enterprise Size, 2010-2012**

Units: NTS millions; %

Industries	Size	Total		SMEs		Large Enterprises	
		Total	Share	Total	Share	Total	Share
Total	2010	36,239,637	100.00	10,709,005	29.55	25,530,632	70.45
	2011	37,881,681	100.00	11,226,933	29.64	26,654,748	70.36
	2012	37,649,075	100.00	11,381,770	30.23	26,267,306	69.77
Agriculture, Forestry, Fishing and Animal Husbandry	2010	38,884	100.00	18,326	47.13	20,558	52.87
	2011	33,843	100.00	18,321	54.14	15,522	45.86
	2012	37,067	100.00	19,966	53.87	17,101	46.13
Mining and Quarrying	2010	48,313	100.00	37,813	78.27	10,500	21.73
	2011	46,953	100.00	37,568	80.01	9,386	19.99
	2012	44,830	100.00	35,402	78.97	9,428	21.03
Manufacturing	2010	13,482,749	100.00	4,072,627	30.21	9,410,122	69.79
	2011	14,122,135	100.00	4,338,874	30.72	9,783,261	69.28
	2012	14,002,782	100.00	4,375,488	31.25	9,627,294	68.75
Electricity and Gas Supply	2010	773,073	100.00	3,515	0.45	769,557	99.55
	2011	833,515	100.00	3,372	0.40	830,143	99.60
	2012	895,151	100.00	3,692	0.41	891,458	99.59
Water Supply and Remediation Services	2010	178,359	100.00	56,259	31.54	122,101	68.46
	2011	190,890	100.00	55,021	28.82	135,869	71.18
	2012	181,289	100.00	55,632	30.69	125,658	69.31
Construction	2010	1,962,639	100.00	1,120,723	57.10	841,917	42.90
	2011	2,079,702	100.00	1,193,584	57.39	886,119	42.61
	2012	2,088,385	100.00	1,235,537	59.16	852,848	40.84
Wholesale and Retail Trade	2010	13,139,161	100.00	3,986,557	30.34	9,152,605	69.66
	2011	13,723,088	100.00	4,085,832	29.77	9,637,256	70.23
	2012	13,439,023	100.00	4,102,447	30.53	9,336,576	69.47
Transportation and Storage	2010	1,059,266	100.00	250,518	23.65	808,748	76.35
	2011	1,005,769	100.00	261,337	25.98	744,432	74.02
	2012	1,049,942	100.00	262,656	25.02	787,285	74.98
Accommodation and Food Services	2010	369,476	100.00	269,507	72.94	99,970	27.06
	2011	420,527	100.00	297,131	70.66	123,396	29.34
	2012	460,649	100.00	321,381	69.77	139,267	30.23

**Table C-2 Total Sales Value by Industry and Enterprise Size, 2010-2012 (Continued)**

Units: NT\$ millions; %

Industries	Size	Total		SMEs		Large Enterprises	
		Total	Share	SMEs	Share	Enterprises	Share
Information and Communication	2010	853,621	100.00	97,102	11.38	756,519	88.62
	2011	906,897	100.00	100,770	11.11	806,127	88.89
	2012	961,866	100.00	105,364	10.95	856,503	89.05
Finance and Insurance	2010	2,268,459	100.00	197,876	8.72	2,070,583	91.28
	2011	2,451,486	100.00	195,036	7.96	2,256,450	92.04
	2012	2,235,043	100.00	186,220	8.33	2,048,823	91.67
Real Estate	2010	867,849	100.00	157,187	18.11	710,662	81.89
	2011	825,421	100.00	175,783	21.30	649,638	78.70
	2012	944,188	100.00	189,948	20.12	754,240	79.88
Professional, Scientific and Technical Services	2010	640,896	100.00	175,298	27.35	465,598	72.65
	2011	618,877	100.00	181,488	29.33	437,389	70.67
	2012	628,374	100.00	189,138	30.10	439,236	69.90
Support Services	2010	294,066	100.00	113,018	38.43	181,048	61.57
	2011	341,936	100.00	121,455	35.52	220,481	64.48
	2012	371,661	100.00	130,672	35.16	240,989	64.84
Education	2010	6,902	100.00	4,965	71.93	1,937	28.07
	2011	8,138	100.00	6,057	74.42	2,082	25.58
	2012	9,577	100.00	6,820	71.21	2,757	28.79
Human Health and Social Work Services	2010	4,366	100.00	1,842	42.19	2,524	57.81
	2011	4,728	100.00	1,920	40.62	2,807	59.38
	2012	5,440	100.00	1,933	35.53	3,507	64.47
Arts, Entertainment and Recreation	2010	72,341	100.00	43,624	60.30	28,717	39.70
	2011	73,876	100.00	46,376	62.78	27,500	37.22
	2012	80,578	100.00	48,023	59.60	32,555	40.40
Other Services	2010	179,217	100.00	102,249	57.05	76,968	42.95
	2011	193,900	100.00	107,008	55.19	86,891	44.81
	2012	213,242	100.00	111,460	52.27	101,782	47.73

Notes and source: See Table C-1.

