

2015 White Paper on Small and Medium Enterprises in Taiwan

*Entrepreneurship, Innovation,
and Reviving SMEs' Vitality*



Small and Medium Enterprise Administration

Ministry of Economic Affairs

October 2015

2015 White Paper on Small and Medium Enterprises in Taiwan

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Edited by

Chung-Hua Institution for Economic Research

No. 75, Chang Hsing St.

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Taiwan, R.O.C.

Editor in Chief:

Shu-Yen Wu

Managing Editor:

William (Wei-Qi) Lin

English Translator:

William (Wei-Qi) Lin, Jing-I Lu

Proof Reader:

Ying-Xuan Chen, Gui-Yun Xuan, Lan-Yi Liu

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Foreword

Despite setbacks, an uneven global recovery continues, driven by relatively steady developed economies, especially strong growth in the United States, and by deceleration of emerging markets, particularly in mainland China that faces an extended period of strong headwinds, led by the need to rebalance its economy from an unsustainably high rate in investment. The distribution of risks to near-term global growth has also been uneven. The sharp decline in oil prices driven by the shale boom in the United States, Federal Reserve's potential monetary policy normalization, slowing growth in mainland China, and geopolitical tensions continue to pose threats. Risks of disruptive shifts in worldwide economies, capital markets and asset prices remain relevant. Low oil prices will help extend the United States expansion that is the engine of growth for the global economy by increasing real growth and lowering inflation. The diverging trajectories of the major economies also have varying implications across regions and countries, boosting those with strong trade links with the United States, but hurting those more tightly linked with the other major economies.

Benefited from the robust growth in the United States and exports, Taiwan's economic growth rate of 3.77 percent was the highest among the Asian tigers in 2014, a significant improvement from 2.23 percent growth in 2013. However, economic growth in 2015 was expected to be lower than 2014 due to the factors such as slowing growth in mainland China, Federal Reserve's decision on raising interest rates, and limited inflation-adjusted wage growth on domestic front. As for the performance of SMEs in 2014, of particular note is the number of SMEs, which reached a record level of 1,353,049 and accounted for 97.61 percent of all enterprises in Taiwan. In addition, the number of employed persons in SMEs rose to 8,669,000 - the highest level in recent years - and represented 78.25 percent of all employed persons in Taiwan. These statistics clearly illustrate that SMEs function as a stabilizing force in labor market and a key driving force of the country's economic development. The annual sales of SMEs in 2014 came to NT\$11,840 billion, up 4.58 percent from 2013, accounting for 29.42 percent of the total annual sales of all business enterprises in Taiwan.

In order to witness the development of SMEs in Taiwan, the Small and Medium Enterprise Administration, Ministry of Economic Affairs 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 *2015 White Paper*, an extensive array of statistical figures is provided to describe the development of SMEs from a wide variety of perspectives in 2014, which includes a comparison with their performance in previous years, as well as with the performance of large enterprises.

In Part Two of the *2015 White Paper*, two special topics are tackled through an in-depth analysis on the significant challenges and opportunities faced by SMEs in recent years. They are "Innovation Vitality: New Microenterprises" and "Succession and Transformation: Reactivating the Entrepreneurial Spirit."

The government has been actively helping SMEs in various ways ensuring an overall innovation and business friendly environment in which necessary resources are available 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: (1) improving financial and funding services and strengthening investment in SMEs; (2) promoting R&D, upgrade, and transformation, led by SMEs with high growth potential; (3) strengthening start-ups and incubation: accelerating forward-looking SMEs' global connection; (4) revitalizing local industries by outreach development and regional branding; and (5) other government resources to optimize business environment for SMEs, such as government procurement and policy loans for special projects. The Appendix to the *2015 White Paper* also provides important SME statistics covering the years from 2012 to 2014 for reference purposes.

Providing guidance to support the development of SMEs requires a long-term effort and commitment. It is hoped that the *2015 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' in a cursive style.

Yun-Lung Yeh

Director General

Small and Medium Enterprise Administration

Ministry of Economic Affairs

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Summary

SMEs have been the key driving force of Taiwan's economic development over the past half century: recognized as export vanguard early on, key partners in supply chains and industrial clusters later, and recently focal point of local economy, social value, and dreams of potential young entrepreneurs. For many years, export-oriented SMEs, small and medium sized manufacturers in particular, relied heavily on an industrial original equipment manufacturer (OEM) contract manufacturing model, which focused on raising production efficiency as core competency, rather than on developing key technologies, brands, or end-user markets. Lacking key technology, and without their own brands and distribution channels, most SMEs have had to resort to competing on price and failed to achieve significant enhancement of the value-added.

2015 will mark the fifth consecutive year that average growth in emerging economies has declined. An uneven global recovery and the diverging trajectories of the major economies also have varying implications across regions and countries, boosting those with strong trade links with the United States, but hurting those more tightly linked with the other major economies, particularly in mainland China that faces an extended period of strong headwinds, led by the need to rebalance its economy from an unsustainably high rate in investment. Mainland China in recent years provided significant support to its own industries and actively explored cooperation opportunities with large international companies to form so-called "China's own autonomic supply chain," which will pose significant challenge to Taiwan SMEs, especially those play an important role in the upstream supply chain supporting large enterprises' production and exports. Chinese firms have become increasingly competitive in moving upward across the value chain through both traditional cost advantage, and proprietary technologies and brands, forcing many companies including some of their former partners to move out setting up plants in Southeast Asia. Innovation, upgrade and transformation are the keys for Taiwan SMEs to remain viable as sustainable long-term going concerns.

