Part Two

Development Issues Facing SMEs in Taiwan

Chapter 7

The Impact of the SARS Epidemic on Taiwan's SMEs and Industry in General

The Severe Acute Respiratory Syndrome (SARS) epidemic began at Foshan in Guangdong Province, mainland China, in November 2002. By the end of May 2003, the disease had spread to more than 30 countries throughout the world, and its impact on mainland China, Hong Kong, Singapore and Taiwan was particularly heavy. Considerable research has been undertaken regarding the impact of SARS on Taiwanese industry and on the Taiwanese economy as a whole. However, the forecasts produced while the epidemic was still underway and the various questionnaire surveys implemented during this period are considered of limited value for this study. Instead, section I of this chapter uses business tax data to examine the impact of SARS on sales performance in various industries; Section II uses data obtained in a survey conducted in the second quarter of 2004 to analyze the impact of SARS on Taiwan's SMEs, so as to gain a clearer picture of the SARS epidemic's effects.

I The Impact of SARS on Sales Performance

The impact of SARS was felt in almost every industry. This section uses the changes in sales performance in individual industries to analyze the effect that SARS had on Taiwanese industry in 2003. Business tax data is used for this purpose, based on periods of two months.

As can be seen from Table 7-1-1 and Table 7-1-2, although overall sales for Taiwanese industry as a whole fell by 0.38% year-on-year in the period May–June 2003, in every other two-month period sales continued to grow, both consecutively and year-on-year. The impact of SARS on Taiwanese industry as a whole was thus relatively limited. Nevertheless, if one examines the changes in the sales performance achieved by individual industries, it is apparent that a significant number of industries experienced a decline in sales during the periods March–April and May–June 2003. In terms of year-on-year comparison with 2002, the number of industries experiencing a decline in sales was 31 in March–April and 36 in May–June; both these figures are substantially higher than those for the other two-month periods. If one compares sales performance with that in the previous two-month period, 20 industries can be seen to have experienced a decline in March–April, 21 in May–June, and 21 in July–August. May–June was thus the peak period for declining sales performance, with approximately half of Taiwan's industries seeing their sales fall off during these two months. The industries that experienced a decline in sales in March–April and May–June were mainly in the service sector; May–June was the only two-month period in which a significant number of manufacturing industries experienced a falling off in sales.

There are various other factors that may have had an impact on sales performance in 2003, including the state of the global economy, the war in Iraq, the business cycle, seasonal factors, etc. Nevertheless, following its sudden outbreak the SARS epidemic spread with great rapidity, and its impact was pronounced. Some industries providing specialist products and services did experience an increase in demand due to the

Table 7-1-1 Sales Performance of Taiwanese Industries, January – August 2003

Unit: %

Industry	Year-on-year Growth Rate (A)			Sequential Growth Rate (B)			
	March – April	May – June	July – Aug	Jan – Feb	March – April	May – June	July – Aug
Total [1]	6.83	-0.38	6.03	13.70	5.72	4.67	10.11
Agriculture, Forestry and Fisheries	8.21	24.33	-6.71	-9.68	-14.55	10.83	1.80
Agriculture (arable and pastoral)	1.01	25.02	-25.13	-10.59	-19.85	12.83	-15.76
Forestry and logging	61.54	38.78	-0.74	-13.74	15.29	21.79	8.29
Fisheries	18.39	18.98	38.85	-5.97	-5.98	3.15	40.57
Mining and Quarrying	20.90	-12.52	7.74	-8.60	8.78	-2.24	3.93
Mining (fuels)	11.73	-12.43	13.33	-33.06	7.98	-4.88	-0.28
Other mining	9.95	-4.57	3.67	16.58	-8.78	2.40	0.49
Quarrying	27.95	-14.60	6.84	-0.06	14.71	-2.50	6.72
Manufacturing	12.44	-2.39	8.39	13.05	4.21	1.92	11.09
Food and beverage manufacturing	2.19	1.61	7.58	4.07	-0.66	2.42	-0.76
Tobacco products manufacturing	-2.60	-10.16	-30.36	300.00	152.70	60.00	-19.31
Textiles	3.92	-0.94	5.91	17.08	-11.39	-5.82	3.70
Garment, apparel and other textile product manufacturing	5.40	4.16	11.32	1.73	-9.34	-11.17	-2.82
Leather, fur, and leather and fur product manufacturing	32.30	-11.73	-9.83	134.39	94.43	81.52	89.98
Wood and bamboo products manufacturing	13.11	-3.91	6.26	-2.36	-7.86	-9.69	-1.03
Furniture and furnishings manufacturing	12.14	-10.62	-1.96	0.35	-1.36	-0.83	-0.16
Paper pulp, paper and paper products manufacturing	9.03	-5.16	4.11	18.76	4.67	-0.89	3.61
Printing and ancillary industries	15.71	-10.68	15.17	5.86	2.41	-4.75	7.05
Chemical Materials Manufacturing	0.44	1.87	8.07	34.31	10.56	9.71	17.91
Chemical products manufacturing	4.72	-0.52	2.33	19.41	1.77	7.78	5.17