## 2013 White Paper on SMEs in Taiwan

**Table C-3 Domestic Sales Value by Industry and Enterprise Size, 2010-2012**

Units: NT\$ millions; %

Industries	Size	Total		SMEs		Large Enterprises	
			Share		Share		Share
Total	2010	26,216,138	100.00	9,088,972	34.67	17,127,166	65.33
	2011	27,754,779	100.00	9,576,948	34.51	18,177,832	65.49
	2012	27,797,659	100.00	9,633,690	34.66	18,163,970	65.34
Agriculture, Forestry, Fishing and Animal Husbandry	2010	33,769	100.00	16,016	47.43	17,752	52.57
	2011	29,567	100.00	16,339	55.26	13,228	44.74
	2012	32,021	100.00	18,178	56.77	13,843	43.23
Mining and Quarrying	2010	47,718	100.00	37,500	78.59	10,219	21.41
	2011	46,182	100.00	37,259	80.68	8,923	19.32
	2012	44,332	100.00	35,285	79.59	9,047	20.41
Manufacturing	2010	7,183,762	100.00	2,928,313	40.76	4,255,449	59.24
	2011	7,795,202	100.00	3,157,153	40.50	4,638,049	59.50
	2012	7,578,558	100.00	3,080,012	40.64	4,498,546	59.36
Electricity and Gas Supply	2010	758,789	100.00	3,422	0.45	755,367	99.55
	2011	817,410	100.00	3,329	0.41	814,081	99.59
	2012	880,884	100.00	3,653	0.41	877,231	99.59
Water Supply and Remediation Services	2010	168,561	100.00	54,632	32.41	113,929	67.59
	2011	178,826	100.00	53,599	29.97	125,228	70.03
	2012	169,914	100.00	54,222	31.91	115,692	68.09
Construction	2010	1,801,239	100.00	1,108,468	61.54	692,771	38.46
	2011	1,905,758	100.00	1,180,816	61.96	724,942	38.04
	2012	1,918,300	100.00	1,224,656	63.84	693,644	36.16
Wholesale and Retail Trade	2010	10,160,204	100.00	3,552,451	34.96	6,607,753	65.04
	2011	10,655,208	100.00	3,657,554	34.33	6,997,654	65.67
	2012	10,770,509	100.00	3,688,686	34.25	7,081,823	65.75
Transportation and Storage	2010	754,294	100.00	241,349	32.00	512,945	68.00
	2011	724,199	100.00	252,593	34.88	471,606	65.12
	2012	746,315	100.00	253,739	34.00	492,576	66.00
Accommodation and Food Services	2010	367,833	100.00	269,379	73.23	98,454	26.77
	2011	419,940	100.00	297,013	70.73	122,927	29.27
	2012	459,807	100.00	321,254	69.87	138,553	30.13

**Table C-3 Domestic Sales Value by Industry and Enterprise Size, 2010-2012 (Continued)**

Units: NTS millions; %

Industries	Size	Total		SMEs		Large Enterprises	
			Share		Share		Share
Information and Communication	2010	759,262	100.00	91,159	12.01	668,103	87.99
	2011	807,960	100.00	94,949	11.75	713,011	88.25
	2012	864,099	100.00	99,309	11.49	764,790	88.51
Finance and Insurance	2010	2,266,254	100.00	197,233	8.70	2,069,021	91.30
	2011	2,449,468	100.00	194,508	7.94	2,254,960	92.06
	2012	2,231,191	100.00	185,531	8.32	2,045,659	91.68
Real Estate	2010	859,734	100.00	156,609	18.22	703,125	81.78
	2011	821,829	100.00	175,189	21.32	646,640	78.68
	2012	940,420	100.00	189,165	20.11	751,255	79.89
Professional, Scientific and Technical Services	2010	510,715	100.00	168,598	33.01	342,117	66.99
	2011	495,441	100.00	175,335	35.39	320,106	64.61
	2012	496,563	100.00	182,713	36.80	313,851	63.20
Support Services	2010	288,708	100.00	111,759	38.71	176,949	61.29
	2011	334,531	100.00	120,445	36.00	214,086	64.00
	2012	363,645	100.00	129,550	35.63	234,095	64.37
Education	2010	6,836	100.00	4,957	72.51	1,879	27.49
	2011	8,070	100.00	6,050	74.97	2,020	25.03
	2012	9,468	100.00	6,780	71.61	2,688	28.39
Human Health and Social Work Services	2010	4,255	100.00	1,779	41.81	2,476	58.19
	2011	4,567	100.00	1,847	40.44	2,720	59.56
	2012	5,148	100.00	1,911	37.13	3,237	62.87
Arts, Entertainment and Recreation	2010	72,078	100.00	43,453	60.29	28,625	39.71
	2011	73,705	100.00	46,264	62.77	27,441	37.23
	2012	80,451	100.00	47,942	59.59	32,509	40.41
Other Services	2010	172,126	100.00	101,894	59.20	70,231	40.80
	2011	186,915	100.00	106,705	57.09	80,210	42.91
	2012	206,034	100.00	111,103	53.92	94,931	46.08

Notes and source: See Table C-1.