2015 White Paper on Small and Medium Enterprises 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 on strategies to drive microenterprises as source of innovation and entrepreneurship, and to reactivate the entrepreneurial spirit of matured SMEs that are facing, or in the process of, succession and transformation. **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.

Benefited from the robust growth in the United States and exports, Taiwan's economic growth rate of 3.77 percent was the highest among the Asian tigers in 2014. However, economic growth in 2015 was expected to be lower than 2014 due to the factors such as slowing growth in mainland China, Federal Reserve's decision on raising interest rates, and limited inflation-adjusted wage

growth on domestic front. As for the performance of SMEs in 2014, the number of SMEs reached a record level of 1,353,049, up 1.64 percent from 2013, and accounted for 97.61 percent of all enterprises in Taiwan. In addition, the number of employed persons in SMEs increased to 8,669,000, up 0.95 percent from 2013 - the highest level in recent years - and represented 78.25 percent of all employed persons in Taiwan. The annual sales of SMEs in 2014 came to NT\$11,840 billion, up 4.58 percent from 2013, accounting for 29.42 percent of the total annual sales of all business enterprises in Taiwan. In 2014, a total of 93,968 new SMEs were established.

Amid industrial structure in Taiwan, the number of SMEs is mostly concentrated in the service sector, with the proportion being 80 percent. Over 49 percent of SMEs are in Wholesale and Retail Trade, followed by Manufacturing (11 percent), and Hotel and Restaurant industry (10 percent). By the form of organization, 55 percent of SMEs are Sole Proprietorships. By regional distribution, 47 percent of all SMEs were concentrated in Northern Taiwan.

In terms of market entry and exit, SMEs often display more flexibility than large enterprises. That explains the left side concentration of the distribution of the years in existence for SMEs: share of SMEs in existence below 10 years is 50.67 percent (vs. 25.12 percent of large enterprises). However, there were nearly 50 percent SMEs had been going concerns 10 years or more by the end of 2014, and the share of SMEs in existence for 20 years or more had been rising consistently over the past 5 years, climbing from 20.5 percent by 2008 to 24.3 percent by 2014, showing improved consistency and resilience.

Six Special Municipalities combined represent 77.0 percent sales and 73.2 percent employed persons of SMEs, and have 973,487 SMEs, representing 72.0 percent of all SMEs in Taiwan.

The dawning of the era of the knowledge economy has had a huge impact on the macro environment for the manufacturing sector. Companies need to focus on the two ends of the “smile curve,” building up their R&D capabilities and developing the ability to provide high value-added services. This process can be described as the “servitization” of manufacturing industry, with “design” as of particular importance. With the rising trend of “design led innovation,” Taiwan SMEs should start bold thinking to craft strategies more oriented toward driving innovation and value through integrating design element into the whole value-added process of R&D, production, marketing and service, and redefining enterprise-customer relationship as “co-innovation.”

Part Two consists of two chapters, in which two special topics are tackled through an in-depth analysis on the significant challenges and opportunities faced by SMEs in recent years and the corresponding strategies. They are “Innovation Vitality: New Microenterprises” and “Succession and Transformation: Reactivating the Entrepreneurial Spirit.”

There had been a significant wedge between GDP growth rate of emerging world and that of developed world going back to the early 2000s. But now this growth rate differential is the most narrow it has been since the aftermath of the Asian financial crisis in the late 1990s. Taiwan should facilitate succession and transformation of its matured SMEs and gives birth to more proactive new microenterprises, particularly in emerging industries, to deepen their connections to leading industrial supply chains in advanced economies in order to maintain the lead on emerging market countries in science, technology, and innovation.

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New microenterprises are the source of innovation and entrepreneurship; they often actively use and leverage social network and crowdfunding for funding and marketing, and at the same time help the upgrade of other industries. These characteristics are fundamental to the on-going trend of microenterprises. A microenterprise start-up should try to first identify - and then focus on - its core competency which is typically obtained through specialization, allowing it to establish a footprint while gaining a solid reputation and brand recognition. Using, and later leveraging, core competency usually provides the best chance for a microenterprise's continued growth and survival, as this is what differentiates the company from competitors. Business functions not enhanced by core competency should be outsourced if economically feasible. The development of new microenterprises depends on the outsourcing of demand-oriented management and focuses on enterprise's core value. This helps reduce risk and cost, and enhance efficiency, which in turn, creates higher value-added, accumulates experiences, and helps upgrade of related industries. Therefore, the government should encourage the development of new microenterprises by offering business friendly environment and counseling. Further analyses are presented in Chapter 6.

Over the period from 2002 to 2013, share of SME owners who were above 55 years old grew substantially from 9.69 percent in 2002 to 28.49 percent in 2013. In 2004, almost 50 percent of Taiwan SMEs have been in existence over 10 years; 23.52 percent of these SMEs have been in existence over 20 years. As the first generation of entrepreneurs gradually retreated behind the scenes, the succession process of the new generation and the transition strategy will determine the future of these SMEs.

With regard to the succession and transformation of matured SMEs, based on the extensive case studies and review of related academic researches, Chapter 7 finds that Taiwan SMEs' share of sales peaks in year 16, varies between year 17 to year 20, and then generally goes down after year 20. Some matured SMEs seem unable to reverse their downward spiral once entering mature stage. It can be seen that SMEs founded during the period of Taiwan's economic take-off have entered the mature stage. They began to face significant challenges: old business models unfit for high value-added creation, lack of flexibility and innovation drive, and aging founders losing entrepreneurial spirit and thinking about quit. Some SMEs have entered "the Crisis of the Elderly Age" due to both internal and external factors. Internal factors include bureaucratic rigidity leading to low spirit and inflexibility, short-term oriented and over reliance on founder's past experience. External factors comprise of rapid changing technologies, new business models, ever changing consumer demands and preferences, and intensified competition, leading to diminished competitive advantage.