Table 7-1-1 Sales Performance of Taiwanese Industries, January – August 2003 (continued)

Unit: %

Industry	Year-on-year Growth Rate (A)			Sequential Growth Rate (B)			
	March – April	May – June	July – Aug	Jan – Feb	March – April	May – June	July – Aug
Petroleum and coal products manufacturing	-3.23	-5.84	24.00	62.27	34.62	18.00	38.24
Rubber products manufacturing	18.30	5.63	-15.66	-21.59	-29.66	-21.31	-30.40
Plastic products manufacturing	18.34	0.16	-0.87	0.80	-9.45	-1.47	-1.10
Non-metal mineral products manufacturing	7.51	-2.24	7.94	21.40	2.06	6.78	20.62
Basic metals industry	10.74	-4.49	4.61	31.50	19.19	10.41	11.91
Metal products manufacturing	20.01	-7.00	6.29	-6.85	-10.44	-17.55	-14.33
Machinery manufacturing and repair	22.54	-3.36	7.18	45.35	42.57	32.38	40.65
Computer, communications and audiovisual product manufacturing	20.35	-6.29	8.06	-14.69	-9.83	-13.14	-5.41
Electronic component manufacturing	12.26	-0.38	18.12	8.92	1.33	5.01	22.93
Electric power machinery and equipment manufacturing and repair	18.23	-2.26	9.80	23.17	17.10	13.30	27.46
Transportation equipment manufacturing and repair	15.78	3.77	-1.06	10.65	5.62	-3.31	10.05
Precision, optical and medical instruments and timepiece manufacturing	15.25	2.19	11.18	21.02	5.16	-9.22	26.04
Other industrial product manufacturing	24.11	-7.32	2.26	6.88	1.61	-2.34	0.29
Water, Electricity and Gas	-1.87	12.94	24.33	10.41	17.36	7.34	6.57
Electric power supply	-2.26	15.68	28.78	10.28	16.01	7.82	6.04
Gas fuel supply	0.83	3.62	5.24	33.05	72.90	32.11	26.14
Thermal energy supply	6.51	-1.31	4.87	-10.42	-10.55	-16.30	-1.25
Water supply	-3.04	2.08	8.21	-14.27	-20.15	-23.51	-12.35
Construction	10.66	4.61	1.05	1.41	2.71	5.66	2.47
Civil engineering	9.70	4.06	-1.03	-0.14	-2.63	-0.50	-5.95
Building industry	31.22	10.83	-7.02	-7.91	-4.53	13.35	5.61
Electromechanical, telecommunications, electric circuit and pipeline engineering	6.25	-0.07	6.26	-3.25	5.31	3.53	3.94
Building renovation and decoration	15.27	4.88	2.74	1.31	8.80	4.47	6.36
Other construction-related industries	-0.33	7.74	9.56	32.71	34.46	35.95	38.08
Wholesale and Retail	7.51	-0.72	8.64	-3.30	-8.59	-10.06	-2.99

Table 7-1-1 Sales Performance of Taiwanese Industries, January – August 2003 (continued)