## 2013 White Paper on SMEs in Taiwan

**Table C-4 Export Sales Value by Industry and Enterprise Size, 2010-2012**

Units: NT\$ millions; %

Industries	Size	Total		SMEs		Large Enterprises	
		Total	Share	SMEs	Share	Large Enterprises	Share
Total	2010	10,023,499	100.00	1,620,033	16.16	8,403,466	83.84
	2011	10,126,901	100.00	1,649,985	16.29	8,476,916	83.71
	2012	9,851,416	100.00	1,748,080	17.74	8,103,336	82.26
Agriculture, Forestry, Fishing and Animal Husbandry	2010	5,115	100.00	2,309	45.14	2,806	54.86
	2011	4,276	100.00	1,981	46.34	2,294	53.66
	2012	5,046	100.00	1,788	35.44	3,258	64.56
Mining and Quarrying	2010	594	100.00	314	52.76	281	47.24
	2011	771	100.00	309	40.03	462	59.97
	2012	498	100.00	117	23.53	381	76.47
Manufacturing	2010	6,298,987	100.00	1,144,314	18.17	5,154,673	81.83
	2011	6,326,933	100.00	1,181,721	18.68	5,145,212	81.32
	2012	6,424,224	100.00	1,295,476	20.17	5,128,748	79.83
Electricity and Gas Supply	2010	14,284	100.00	93	0.65	14,190	99.35
	2011	16,105	100.00	43	0.26	16,062	99.74
	2012	14,266	100.00	39	0.28	14,227	99.72
Water Supply and Remediation Services	2010	9,798	100.00	1,627	16.60	8,171	83.40
	2011	12,064	100.00	1,422	11.79	10,642	88.21
	2012	11,375	100.00	1,409	12.39	9,966	87.61
Construction	2010	161,400	100.00	12,255	7.59	149,145	92.41
	2011	173,944	100.00	12,768	7.34	161,176	92.66
	2012	170,085	100.00	10,881	6.40	159,204	93.60
Wholesale and Retail Trade	2010	2,978,957	100.00	434,105	14.57	2,544,852	85.43
	2011	3,067,880	100.00	428,278	13.96	2,639,602	86.04
	2012	2,668,514	100.00	413,761	15.51	2,254,753	84.49
Transportation and Storage	2010	304,972	100.00	9,169	3.01	295,802	96.99
	2011	281,570	100.00	8,744	3.11	272,826	96.89
	2012	303,627	100.00	8,917	2.94	294,709	97.06
Accommodation and Food Services	2010	1,643	100.00	128	7.78	1,515	92.22
	2011	587	100.00	119	20.21	468	79.79
	2012	841	100.00	127	15.10	714	84.90

**Table C-4 Export Sales Value by Industry and Enterprise Size, 2010-2012 (Continued)**

Units: NTS millions; %

Industries	Size	Total		SMEs		Large Enterprises	
			Share		Share		Share
Information and Communication	2010	94,359	100.00	5,942	6.30	88,417	93.70
	2011	98,937	100.00	5,822	5.88	93,116	94.12
	2012	97,767	100.00	6,055	6.19	91,713	93.81
Finance and Insurance	2010	2,204	100.00	643	29.16	1,561	70.84
	2011	2,018	100.00	528	26.16	1,490	73.84
	2012	3,853	100.00	689	17.88	3,164	82.12
Real Estate	2010	8,115	100.00	578	7.12	7,538	92.88
	2011	3,592	100.00	594	16.53	2,998	83.47
	2012	3,757	100.00	773	20.56	2,985	79.44
Professional, Scientific and Technical Services	2010	130,181	100.00	6,700	5.15	123,481	94.85
	2011	123,436	100.00	6,153	4.98	117,283	95.02
	2012	131,811	100.00	6,425	4.87	125,385	95.13
Support Services	2010	5,358	100.00	1,259	23.50	4,099	76.50
	2011	7,405	100.00	1,010	13.64	6,395	86.36
	2012	8,016	100.00	1,122	14.00	6,894	86.00
Education	2010	65	100.00	8	11.56	58	88.44
	2011	69	100.00	7	9.67	62	90.33
	2012	109	100.00	40	36.68	69	63.32
Human Health and Social Work Services	2010	111	100.00	63	56.82	48	43.18
	2011	160	100.00	73	45.68	87	54.32
	2012	292	100.00	22	7.37	270	92.63
Arts, Entertainment and Recreation	2010	263	100.00	171	65.20	91	34.80
	2011	170	100.00	112	65.57	59	34.43
	2012	127	100.00	81	63.87	46	36.13
Other Services	2010	7,092	100.00	355	5.00	6,737	95.00
	2011	6,985	100.00	304	4.35	6,681	95.65
	2012	7,208	100.00	357	4.95	6,851	95.05

Notes and source: See Table C-1.