Based on the life cycle of SMEs in different stages of Start-up, Growth, and Mature, government assistance measures must be tailor-made to address the key issues at each stage, particularly in the vital process of succession and transformation. Strategic directions including succession knowledge exchange platform, succession planning counseling, institutionalized management, government procurement policy tools, and cross-industry cooperation mechanism for SMEs' sustainable development will be discussed in Chapter 7.

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. 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.

The government's development strategy for SMEs in 2014-2015 has focused on (1) improving financial and funding services and strengthening investment in SMEs; (2) promoting R&D, upgrade, and transformation, led by SMEs with high growth potential; (3) strengthening start-ups and incubation: accelerating forward-looking SMEs' global connection; (4) revitalizing local industries by outreach development and regional branding; and (5) other government resources to optimize business environment for SMEs, such as government procurement and policy loans for special projects. A large number of projects and ancillary measures have been implemented in order to help achieve these goals. Each year, the government revises its SME development strategy to reflect changes in the economic environment in Taiwan and the global economy as a whole and carries out planning and implementation of related ancillary measures to boost the competitiveness of Taiwan's SMEs and contribute to their stable, continued development. New guidance and measures recently instituted by the government include the new regulation on equity-based crowdfunding, Bridging Industry Digital Divide Project, Industrial Upgrade and Transformation Action Plan, *ide@ Taiwan* 2020, and Project for Social Enterprises Action Plan.



Part One Recent Development of SMEs

Chapter 1 Macroeconomic Environment

Chapter 2 Major Trends in the Development of SMEs

Chapter 3 Financial and Funding Analysis of SMEs

Chapter 4 SMEs: Human Resources

Chapter 5 Strategies for SMEs in Response to Changes in the Business Environment

SMEs have been the key driving force of Taiwan's economic development over the past half century: recognized as export vanguard early on, key partners in supply chains and industrial clusters later, and recently focal point of local economy, social value, and dreams of potential young entrepreneurs. Official data published by central government of R.O.C. are analyzed to facilitate a deep understanding of SMEs. First, four major indicators including the 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.

2015 will mark the fifth consecutive year that average growth in emerging economies has declined. An uneven global recovery and the diverging trajectories of the major economies also have varying implications across regions and countries, boosting those with strong trade links with the United States, but hurting those more tightly linked with the other major economies, particularly in mainland China that faces an extended period of strong headwinds, led by the need to rebalance its economy from an unsustainably high rate in investment. Mainland China in recent years provided significant support to its own industries and actively explored cooperation opportunities with large international companies to form so-called "China's own autonomic supply chain," which will pose significant challenge to Taiwan SMEs, especially those play an important role in the upstream value chain supporting large enterprises' production and exports. Innovation, upgrade and transformation are the keys for Taiwan SMEs to remain viable as sustainable long-term going concerns.



CHAPTER 1

Macroeconomic Environment

An uneven global recovery continues. 2015 will mark the fifth consecutive year that average growth in emerging economies has declined. Mainland China faces an extended period of strong headwinds, led by the need to rebalance its economy from an unsustainably high rate in investment. However, despite longstanding fears, the eurozone has now grown for nine straight quarters as of the 2nd quarter 2015. In Japan, Abenomics has made progress though still faces deflationary pressure because inflation expectations become unanchored on the downside. At the same time, low oil prices will help extend the United States expansion that is the engine of growth for the global economy by increasing real growth and lowering inflation. The latest evidence came recently as the Commerce Department of the United States revised sharply upward its estimate of economic growth in the second quarter in 2015 to a healthy annual pace of 3.7 percent, from an initial estimate of 2.3 percent (not shown in Table 1-1-1).

The distribution of risks to near-term global growth has also been uneven. The sharp decline in oil prices driven by the United States shale boom, Federal Reserve's potential monetary policy normalization, slowing growth in mainland China, and geopolitical tensions continue to pose threats. Risks of disruptive shifts in worldwide economies, capital markets and asset prices remain relevant. The diverging trajectories of the major economies also have varying implications across regions and countries, boosting those with strong trade links with the United States, but hurting those more tightly linked with the other major economies.

Benefited from the robust growth in the United States and exports, Taiwan's economic growth rate of 3.77 percent was the highest among the Asian tigers in 2014. However, economic growth in 2015 was expected to be lower than 2014 due to the factors such as slowing growth in mainland China, Federal Reserve's decision on raising interest rates, commodity price, and domestic water shortage and power brownouts. On domestic front, limited inflation-adjusted wage growth is a key issue facing the government; in terms of external environment, mainland China in recent years provided significant support to its own industries and actively explored cooperation opportunities with large international companies to form so-called "China's own autonomic supply chain," which will pose significant challenge to Taiwan SMEs, especially those play an important role in the upstream supply chain supporting large enterprises' production and exports. Chinese firms have become increasingly competitive in moving upward across the value chain through both traditional cost advantage and proprietary technologies and brands, forcing many companies including some of their former partners to move out setting up plants in Southeast Asia. Upgrade and transformation are the keys for Taiwan SMEs to remain viable as sustainable long-term going concern.