Unit: %

Industry	Year-on-year Growth Rate (A)			Sequential Growth Rate (B)			
	March – April	May – June	July – Aug	Jan – Feb	March – April	May – June	July – Aug
Wholesale	13.46	-0.78	7.58	-6.88	-10.63	-11.30	-5.05
Retail	-0.64	-0.63	10.29	2.08	-5.21	-8.05	0.32
Hotel and Restaurant	-12.83	-7.65	28.98	7.2	-1.0	-15.06	5.03
Hotel industry	-17.62	-25.73	82.79	8.40	-11.55	-39.59	14.11
Restaurant industry	-11.37	-2.54	17.37	6.86	2.49	-6.91	2.30
Transportation, Warehousing and Communications	-36.27	-4.28	14.43	109.14	17.66	13.94	28.90
Land transportation	1.93	0.41	2.36	25.78	14.78	14.40	15.87
Marine transportation	0.22	-14.30	26.90	1.14	-27.50	-24.68	0.77
Air transportation	-14.42	-18.68	108.25	-1.37	-29.11	-39.79	27.68
Logistics industry [2]	-84.02	-71.63	1.98	12,218.3	1,639.53	332.03	234.99
Transportation-related ancillary industries	13.68	0.01	5.29	9.91	8.19	1.48	11.68
Warehousing	-0.79	7.83	35.69	7.50	-3.23	6.57	37.58
Posts and express delivery [2]	4.77	13.49	-2.17				
Telecommunications	8.82	29.66	10.73	8.66	19.37	59.80	57.64
Finance and Insurance	-7.93	14.71	-14.44	27.73	11.05	33.62	10.19
Finance and related industries	-9.51	-5.15	-22.80	31.72	16.52	13.31	-11.61
Securities and futures	21.82	176.15	-3.38	-9.54	2.00	266.17	158.82
Insurance	-15.88	-2.48	5.40	36.99	-6.39	-7.52	-8.18
Real Estate and Rental	13.12	3.45	-2.90	5.77	-5.72	-4.50	9.33
Real estate	13.67	6.86	-3.37	3.86	-10.53	-2.74	10.88
Rental	11.33	-7.88	-1.08	12.48	14.80	-10.74	3.89
Specialist, Scientific and Technical Services	3.85	3.80	8.23	10.46	8.10	5.42	13.05
Legal and accounting services	19.95	10.79	-6.29	1.09	9.34	0.00	7.44
Construction and engineering services	-19.98	32.24	-22.91	89.16	13.55	11.17	13.73
Specialist design services	26.05	3.50	24.72	-24.97	-23.49	-15.10	25.04
Computer system design services	16.61	-6.60	15.40	-3.07	7.42	-3.28	14.79
Data processing and information services	-2.37	-3.97	21.21				
Consulting services	5.21	9.07	1.04	88.67	81.55	83.91	75.89
R&D services	-4.17	-28.97	124.20	6.10	2.13	30.57	6.64
Advertising	4.20	1.93	13.36	16.50	14.31	7.07	13.86

Table 7-1-1 Sales Performance of Taiwanese Industries, January – August 2003 (continued)

Unit: %

Industry	Year-on-year Growth Rate (A)			Sequential Growth Rate (B)			
	March – April	May – June	July – Aug	Jan – Feb	March – April	May – June	July – Aug
Other specialist, scientific and technical service industries	2.73	9.34	-13.66	-77.39	-76.75	-75.76	-80.40
Educational services	-29.43	47.00	-10.58	203.79	59.89	84.07	27.40
Medical, Healthcare and Social Services	8.65	-31.73	44.03	-38.60	-38.24	-56.96	-43.61
Medical and healthcare services	9.02	-32.16	44.30	10.82	10.83	-26.63	0.00
Social services	5.00	-23.81	35.94	-92.82	-92.95	-94.22	-93.16
Cultural, Sporting and Leisure Services	8.41	1.28	13.12	1.29	4.01	2.75	11.06
Publishing	21.57	-13.20	12.10	4.09	9.89	0.34	9.81
Film industry	-8.38	5.30	23.72	-10.80	-14.20	-19.69	-21.97
Broadcasting	9.18	15.10	0.64	-3.54	-0.18	9.31	9.71
Artistic and sporting services	9.09	2.34	15.04	339.44	316.79	248.53	358.45
Library and archive industry [2]	-80.00	0.00	0.00				
Museums, historical sites and related institutions [2]	–	–	–				
Leisure services	-6.06	-3.13	40.58	-14.38	-17.30	-22.84	-1.65
Other Service Industries	12.25	-0.86	80.24	32.97	36.85	29.56	125.45
Supporting services	6.01	6.00	390.57	–	–	–	–
Environmental health and pollution prevention industry	30.99	-19.48	11.96	-3.21	14.79	-17.62	-9.43
Religious, professional and other organizations	-6.74	35.94	-11.00	98.84	53.45	73.49	66.87
Maintenance services	4.89	5.13	4.09	-8.04	-7.78	-4.35	-8.82
Other service industries	13.66	-1.95	-2.71	16.60	19.75	21.08	15.48

Notes: 1. The totals for this data set also included public administration and various industries that did not fall into any of the industry categories; however, these industries are not included in the 78 industries into which the data has been broken down.