## 2013 White Paper on SMEs in Taiwan

**Table C-5 Total Employment by Industry and Enterprise Size, 2010-2012**

Units: Thousand persons; %

Industries	Size	Total		SMEs		Large Enterprises		Government	
		Total	Share	Total	Share	Total	Share	Total	Share
Total	2010	10,493	100.00	8,191	78.06	1,253	11.94	1,049	10.00
	2011	10,709	100.00	8,337	77.85	1,334	12.46	1,038	9.69
	2012	10,860	100.00	8,484	78.12	1,349	12.42	1,027	9.46
Agriculture, Forestry, Fishing and Animal Husbandry	2010	550	100.00	545	99.08	1	0.10	5	0.83
	2011	542	100.00	536	98.88	1	0.15	5	0.97
	2012	544	100.00	538	98.94	1	0.21	5	0.85
Mining and Quarrying	2010	4	100.00	4	86.59	0	0.65	1	12.76
	2011	4	100.00	3	86.50	0	0	1	13.50
	2012	4	100.00	4	87.13	0	0.58	1	12.29
Manufacturing	2010	2,861	100.00	2,127	74.34	705	24.63	29	1.03
	2011	2,949	100.00	2,158	73.19	762	25.85	28	0.96
	2012	2,975	100.00	2,171	72.99	780	26.22	24	0.79
Electricity and Gas Supply	2010	29	100.00	3	10.88	3	8.78	23	80.34
	2011	29	100.00	3	10.41	3	10.47	23	79.12
	2012	29	100.00	3	11.36	3	10.78	23	77.86
Water Supply and Remediation Services	2010	78	100.00	29	37.79	1	1.36	47	60.86
	2011	79	100.00	32	41.12	1	1.89	45	56.99
	2012	82	100.00	36	43.13	1	1.68	45	55.19
Construction	2010	797	100.00	779	97.73	9	1.10	9	1.17
	2011	831	100.00	813	97.85	9	1.10	9	1.05
	2012	845	100.00	826	97.80	10	1.14	9	1.06
Wholesale and Retail Trade	2010	1,747	100.00	1,682	96.26	54	3.11	11	0.63
	2011	1,763	100.00	1,696	96.20	57	3.26	10	0.54
	2012	1,800	100.00	1,731	96.16	60	3.35	9	0.50
Transportation and Storage	2010	404	100.00	295	73.11	53	13.11	56	13.78
	2011	411	100.00	296	72.04	60	14.57	55	13.38
	2012	414	100.00	302	72.77	58	13.90	55	13.34
Accommodation and Food Services	2010	727	100.00	708	97.37	19	2.56	1	0.08
	2011	728	100.00	709	97.43	18	2.53	0	0.04
	2012	750	100.00	731	97.52	18	2.41	1	0.07

**Table C-5 Total Employment by Industry and Enterprise Size, 2010-2012 (Continued)**

Units: Thousand persons; %

Industries	Size	Total		SMEs		Large Enterprises		Government	
		Total	Share	SMEs	Share	Large Enterprises	Share	Government	Share
Information and Communication	2010	208	100.00	148	71.34	58	27.14	1	0.52
	2011	218	100.00	156	71.67	61	27.97	1	0.37
	2012	228	100.00	165	72.13	63	27.57	1	0.31
Finance and Insurance	2010	428	100.00	315	73.69	96	22.34	17	3.97
	2011	428	100.00	321	75.08	92	21.47	15	3.45
	2012	426	100.00	323	75.68	86	20.28	17	4.05
Real Estate	2010	75	100.00	70	93.75	3	3.39	2	2.86
	2011	87	100.00	83	95.50	2	2.74	2	1.76
	2012	90	100.00	85	95.27	3	3.17	1	1.56
Professional, Scientific and Technical Services	2010	325	100.00	258	79.36	38	11.58	29	9.07
	2011	339	100.00	270	79.70	43	12.69	26	7.61
	2012	342	100.00	274	80.20	43	12.48	25	7.32
Support Services	2010	236	100.00	217	91.81	19	7.98	0	0.21
	2011	247	100.00	227	91.99	19	7.62	1	0.39
	2012	260	100.00	237	91.40	22	8.39	1	0.22
Public Administration and Defence; Compulsory Social Security	2010	389	100.00	0	0.00	0	0.00	389	100.00
	2011	388	100.00	0	0.00	0	0.00	388	100.00
	2012	384	100.00	1	0.26	0	0.02	383	99.72
Education	2010	619	100.00	218	35.27	69	11.20	331	53.53
	2011	629	100.00	226	36.00	71	11.26	332	52.74
	2012	630	100.00	230	36.43	67	10.57	334	53.00
Human Health and Social Work Services	2010	386	100.00	192	49.56	116	30.09	79	20.35
	2011	408	100.00	203	49.67	124	30.37	82	19.97
	2012	420	100.00	216	51.47	125	29.73	79	18.80
Arts, Entertainment and Recreation	2010	98	100.00	76	77.62	6	5.64	16	16.74
	2011	94	100.00	75	79.38	4	4.51	15	16.11
	2012	95	100.00	76	80.13	5	5.17	14	14.71
Other Services	2010	532	100.00	525	98.59	5	0.91	3	0.49
	2011	536	100.00	528	98.40	6	1.03	3	0.57
	2012	541	100.00	534	98.83	4	0.81	2	0.37

Note: 1. The industries are classified according to the 9<sup>th</sup> revision of Industry Classification Standard by DGBAS.