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This chapter, which is divided into three sections, analyzes the impact of the changes that have been taking place in macroeconomic environment from 2014 to early 2015. Section I examines the major changes in global economic environment; section II analyzes the business environment in Taiwan; section III presents an overview of the development of SMEs in major nations.

I Changes in the Global Economic Environment

Global growth in 2014 was a modest 3.4 percent, reflecting a pickup in growth in advanced economies relative to the previous year and a slowdown in emerging market and developing economies. Despite the slowdown, emerging market and developing economies still accounted for three-fourths of global growth in 2014.

1. Advanced Economies: Uneven Growth

(1) Strong U.S. economy leading the global recovery

Growth in the United States was stronger than expected, averaging about 4 percent annualized in the last three quarters of 2014 after (harsher-than-usual winter) weather-induced sharp slowdown in the first quarter. Consumption - the main engine of growth - has benefited from steady job creation and income growth, lower oil prices, and improved consumer confidence. The unemployment rate declined to 5.5 percent in February 2015, more than 1 percentage point below its level of a year ago.

There are many reasons why the U.S. economy is doing better than most other developed economies and will continue to outperform in 2015. Conditions remain in place for robust economic performance in 2015. Markedly lower energy prices, tame inflation, reduced fiscal drag, strengthened balance sheets, rising business investment, re-industrialization gaining steam, and an improving housing market are expected to sustain the momentum. The most important factor is domestic demand. The U.S. economy is primarily driven by domestic demand. Specifically, consumer spending accounts for nearly 70% of GDP. The dynamics underpinning consumer spending remain very positive, including strong job growth, improved household finances (the best since the early 2000s), and low gasoline prices. Risks include monetary policy normalization, continuous dollar appreciation that hurts export, and slow real wage gain (Table 1-1-1).

(2) European Union (EU): economic recovery proceeding at a sluggish pace

In the euro area, activity was weaker than expected in the middle part of 2014 as private investment remained weak, except in Ireland, Spain, and Germany. Spain, Ireland and Portugal have experienced economic recovery after implementing austerity measures insisted by Germany. Growth was stronger than expected in the fourth quarter, but uneven across countries. However tight credit conditions and deleverage led to significant risk of deflation and slowdown in investment. In September 2014, the European Central Bank (ECB) cut the already ultra-low main interest rate from 0.15% to 0.05%. It also cut the deposit rate, which was already negative, from -0.1% to -0.2% in the hope of persuading banks to lend more to businesses and consumers. Headline inflation turned negative in December 2014, reflecting the decline in oil prices, softer prices for other commodities, and a weakening of demand in a number of countries already experiencing below-target inflation. In January 2015, the

ECB announced a larger than expected program of asset purchases (quantitative easing) over 1 trillion euro, including government bonds to address persistently low inflation in the euro area.

Among EU advanced economies in 2014, German and UK showed robust growth while French economic growth slowed down and Italy remained mired in recession. Overall, the euro area managed to eke out positive growth in 2014. A variety of factors will help to sustain this forward momentum in 2015, including sustained low oil prices, a weaker euro, reduced fiscal headwinds, diminished sovereign-debt tensions, and an accommodative monetary policy. Meanwhile, improved global growth in tandem with a weaker euro should help eurozone exports (Table 1-1-1).

Table 1-1-1 Economic Growth of Advanced Economies

Unit: %

Country / Region	2013	2014	Quarter			
			I	II	III	IV
Advanced Economies	1.4	1.8	1.9	1.8	1.7	1.7
U.S.A.	2.2	2.4	1.9	2.6	2.7	2.4
European Union	0.1	1.3	1.4	1.3	1.3	1.4
Germany	0.2	1.6	2.3	1.4	1.2	1.5
France	0.7	0.2	0.7	-0.2	0.2	0.0
UK	1.7	2.8	2.7	2.9	2.8	3.0
Italy	-1.7	-0.4	-0.2	-0.3	-0.5	-0.4
Japan	1.6	-0.1	2.1	-0.4	-1.4	-0.8

Source : Global Insight Inc., *Global Insight's Comparative World Overview*, June 2015.

(3) Japan: effectiveness of Abenomics remains to be seen

In 2014, Japan suffered through its fourth recession in six years. After a weak second half of the year, growth in 2014 was close to zero (-0.1 percent), reflecting weak consumption. The latest downturn can be blamed on the April 2014 sales tax hike, which had a bigger and more long-lasting negative impact on consumer spending and investment than was anticipated. In response, the government of Shinzo Abe postponed the second round of sales tax hikes from October 2015 to April 2017. Additionally, the government will likely provide some temporary stimulus in both 2015 and 2016. At the same time, the Bank of Japan has also pledged to further expand its quantitative easing program. These growth-supportive policy moves, along with much lower oil prices and a substantially weaker yen, will push Japanese growth back into positive territory in 2015 - although only to around 1% (Table 1-1-1).

It is the “Third Arrow” (besides unprecedented aggressive monetary easing and a blowout deficit-financed fiscal spending) - Abenomics’ reform program for promoting private sector investment-led growth to enhance payroll, export, and domestic demand - that is by far the most strategically important. Indeed, it is vital and imperative. However, most of the proposed reforms including relaxations of labor market rigidities, less protection for farmers, and utility deregulation are thus far vague and remain to be seen. These reforms may be made more credible by the Japanese government’s part in the Trans-Pacific Partnership, which suggests a willingness to take on special interests.