2. The industrial classification has been changed in 2003. In this study, the 2003 classification system is adopted. Meanwhile necessary adjustment is done on the 2002 data to make it consistent with the 2003 classification. Posts and express delivery, library and archive industry, museums, historical sites and related institutions, supporting services are new categories in 2003 industrial classification; therefore, there are no matches in 2002 data. Besides, the data on transportation, warehousing and communications are tremendously different in 2002 and 2003, which is because new sub-items are included in this category in 2003.

Source: Ministry of Finance, *Monthly Bulletin of Financial Statistics*, 2003.

Table 7-1-2 Summary on Sales Performance of Taiwanese Industries, January – August 2003

Item	Year-on-year Growth Rate (A)			Sequential Growth Rate (B)			
	March – April	May – June	July – Aug	Jan – Feb	March – April	May – June	July – Aug
No. of industries experiencing declining sales	20	41	21	26	31	36	23
Industries experiencing declining sales as percentage of all industries [1]	25.64	52.56	26.92	33.33	39.74	46.15	29.49
No. of manufacturing industries experiencing declining sales	3	17	6	4	9	13	9
No. of service industries experiencing declining sales	16	19	11	12	15	18	9
No. of industries experiencing both a year-on-year (A) and sequential (B) decline in sales	7	25	7				
No. of service industries experiencing a decline in both A and B	7	14	2				
Industries experiencing a decline in both A and B as a percentage of all industries [1]	8.97	32.05	8.97				
No. of manufacturing industries experiencing a decline in both A and B	0	8	3				

Notes: See Table 7-1-1.
Source: See Table 7-1-1.

epidemic, but for most industries in the commercial sector and those involved in the production of consumer goods or the provision of leisure-related services, the impact on sales was a negative one. Looking at sequential and year-on-year changes in sales performance, it can be seen that:

(1) Seven industries experienced both a sequential and a year-on-year decline in sales in the period March–April, with all of these industries being in the service sector;

(2) In May–June the number of industries experiencing both a sequential and a year-on-year decline in sales rose to 25

(roughly one third of all industries), of which 14 were service sector industries and eight were manufacturing industries;

(3) In July–August the number of industries experiencing both a sequential and year-on-year decline fell to seven, of which two were in the service sector and three were manufacturing industries.

As far as the extent of the SARS epidemic's impact is concerned, therefore, around one third to one half of Taiwan's industries appear to have experienced a decline in sales due to SARS; the impact of the epidemic was thus quite extensive. The service sector industries were the first to feel its effects; during the periods March–April and May–June 2003 the retail industry, hotel industry, restaurant industry, air transportation industry, insurance industry and leisure industry all experienced a decline in sales in both sequential and year-on-year terms, whereas in the manufacturing sector there was no pronounced decline in sales until May–June, and even then it was short-lived.

As regards the "depth" of the impact, industries that experienced a decline in sales (either sequential or year-on-year) of 10% or higher included the hotel industry (March–June), the air transportation industry (March–June), the marine transportation industry and the medical and healthcare industry (May–June), the social services industry (May–June), and the environmental health and pollution prevention services industry (May–June).

II The SARS Questionnaire Survey

The analysis in the previous section showed that, although the impact of SARS was felt across a wide range of industries, in most cases its impact was short-lived. Only a minority of industries suffered heavily, or for an extended period. The questionnaire survey undertaken for this study targeted SMEs in these more seriously affected industries.

The survey was conducted over the period April 1–15, 2004. Five industries were included in the survey: the pharmaceuticals and medical instruments industry, the textile and garment industry, the travel industry, the hotel industry, and the medical services industry (hospitals and clinics). The survey results are outlined below.