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: DGBAS, Monthly Bulletin of Manpower.

## 2013 White Paper on SMEs in Taiwan

**Table C-6 Number of Paid Employees by Industry and Enterprise Size, 2010-2012**

Units: Thousand persons; %

Industries	Size	Total		SMEs		Large Enterprises		Government	
		Total	Share	SMEs	Share	Enterprises	Share	Government	Share
Total	2010	8,104	100.00	5,805	71.63	1,250	15.42	1,049	12.95
	2011	8,328	100.00	5,958	71.54	1,332	15.99	1,039	12.46
	2012	8,495	100.00	6,122	72.06	1,346	15.85	1,027	12.09
Agriculture, Forestry, Fishing and Animal Husbandry	2010	83	100.00	78	93.92	1	0.64	5	5.44
	2011	84	100.00	78	92.77	1	0.99	5	6.23
	2012	85	100.00	79	93.26	1	1.31	5	5.43
Mining and Quarrying	2010	4	100.00	4	86.16	0	0.67	1	13.17
	2011	4	100.00	3	86.36	0	0.00	1	13.64
	2012	4	100.00	3	86.71	0	0.60	1	12.68
Manufacturing	2010	2,600	100.00	1,867	71.82	703	27.05	29	1.13
	2011	2,684	100.00	1,895	70.60	761	28.35	28	1.06
	2012	2,721	100.00	1,919	70.52	779	28.62	24	0.86
Electricity and Gas Supply	2010	29	100.00	3	10.38	3	8.83	23	80.79
	2011	29	100.00	3	10.13	3	10.51	23	79.36
	2012	29	100.00	3	11.36	3	10.78	23	77.86
Water Supply and Remediation Services	2010	70	100.00	21	30.62	1	1.51	47	67.86
	2011	70	100.00	23	33.35	1	2.14	45	64.51
	2012	74	100.00	27	36.34	1	1.88	45	61.79
Construction	2010	668	100.00	650	97.31	9	1.29	9	1.40
	2011	694	100.00	676	97.43	9	1.32	9	1.25
	2012	708	100.00	690	97.37	10	1.36	9	1.26
Wholesale and Retail Trade	2010	1,028	100.00	962	93.66	54	5.27	11	1.07
	2011	1,059	100.00	992	93.67	57	5.43	10	0.90
	2012	1,110	100.00	1,041	93.78	60	5.41	9	0.81
Transportation and Storage	2010	310	100.00	202	65.00	53	17.06	56	17.93
	2011	319	100.00	204	64.02	60	18.76	55	17.22
	2012	329	100.00	217	65.76	58	17.47	55	16.77
Accommodation and Food Services	2010	418	100.00	399	95.43	19	4.44	1	0.13
	2011	428	100.00	409	95.64	18	4.29	0	0.07
	2012	451	100.00	433	95.99	18	3.88	1	0.12

**Table C-6 Number of Paid Employees by Industry and Enterprise Size, 2010-2012 (Continued)**

Units: Thousand persons; %

Industries	Size	Total		SMEs		Large Enterprises		Govern-ment	
		Total	Share	SMEs	Share	Enterprises	Share	ment	Share
Information and Communication	2010	196	100.00	136	69.66	58	29.79	1	0.55
	2011	204	100.00	142	69.71	61	29.90	1	0.39
	2012	213	100.00	149	70.17	63	29.50	1	0.33
Finance and Insurance	2010	424	100.00	312	73.49	95	22.50	17	4.01
	2011	423	100.00	317	74.83	92	21.69	15	3.48
	2012	422	100.00	318	75.44	86	20.48	17	4.09
Real Estate	2010	66	100.00	61	93.03	2	3.72	2	3.24
	2011	78	100.00	74	94.98	2	3.06	2	1.96
	2012	80	100.00	76	94.70	3	3.55	1	1.75
Professional, Scientific and Technical Services	2010	255	100.00	188	73.69	38	14.74	29	11.56
	2011	268	100.00	199	74.30	43	16.06	26	9.64
	2012	267	100.00	199	74.64	43	15.97	25	9.39
Support Services	2010	216	100.00	197	91.12	19	8.65	0	0.23
	2011	224	100.00	204	91.23	19	8.34	1	0.43
	2012	236	100.00	213	90.57	22	9.19	1	0.24
Public Administration and Defence; Compulsory Social Security	2010	389	100.00	0	0.00	0	0.00	389	100.00
	2011	388	100.00	0	0.00	0	0.00	388	100.00
	2012	384	100.00	1	0.26	0	0.02	383	99.72
Education	2010	588	100.00	187	31.87	69	11.78	331	56.35
	2011	598	100.00	195	32.69	71	11.82	332	55.49
	2012	596	100.00	195	32.74	67	11.18	334	56.08
Human Health and Social Work Service	2010	354	100.00	159	44.99	116	32.81	79	22.20
	2011	377	100.00	171	45.46	124	32.89	82	21.65
	2012	386	100.00	182	47.13	125	32.38	79	20.49
Arts, Entertainment and Recreation	2010	80	100.00	58	72.61	5	6.82	16	20.57
	2011	73	100.00	53	73.42	4	5.81	15	20.77
	2012	73	100.00	54	74.30	5	6.60	14	19.10
Other Services	2010	327	100.00	319	97.74	5	1.45	3	0.80
	2011	328	100.00	319	97.38	6	1.68	3	0.94
	2012	327	100.00	321	98.06	4	1.33	2	0.61