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2. Emerging Economies: More Subdued Outlook

(1) Mainland China: growth slowing down

In mainland China, growth fell to 7.4 percent in 2014 from 7.7 percent in 2013. 2014 saw falling investment in fixed assets and downward trend of PPI (Producer Price Index) induced by low oil and other commodity price. It was a bumpy transition away from an era when smokestack industries, huge exports and massive infrastructure spending - underpinned by trillions in state-backed debt - that propelled the economy into the world's second-largest in the past two decades to a "new normal" of modest economic growth through services, consumer spending and private entrepreneurship as new drivers that rely less on debt and more on the stock market for funding. Thanks to government stimulus, there have been brief upticks in growth over the past couple of years. However, given government concerns over the glut of debt, industrial overcapacity, and the large inventory of unsold housing, the stimulus has been very modest and temporary. So far. Unfortunately, every time the stimulus wears off, growth sags (Table 1-1-2).

(2) ASEAN: uneven economic development

As mainland China is facing diminishing demographic dividend and rising labor and property cost, on the other side of the South China Sea, ASEAN countries have been benefited from accelerated regional economic integration, and rising urbanization rate, middle class and demographic dividend. This region has become the next Asian Pacific manufacturing base after the BRIC for its cost advantage and the growth potential. Countries all over the world have been coming in the region to invest. Japan and South Korea are among the most active ones.

Developments in the ASEAN economies will remain uneven. Despite robust growth of 4.6 percent, the ASEAN economies' growth momentum lost some steam in 2014. With the exception of Malaysia and Vietnam, activity in the rest of the ASEAN economies decelerated. In Indonesia, weaker net exports and investment activity from the downturn in the commodity cycle eroded growth. In Thailand, policy uncertainty sharply dented domestic demand and exports. Philippines, benefited from government's anti-corruption movement, improved infrastructure, and foreign investment, remains on a positive trajectory, though growth rate was down to 6.1 percent in 2014 from 7.1 percent in 2013 (Table 1-1-2).

(3) Russia and Brazil: deteriorating economic conditions

Two of the world's biggest emerging markets are either in recession or close. Brazil suffered through two quarters of contraction in mid-2014 and growth in 2015 will be less than 1%. Russia stayed out of recession in 2014, but will likely see a decline in real GDP in 2015 because of the triple whammy of sanctions, plunging oil prices, and capital flight with ruble falling almost 50% (Table 1-1-2).

(4) India: bright spot in Asia

A number of positive developments have followed the landslide general election in May 2014, with new Prime Minister Narendra Modi's pro-reform and pro-modernization government seeking to swiftly reverse years of decline. Modi has pushed for a more business and investor friendly approach to India's much-needed structural reform, targeting cutting red tape and improving the government's efficiency and transparency, upgrading infrastructure, increasing education and training, promoting

regional economic integration (signing of free trade agreements with ASEAN countries), and attracting FDI (Foreign Direct Investment).

India's growth improved to 7.3 percent in 2014 from 6.9 percent in 2013 amid stronger domestic demand, reflecting resilient private consumption and the incipient recovery in investment helped by stronger confidence and reduced policy uncertainty (Table 1-1-2).

Table 1-1-2 Economic Growth of Emerging Economies

Unit: %

Country / Region	2013	2014
Emerging Economies	4.9	4.4
Asian Pacific	6.0	6.0
Mainland China	7.7	7.4
Singapore	4.4	2.9
South Korea	2.9	3.3
Taiwan	2.2	3.8
Hong Kong	3.1	2.5
Thailand	2.8	0.9
Malaysia	4.7	6.0
Indonesia	5.6	5.0
Philippine	7.1	6.1
India	6.9	7.3
Pakistan	4.4	5.4
Latin America/Caribbean	3.1	0.8
Brazil	2.7	0.1
Argentina	2.9	0.5
Columbia	4.7	4.6
Peru	5.7	2.4
Chile	4.3	1.8
Mexico	1.4	2.1
Emerging Europe	2.2	1.7
Russia	1.3	0.6
Turkey	4.2	2.9
Hungary	1.7	3.5
Czech	-0.7	2.0
Poland	1.7	3.3
Middle East	2.5	3.1
Israel	3.4	2.8
Saudi-Arabia	2.7	3.6
North Africa	-3.9	0.6
Egypt	2.1	2.1
Morocco	4.7	2.4
Republic of South Africa	2.2	1.5

Source : Global Insight Inc., *Global Insight's Comparative World Overview*, June 2015.

3. Decline in Oil Price: Booming Supply and Shale Oil Hydraulic Fracturing Technology

From the summer of 2014 through the end of the year, commodity prices have plummeted. Oil prices plunged around 45%. A combination of feeble global demand growth and strong supply growth is to blame. China remains key to the demand-side story. Any further softening of growth will likely translate into another round of price declines. Structural excess supply is especially acute in oil markets. Rising US oil production and booming supply driven by advanced shale oil hydraulic fracturing technology, along with an unwillingness / inability of OPEC to make large production cuts, is keeping prices low. The dilemma is that if prices do eventually rise from current levels (due to OPEC discipline in cutting production, for example), this will only encourage more US oil production. In the meantime, the sharp drop in oil prices is likely to have a negative effect on oil sector investment over the next few years. All this means that oil prices will stay low and that commodity prices are likely to slide much further in 2015.

4. Regional Economic Integration and New Geopolitical Relation

(1) Regional economic integration

There has been a rising trend towards the formation of multilateral and bilateral free trade agreements (FTAs) and in particular, ASEAN Economic Community (AEC), Regional Comprehensive Economic Partnership (RCEP), and Trans-Pacific Partnership (TPP).