1. The Impact of SARS on Operating Revenue

(1) The Period in Which the Impact of SARS was Felt

For the respondents as a whole, the impact of SARS was basically limited to the period April–June 2003, with the impact being at its most severe in May. The period in which the impact was felt and the percentage of companies experiencing the impact was more or less the same for enterprises of different sizes; between different industries, however, there was some variation. In May, when the epidemic was at its height, 94% of travel agencies, 78% of hotels and 76% of medical service providers were affected. These figures were far higher than the equivalent percentages for the textile industry (48%) and the pharmaceutical and medical instruments manufacturing industry (48%); however, in the case of the textile industry the percentage of enterprises that were affected did not start to fall significantly until July, a relatively late date.

(2) The Severity of the Impact

For the five industries as a whole, 75% of enterprises reported a reduction in operating revenue due to SARS (of these, 31% reported a reduction of more than 50%, 26% reported a reduction of less than 30%, and 13% reported a reduction in the range of 30–50%). 21% of enterprises reported that SARS had no impact on their operating revenue, and only 4% reported an increase in operating revenue as a result of the epidemic (of which approximately 3% reported an increase of 30% or less).

If one breaks the data down by enterprise size, it can be seen that 80% of micro-enterprises (those with 5 or fewer employees), 72% of SMEs and 78% of large enterprises reported a fall in operating revenue. Micro-enterprises were thus the least badly affected, followed by SMEs; the decline in the operating revenue of large enterprises was not very pronounced. 6% of large enterprises, 4% of SMEs and 2% of micro-enterprises reported an increase in operating revenue.

Of the five industries included in the survey, the travel industry was worst hit. 96% of travel agencies reported a decline in operating revenue; for 79% the decline was in excess of 50%. In the hotel industry, 40% of hotel operators reported a fall in revenue of 50% or more. In the medical services industry, although 80% of service providers reported a fall in operating revenue, in most cases revenue fell by less than 30%. The fall in revenue was also usually less than 30% in the textile and garment industry and in the pharmaceuticals and medical instruments industry. Seventeen percent of pharmaceuticals and medical equipment makers reported an increase in operating revenue due to SARS, although in most cases it was an increase of less than 30%. In the other four industries, less than 5% of enterprises reported an increase in operating revenue.

(3) Was the Impact of SARS on Operating Revenue Still Being Felt One Year after the Epidemic?

The survey results indicated that as of April 2002 (one year on from the SARS epidemic), for the five industries as a whole 12% of enterprises felt that their operating revenue was still being affected by the aftereffects of SARS. For larger enterprises, SMEs and micro-enterprises the percentages were 16%, 11% and 14%, respectively. Eighteen percent of travel agencies and 15% of hotel operators reported that they were still being affected by SARS; these figures were significantly higher than those for the medical services industry (9%), textile and garment industry (9%) and pharmaceuticals and medical instruments industry (8%).

2. Strategies Adopted by Taiwanese Enterprises in Response to the SARS Crisis

The main strategies adopted by business enterprises in response to SARS were to strengthen sanitation (45% of enterprises), introduce cost-cutting measures (21%), adapt marketing methods (13%), and make adjustments to produce or service contents (7%). 34% of enterprises did not adopt any special response measures.

For SMEs and micro-enterprises, the percentages of enterprises that did not adopt any special response measures were 36% and 35% respectively; these figures are significantly higher than the percentage for large enterprises (20%). Among those enterprises that did adopt special measures in response to SARS, regardless of the size of the enterprise he two main measures adopted were improved sanitation and cost-cutting. In addition, many SMEs made changes to their marketing and promotional methods, and nearly 20% of large enterprises made adjustments to marketing and promotional methods and to product and service content. Large enterprises were thus not only more likely to adopt response measures, they were more likely to adopt more than one measure.

In the medical services industry the main focus was on improving sanitation (66% of enterprises). However, 30% of service providers in this industry did not make any special effort to improve sanitation. In the hotel industry 66% of operators tried to improve sanitation, and 17% made adjustments to their marketing and promotional methods. The main response strategy adopted by travel agencies was to cut costs (58%). In the pharmaceuticals and medical instruments manufacturing industry and the textile and garment industry the main measure adopted was to improve sanitation (38% and 29%, respectively), but these percentages were lower than the percentage of enterprises in these industries that did not make any changes (46% and 59%, respectively).