Notes and source: See Table C-5.

## 2013 White Paper on SMEs in Taiwan

**Table C-7 Overview of Newly-Established Enterprises in 2012 by Industry and Enterprise Size**

Units: enterprises; %

Industries	Size	Total (1)	SMEs (2)		Large Enterprises		
			(2) / (1)	Share	Enterprises	Share	
Number of Enterprises							
<b>Total</b>		96,153	95,954	100	99.79	199	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		703	702	0.73	99.86	1	0.50
Mining and Quarrying		86	86	0.09	100.00	0	0.00
Manufacturing		4,921	4,871	5.08	98.98	50	25.13
Electricity and Gas Supply		44	43	0.04	97.73	1	0.50
Water Supply and Remediation Services		528	527	0.55	99.81	1	0.50
Construction		7,997	7,986	8.32	99.86	11	5.53
Wholesale and Retail Trade		45,252	45,152	47.06	99.78	100	50.25
Transportation and Storage		1,292	1,290	1.34	99.85	2	1.01
Accommodation and Food Services		15,065	15,060	15.70	99.97	5	2.51
Information and Communication		1,895	1,891	1.97	99.79	4	2.01
Finance and Insurance		732	730	0.76	99.73	2	1.01
Real Estate		3,648	3,633	3.79	99.59	15	7.54
Professional, Scientific and Technical Services		3,562	3,561	3.71	99.97	1	0.50
Support Services		2,492	2,488	2.59	99.84	4	2.01
Education		229	228	0.24	99.56	1	0.50
Human Health and Social Work Services		50	50	0.05	100.00	0	0.00
Arts, Entertainment and Recreation		1,885	1,885	1.96	100.00	0	0.00
Other Services		5,772	5,771	6.01	99.98	1	0.50

**Table C-7 Overview of Newly-Established Enterprises in 2012 by Industry and Enterprise Size (Continued)**

Units: NT\$ millions; %

Industries	Size	Total (1)	SMEs		Large Enterprises		
			(2)	(2) / (1)	Share	Share	
Sales Value							
<b>Total</b>		235,463	177,861	100.00	75.54	57,602	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		754	456	0.26	60.43	298	0.52
Mining and Quarrying		399	399	0.22	100.00	0	0.00
Manufacturing		27,883	23,531	13.23	84.39	4,352	7.56
Electricity and Gas Supply		263	138	0.08	52.56	125	0.22
Water Supply and Remediation Services		1,089	973	0.55	89.31	116	0.20
Construction		22,575	21,322	11.99	94.45	1,253	2.18
Wholesale and Retail Trade		122,015	84,157	47.32	68.97	37,859	65.72
Transportation and Storage		3,598	3,365	1.89	93.52	233	0.41
Accommodation and Food Services		17,887	17,154	9.64	95.90	734	1.27
Information and Communication		4,607	3,770	2.12	81.84	837	1.45
Finance and Insurance		5,631	2,399	1.35	42.60	3,232	5.61
Real Estate		14,106	7,479	4.20	53.02	6,627	11.51
Professional, Scientific and Technical Services		4,817	4,625	2.60	96.00	193	0.33
Support Services		4,137	2,884	1.62	69.71	1,253	2.18
Education		637	453	0.25	71.20	183	0.32
Human Health and Social Work Services		49	49	0.03	100.00	0	0.00
Arts, Entertainment and Recreation		1,480	1,480	0.83	100.00	0	0.00
Other Services		3,535	3,229	1.82	91.34	306	0.53