RCEP is a proposed FTA between the ten member states of the Association of Southeast Asian Nations (ASEAN) (Brunei, Myanmar, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand, Vietnam) and the six states with which ASEAN has existing FTAs (Australia, China, India, Japan, Korea and New Zealand). RCEP negotiations were formally launched in November 2012 at the ASEAN Summit. All above 16 countries could join the RCEP in 2015 if the negotiation goes well, forming a vast new economic region of over 2 billion people and US\$20 trillion market.

ASEAN is intensifying efforts to realize by 2015 the AEC and implement the initiatives to achieve a single market and production base, allowing the free flow of goods, services, investments, and skilled labor, and the free movement of capital across the region. If ASEAN were one economy, it would be seventh largest in the world with a combined gross domestic product (GDP) of over \$2.5 trillion in 2014.

TPP is a proposed regional free trade agreement that is currently being negotiated by twelve countries throughout the Asia-Pacific region (Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States, and Vietnam). TPP negotiation could be finished by the end of 2015 as U.S. Congress finally passed the Trade Promotion Authority (TPA) Bill in June 2015. TPA is the authority of the President of the United States to negotiate international agreements that the Congress can approve or disapprove but cannot amend or filibuster.

South Korea (one of Taiwan's main competitors in terms of foreign trade) have signed FTA with the U.S. (came into effect in March 2012), FTA with Australia (came into effect on April, 2014),

and FTA with mainland China (will come into effect in January 2016). These FTAs have resulted in intensified competitive pressure on Taiwanese firms, particularly in electronics exports, with high degree of overlap between two countries.

Taiwan has 75 percent foreign trade and investment concentrated in Asia-Pacific region. About 35 percent of Taiwan's trade volume is with TPP members, and 57 percent of trade volume is with RCEP members. It is vital for Taiwan to join TPP and/or RCEP as these two regions, RCEP in particular, have a decisive influence on Taiwan's export, especially when the major competitor South Korea has been so active in FTA and regional economic integration; or else Taiwan could face the threat of being marginalized.

(2) Mainland China actively seeking dominant role in trade

In 2013, China's President Xi Jinping proposed a plan to stimulate development in Eurasia by constructing what he called the Silk Road Economic Belt and the 21st Century Maritime Silk Road or "One Belt, One Road" - revivals of the overland and maritime trade routes that once connected China and Europe. Since then, the "One Belt, One Road" has become a fixture in official Chinese discussions on both foreign and domestic policy. It shows that mainland China has been actively seeking a dominant role in trade and challenges the TTP, a 12-nation trade deal led by U.S. that includes the U.S., Vietnam, Australia, Japan and others - but not China. China's recent push to create the Asian Infrastructure Investment Bank (agreement signed on June 29, 2015; total 57 founding member nations including mainland China, the largest shareholder), without the U.S. involvement, is part of that strategy. "One Belt, One Road" will spread "the China model" of development through infrastructure construction and export growth, and boost Chinese construction and other firms. These projects will continue whether or not the U.S. wraps up the trade deals it seeks. The new infrastructure built as part of the "One Belt, One Road" initiative is meant to support China's economic rebalancing by opening new markets, generating demand for higher value-added Chinese goods and helping China build globally competitive industries.

5. 2015 Risks: Geopolitics, Competitive Devaluation, Oil, and Greece

(1) Rising trend of competitive devaluation

The divergent growth prospects for the world's key economies mean that central banks will go their separate ways in 2015. The Fed, Bank of England, and Bank of Canada are expected to hike rates in 2015, respectively. These economies are enjoying relatively robust growth, and central bankers are beginning to worry more about the potential for higher inflation and less about the fragility of growth. Weaker inflation due to falling commodity prices could, however, delay the first rate hikes in each case. In contrast, the ECB, BoJ (Bank of Japan) and PBoC (People's Bank of China) are on track to either cut interest rates more and/or provide more liquidity via asset purchases or allow for more currency devaluation. Meanwhile, central banks in the emerging world will either be on hold, or will cut interest rates. If emerging market currencies swoon again as the Fed begins to raise rates, the pressure for central banks in these economies to tighten or allow further devaluation will intensify again. That said, Taiwan, particularly its machine tool industry, could be severely impacted by further devaluation of Japanese Yen and Korean Won.

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(2) Rapid spread of ISIS terrorism

The Islamic State in Iraq and Syria (ISIS) has made headlines with audacious land grab and terror tactics. The negative impact of ISIS on world politics is clear from brutal stories of murders, extortion and genocide perpetrated by the regime. Regionally, ISIS will disrupt and degrade the economy of several states, and that in turn may lead to further political chaos. And ripples from the Middle East's economy may be felt around the world. Geopolitical risks in several regions including Iraq, Ukraine and Libya could further disrupt trade in commodities, financial transactions, and regional and global economic integration.

(3) Oil price volatility

U.S. oil price hit fresh six-year low, dipping below \$40 a barrel in August 2015. Oil investors and forecasters, who predicted early in the year that prices would recover in the second half of 2015, now say a rebound is unlikely before the second half of next year or 2017. The shift in sentiment is partly due to the resilience of U.S. oil producers, who are continuing to pump crude at near-record levels despite months of spending cuts, thanks to new efficiencies in drilling technology. The dilemma is that if prices do eventually rise from current levels (due to OPEC discipline, for example), this will only encourage more US oil production. In the meantime, the sharp drop in oil prices is likely to have a negative effect on oil sector investment over the next few years.