3. Payment for Employees Placed in Isolation due to SARS

The Council of Labor Affairs stipulated that where employees had to be placed in isolation (confined to their homes) because there was a danger that they might have contracted SARS, the employer was still required to pay that employee their full salary. The survey results showed that, of the enterprises covered by the survey, 64% paid such employees their full salary for the period spent in isolation, 10% paid the employees only part of their regular salary, and 7% did not pay them any salary. Nineteen percent of respondents stated that they did not know how these employees were paid.

The smaller the enterprise, the more likely it was that that respondent did not know how payment was made for time spent in isolation, and the more likely it was that no payment was made. Large enterprises were more likely to have continued to pay the employee's full salary; the combined total of large enterprises that paid only part of the regular salary or paid no salary at all was only around 8%, significantly lower than the equivalent percentage for SMEs and micro-enterprises (nearly 20%).

As regards the situation in individual industries, in the pharmaceuticals and medical instruments manufacturing industries (both of which fall under the category of manufacturing industries), over 70% of enterprises continued to pay employees placed in isolation their full salary; this figure was higher than those for the other three (service) industries. Among the service sector industries, the percentage of enterprises paying the full salary was highest in the medical services industry, at nearly 70%; however, the percentage of enterprises reporting that they did not know how payment was made was also higher than in any of the other four industries, at 24%. In the travel industry and hotel industry only half of enterprises reported paying the full salary to employees in isolation; these two industries had the highest percentage of enterprises paying either only part of the regular salary or no salary at all. This may be related to the fact that both of these industries were severely affected by the SARS epidemic, which would have made them inclined to reduce expenditure on salaries as much as possible. It may also be related to the fact that many employees in these industries are not regular, full-time employees; it would be easier for employers to get away with paying either a partial salary or no salary at all to such employees.

4. Establishment of Response Mechanisms

Following the SARS epidemic, 61% of respondents established standard operating procedures to deal with similar crises in the future, but the remaining 39% did not establish standard operating procedures of this sort. The percentage of enterprises that had established standard operating procedures was 87% for large enterprises, 62% for micro-enterprises and 54% for SMEs. For the five industries covered by the survey the figures were as follows: medical services industry, 80%; pharmaceutical and medical instruments manufacturing industry, 68%; hotel industry, 64%; travel industry, 48%; textile and garment industry, 44%. These figures suggest that, following SARS, most enterprises have realized the importance of having an effective crisis management capability, and that this is particularly true among large enterprises and in those industries whose activities are directly related to human life.

5. The Impact of SARS on Willingness to Invest in Taiwan

Has SARS and frequent outbreaks of other infectious diseases in Taiwan affected investor confidence? Fifty-seven percent of respondents stated that SARS had not affected their confidence, 25% said that it had reduced their confidence, and 17% said that it had increased their confidence.

Reduced investor confidence was most apparent in the travel industry and hotel industry, where 37.5% of travel agencies and 34% of hotel operators reported a reduction in confidence, compared to 19% in the textile and garment industry, 17% in the medical services industry, and 15% in the pharmaceuticals and medical equipment manufacturing industry.

The size of an enterprise made little difference here; as in all differing size categories, around 50–60% of enterprises reported that their confidence had not been affected by SARS, 20–30% reported a reduction in confidence and 10–20% reported that their confidence had been boosted. However, it did appear that SARS was marginally more likely to have had a negative impact on confidence in the case of smaller enterprises.

6. The Impact of SARS on Willingness to Invest in Mainland China

Has Taiwanese enterprises' enthusiasm for investing in mainland China been dampened by SARS and other epidemics? In the survey, 50% of respondents reported a reduction in confidence, while 47% stated that their confidence had not been affected and 3% said that it had been boosted.

In the textile industry, 40% of enterprises reported a reduction in confidence; for all of the other four industries the figure was in excess of 50%. Textile and garment makers thus appear to be more confident of their ability to make a success of their mainland China operations.

Fifty-seven percent of large enterprises reported a reduction in confidence, compared to 50% for SMEs and 46% for micro-enterprises. It thus appears that, the larger the enterprise, the more enthusiasm for investment in mainland China has been negatively impacted by SARS.