## 2013 White Paper on SMEs in Taiwan

**Table C-7 Overview of Newly-Established Enterprises in 2012 by Industry and Enterprise Size (Continued)**

Units: NT\$ millions; %

Industries	Size	Total (1)	SMEs		Large		
			(2)	(2) / (1)	Share	Enterprises	Share
<b>Domestic Value</b>							
<b>Total</b>		212,954	167,679	100.00	78.74	45,276	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		731	438	0.26	59.94	293	0.65
Mining and Quarrying		399	399	0.24	100.00	0	0.00
Manufacturing		23,169	19,072	11.37	82.32	4,097	9.05
Electricity and Gas Supply		263	138	0.08	52.56	125	0.28
Water Supply and Remediation Services		1,023	906	0.54	88.61	116	0.26
Construction		22,531	21,278	12.69	94.44	1,253	2.77
Wholesale and Retail Trade		105,159	79,002	47.12	75.13	26,157	57.77
Transportation and Storage		3,436	3,276	1.95	95.32	161	0.36
Accommodation and Food Services		17,878	17,145	10.22	95.90	733	1.62
Information and Communication		4,261	3,716	2.22	87.21	545	1.20
Finance and Insurance		5,627	2,395	1.43	42.56	3,232	7.14
Real Estate		14,100	7,473	4.46	53.00	6,627	14.64
Professional, Scientific and Technical Services		4,656	4,463	2.66	95.86	193	0.43
Support Services		4,023	2,770	1.65	68.85	1,253	2.77
Education		637	453	0.27	71.20	183	0.41
Human Health and Social Work Services		49	49	0.03	100.00	0	0.00
Arts, Entertainment and Recreation		1,479	1,479	0.88	100.00	0	0.00
Other Services		3,534	3,228	1.92	91.34	306	0.68

**Table C-7 Overview of Newly-Established Enterprises in 2012 by Industry and Enterprise Size (Continued)**

Units: NT\$ millions; %

Industries	Size	Total (1)	SMEs (2)	Export Value		Large Enterprises	
				(2) / (1)	Share	Enterprises	Share
<b>Total</b>		22,509	10,183	100.00	45.24	12,326	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		23	17	0.17	75.90	6	0.05
Mining and Quarrying		0	0	0.00	0.00	0	0.00
Manufacturing		4,714	4,460	43.80	94.60	255	2.07
Electricity and Gas Supply		0	0	0.00	0.00	0	0.00
Water Supply and Remediation Services		66	66	0.65	100.00	0	0.00
Construction		44	44	0.44	100.00	0	0.00
Wholesale and Retail Trade		16,856	5,154	50.62	30.58	11,702	94.94
Transportation and Storage		162	89	0.88	55.17	73	0.59
Accommodation and Food Services		9	9	0.09	98.82	0	0.00
Information and Communication		346	55	0.54	15.78	291	2.36
Finance and Insurance		4	4	0.04	100.00	0	0.00
Real Estate		6	6	0.05	100.00	0	0.00
Professional, Scientific and Technical Services		162	162	1.59	100.00	0	0.00
Support Services		114	114	1.12	100.00	0	0.00
Education		0	0	0.00	0.00	0	0.00
Human Health and Social Work Services		0	0	0.00	0.00	0	0.00
Arts, Entertainment and Recreation		0	0	0.00	100.00	0	0.00
Other Services		1	1	0.01	100.00	0	0.00

Note: 1. The industries are classified according to the 9<sup>th</sup> revision of Industry Classification Standard by DGBAS.

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, 2012.

## 2013 White Paper on SMEs in Taiwan

**Table C-8 Female-Owned Enterprises in 2012 – Number of Enterprises and Sales Value by Industry and Enterprise Size**

Units: NTS millions; %

Industries \ Size	Total	Female-Owned Enterprises	SMEs	Large Enterprises		
				Share	Share	
Number of Enterprises						
<b>Total</b>	1,326,766	479,803	474,237	100.00	5,566	100.00
Agriculture, Forestry, Fishing and Animal Husbandry	11,862	2,781	2,768	0.58	13	0.23
Mining and Quarrying	1,223	278	276	0.06	2	0.04
Manufacturing	141,865	38,266	37,742	7.96	524	9.41
Electricity and Gas Supply	437	80	65	0.01	15	0.27
Water Supply and Remediation Services	7,409	2,224	2,155	0.45	69	1.24
Construction	104,172	26,312	26,076	5.50	236	4.24
Wholesale and Retail Trade	671,932	253,903	250,398	52.80	3,505	62.97
Transportation and Storage	31,301	7,957	7,807	1.65	150	2.69
Accommodation and Food Services	125,856	60,813	60,738	12.81	75	1.35
Information and Communication	16,996	5,002	4,911	1.04	91	1.63
Finance and Insurance	16,110	4,919	4,497	0.95	422	7.58
Real Estate	28,286	8,301	8,043	1.70	258	4.64
Professional, Scientific and Technical Services	39,460	13,966	13,857	2.92	109	1.96
Support Services	29,777	11,725	11,659	2.46	66	1.19
Education	1,395	518	517	0.11	1	0.02
Human Health and Social Work Services	409	124	124	0.03	0	0.00
Arts, Entertainment and Recreation	22,433	7,942	7,928	1.67	14	0.25
Other Services	75,843	34,692	34,676	7.31	16	0.29

**Table C-8 Female-Owned Enterprises in 2012 – Number of Enterprises and Sales Value by Industry and Enterprise Size (Continued)**