(4) Greece's debt crisis: risk of spillover

Greece narrowly avoided defaulting on its debt after receiving billions of euro in new aid from other eurozone countries. Most of the money in the new bailout package will be used to repay existing debt rather than to rebuild the shattered Greek economy. But the new aid may offer some assurances to investors and others that Greece is not about to leave the eurozone. At the height of the debt crisis a few years ago, many experts worried that Greece's problems would spill over to the rest of the world. If Greece defaulted on its debt and exited the eurozone, it might create global financial shocks similar to the collapse of Lehman Brothers did. Europe has put up safeguards to limit the so-called financial contagion, in an effort to keep the problems from spreading to other countries.

To summarize, 2015 and going forward could see uneven distribution of risks to near-term global growth, such as falling oil price, slowing growth in China, and competitive devaluation. The challenge could be particularly pronounced for a group of important emerging market economies with large-scale capital inflow and/or large current deficit. This makes those countries especially vulnerable to any abrupt reversal of capital flows that might be prompted by the Federal Reserve's prospective monetary normalization and raising interest rate. Geopolitical tensions continue to pose threats to world economy, capital markets and economic integration. According to Global Insight's *Comparative World Overview* in June, 2015, global economy growth in 2015 will be slightly lower than that in 2014. Developed economies will remain stable growth (Table 1-1-3).

Table 1-1-3 Economic Growth of Developed and Emerging Economies

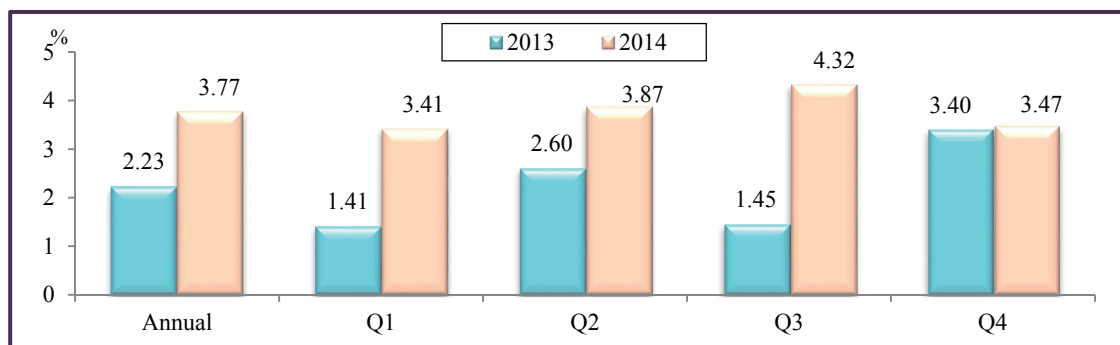
Unit: %

Country / Region	2014	2015	2016 (forecast)	2017(forecast)
Global	2.6	2.7	2.6	3.3
Advanced economies	1.4	1.8	1.8	2.5
U.S.A.	2.2	2.4	2.1	3.1
EU	0.1	1.3	1.8	2.1
Germany	0.2	1.6	1.8	2.2
France	0.7	0.2	1.1	1.5
U.K.	1.7	2.8	2.4	2.6
Italy	-1.7	-0.4	0.6	0.9
Japan	1.6	-0.1	1.0	1.5
Asia-Pacific region	5.0	4.7	4.8	5.0
China	7.7	7.4	6.5	6.3
Taiwan	2.2	3.8	3.5	3.6
South Korea	2.9	3.3	2.5	3.5
Hong Kong	3.1	2.5	2.6	3.0
Singapore	4.4	2.9	3.2	3.2
Thailand	2.8	0.9	3.0	3.2
Malaysia	4.7	6.0	4.8	5.0
Indonesia	5.6	5.0	5.0	5.3
Philippine	7.1	6.1	5.7	5.8
Vietnam	5.4	6.0	6.3	6.6

Source : Global Insight Inc., *Global Insight's Comparative World Overview*, June 2015.

II Changes in the Economic Environment in Taiwan

Benefited from robust US economy, strong US dollar, and low oil price, Taiwan's economic growth rate improved from 2.23 percent in 2013 to 3.77 percent in 2014, amid uneven global recovery and slowing economic growth in China, the most important trading partner of Taiwan (Figure 1-2-1).

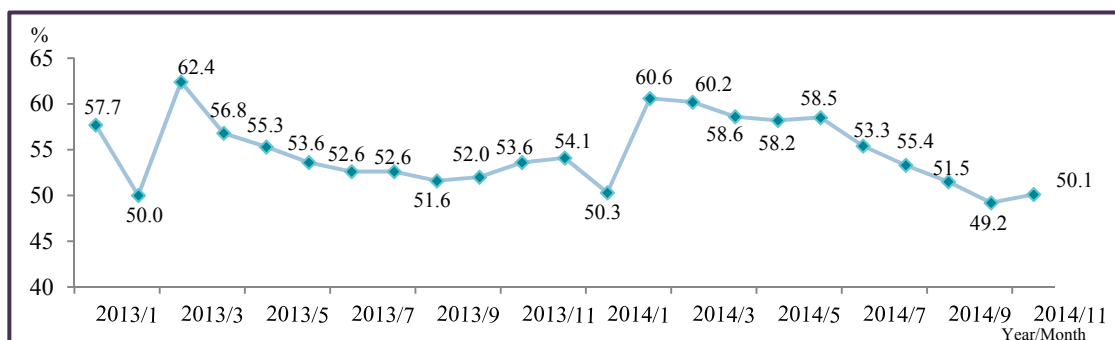
Figure 1-2-1 Taiwan Economic Growth, 2013-2014Source : DGBAS, National Statistics, accessed June 2015, <http://ebas1.ebas.gov.tw/pxweb/Dialog/statfile9L.asp>.