Units: NTS millions; %

Industries	Size	Total	Female-Owned Enterprises	SMEs		Large Enterprises	
					Share		Share
Sales Value							
<b>Total</b>		33,784,736	5,033,775	2,619,714	100.00	2,414,062	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		36,849	9,665	4,219	0.16	5,446	0.23
Mining and Quarrying		44,774	4,949	4,933	0.19	16	0.00
Manufacturing		12,329,894	954,557	640,731	24.46	313,825	13.00
Electricity and Gas Supply		880,987	8,746	804	0.03	7,941	0.33
Water Supply and Remediation Services		179,560	38,326	16,154	0.62	22,171	0.92
Construction		1,990,884	376,227	291,909	11.14	84,319	3.49
Wholesale and Retail Trade		11,891,632	2,563,967	1,202,890	45.92	1,361,078	56.38
Transportation and Storage		912,280	122,896	72,457	2.77	50,439	2.09
Accommodation and Food Services		425,917	131,018	111,722	4.26	19,296	0.80
Information and Communication		874,073	110,668	25,789	0.98	84,879	3.52
Finance and Insurance		2,115,273	298,253	44,754	1.71	253,499	10.50
Real Estate		927,226	174,334	48,422	1.85	125,912	5.22
Professional, Scientific and Technical Services		560,053	106,786	56,922	2.17	49,863	2.07
Support Services		320,927	62,093	43,074	1.64	19,019	0.79
Education		9,282	1,773	1,628	0.06	145	0.01
Human Health and Social Work Services		4,376	0	593	0.02	0	0.00
Arts, Entertainment and Recreation		78,447	16,489	12,748	0.49	3,741	0.15
Other Services		201,710	52,436	39,964	1.53	12,472	0.52

## 2013 White Paper on SMEs in Taiwan

**Table C-8 Female-Owned Enterprises in 2012 – Number of Enterprises and Sales Value by Industry and Enterprise Size (Continued)**

Units: NT\$ millions; %

Industries	Size	Total	Female-Owned Enterprises	SMEs		Large Enterprises	
					Share		Share
<b>Domestic Sales</b>							
<b>Total</b>		25,568,713	4,191,330	2,365,181	100.00	1,826,149	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		31,821	8,383	3,865	0.16	4,518	0.25
Mining and Quarrying		44,306	4,908	4,892	0.21	16	0.00
Manufacturing		7,060,683	698,388	521,489	22.05	176,899	9.69
Electricity and Gas Supply		867,796	8,223	804	0.03	7,420	0.41
Water Supply and Remediation Services		168,701	37,151	15,736	0.67	21,415	1.17
Construction		1,825,271	374,582	290,536	12.28	84,046	4.60
Wholesale and Retail Trade		9,594,400	2,016,257	1,075,401	45.47	940,856	51.52
Transportation and Storage		683,730	110,201	70,719	2.99	39,482	2.16
Accommodation and Food Services		425,087	130,960	111,665	4.72	19,295	1.06
Information and Communication		785,981	97,336	24,496	1.04	72,840	3.99
Finance and Insurance		2,111,992	296,268	44,508	1.88	251,760	13.79
Real Estate		923,460	172,486	48,150	2.04	124,336	6.81
Professional, Scientific and Technical Services		436,002	103,694	55,321	2.34	48,372	2.65
Support Services		316,478	61,534	42,865	1.81	18,668	1.02
Education		9,175	1,746	1,601	0.07	145	0.01
Human Health and Social Work Services		4,694	593	593	0.03	0	0.00
Arts, Entertainment and Recreation		78,346	16,449	12,718	0.54	3,731	0.20
Other Services		200,789	52,170	39,821	1.68	12,349	0.68

**Table C-8 Female-Owned Enterprises in 2012 – Number of Enterprises and Sales Value by Industry and Enterprise Size (Continued)**

Units: NTS millions; %

Industries	Size	Total	Female-Owned Enterprises	SMEs	Large Enterprises		
					Share	Share	
<b>Export Sales</b>							
<b>Total</b>		8,216,023	842,445	254,533	100.00	587,913	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		5,028	1,282	354	0.14	928	0.16
Mining and Quarrying		468	41	41	0.02	0	0.00
Manufacturing		5,269,211	256,169	119,243	46.85	136,926	23.29
Electricity and Gas Supply		13,191	522	0	0.00	522	0.09
Water Supply and Remediation Services		10,859	1,174	418	0.16	756	0.13
Construction		165,613	1,645	1,372	0.54	273	0.05
Wholesale and Retail Trade		2,297,232	547,711	127,489	50.09	420,222	71.48
Transportation and Storage		228,550	12,694	1,737	0.68	10,957	1.86
Accommodation and Food Services		830	58	57	0.02	1	0.00
Information and Communication		88,092	13,332	1,293	0.51	12,039	2.05
Finance and Insurance		3,280	1,985	246	0.10	1,739	0.30
Real Estate		3,765	1,849	273	0.11	1,576	0.27
Professional, Scientific and Technical Services		124,051	3,092	1,601	0.63	1,491	0.25
Support Services		4,449	559	209	0.08	351	0.06
Education		107	26	26	0.01	0	0.00
Human Health and Social Work Services		275	0	0	-	0	0.00
Arts, Entertainment and Recreation		100	39	30	0.01	10	0.00
Other Services		921	266	143	0.06	123	0.02

Note: The figure in total does 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, 2012.



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