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1. Overall Strong Indicator Signals in 2014

In the first half of 2014, Taiwan Manufacturing PMI (Purchasing Managers Index) was at highest and remained above 55 much longer than 2013, showing robust consecutive month expansion. However, the second half of 2014 saw downward trend of PMI until below 50 in November, and then back to 50.1 in December (Figure 1-2-2).

Figure 1-2-2 Taiwan Manufacturing PMI, 2013-2014



Note: Figures with more than 50 denote economic expansion.

Source: Chung-Hua Institution for Economic Research, *Taiwan Manufacturing Purchasing Managers' Index*, June 2015.

The National Development Council uses “traffic light” symbols to represent the state of health of the economy. Like PMI, the indicators by the National Development Council showed similar trend. Months from February to November of 2014 were given a “green light,” longer than 2013, denoting strong and steady growth. The December’s turning “yellow blue light” from previous month’s “green light” signal was partly attributable to declining customs-cleared exports, industrial production index, and imports of machineries and electrical equipment (Figure 1-2-3).

Figure 1-2-3 Monitoring Indicators for Taiwan in 2014

Month		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Item	Total Score	22	25	25	29	24	26	27	29	27	24	25	22
	Compared to the same period last year	3	5	7	12	5	3	7	9	7	3	4	-2
Monitoring indicators (Light Signal)													
Monetary aggregates, M1B													
TAIEX average closing price													
Industrial production index													
Index of producer's shipment for manufacturing													
The TIER manufacturing composite indicator													

Item \ Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Non-agricultural employment												
Custom-cleared exports												
Imports of machineries and electrical equipment												
Sales of trade and food services												

Note:

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: National Development Council, *Composite Indicators for Taiwan*, May 2015.

2. Stable Consumer Prices

2014 Consumer Price Index (CPI) rose by 1.20 percent, slightly higher than the 0.79 percent increase in 2013. The main driver was the agricultural production gap caused by excessive rain in rainy season.

Wholesale Price Index (WPI) fell 0.57 percent in 2014, much smaller than the 2.43 percent drop in 2013 (Table 1-2-1).

Table 1-2-1 Key Indicators for the Taiwanese Economy, 2008-2014

Indicator \ Year	Economic growth rate	Wholesale price index	Consumer price index	Tax revenue	Money supply		Overnight interbank call loan rate	Exchange rate (NT\$ to the US\$)	Labor force participation rate	Unemployment rate
					M1B	M2				
2008	0.70	5.14	3.52	1.53	-2.94	2.71	2.014	31.52	58.28	4.14
2009	-1.57	-8.73	-0.86	-13.07	16.54	7.45	0.109	33.05	57.90	5.85
2010	10.63	5.46	0.96	6.01	14.93	4.53	0.185	31.64	58.07	5.21
2011	3.80	4.32	1.42	8.78	7.16	5.83	0.341	29.46	58.17	4.39
2012	2.06	-1.16	1.93	1.82	3.45	4.17	0.428	29.61	58.35	4.24
2013	2.23	-2.43	0.79	2.08	7.27	4.78	0.386	29.77	58.43	4.18
2014	3.77	-0.57	1.20	7.74	7.96	5.66	0.387	30.37	58.54	3.96

Unit: %

Note: With the exception of the labor force participation rate, unemployment rate and exchange rate (which are all full-year averages) as well as overnight interbank call loan rate (which is weighted average), all other indicators are expressed as annual growth rates.

Source: 1. DGBAS, National Statistics, accessed June 2015, <http://ebas1.ebas.gov.tw/pxweb/Dialog/statfile9L.asp>.

2. Central Bank of the Republic of China, Statistical database, accessed June 2015, <http://www.pxweb.cbc.gov.tw/dialog/statfile9.asp>.

3. Foreign Trade: Stable Growth

In 2014, Taiwan’s total foreign trade rose 2.15 percent to US\$587.7 billion. Exports increased 2.70 percent to US\$313.7 billion, and imports rose 1.53 percent to US\$274.0 billion. Trade surplus rose 11.61 to US\$39.7 billion, over 4 percentage points lower than the 15.75 percent growth in 2013

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(Table 1-2-2).

Table 1-2-2 Taiwan's Foreign Trade Performance, 2008-2014

Unit: 100 million US\$, %

Indicator Year	Exports		Imports		Total foreign trade		Trade surplus / deficit	
	Amount	Annual growth rate	Amount	Annual growth rate	Amount	Annual growth rate	Amount	Annual growth rate
2008	2,556	3.63	2,404	9.67	4,961	6.47	152	-44.65
2009	2,037	-20.32	1,744	-27.48	3,781	-23.79	293	93.03
2010	2,746	34.82	2,512	44.08	5,258	39.09	234	-20.27
2011	3,083	12.26	2,814	12.02	5,897	12.14	268	14.79
2012	3,012	-2.3	2,705	-3.9	5,717	-3.06	307	14.50
2013	3,054	1.41	2,699	-0.21	5,753	0.64	355	15.75
2014	3,137	2.70	2,740	1.53	5,877	2.15	397	11.61

Source: DGBAS, National Statistics, accessed June 2015, <http://ebas1.ebas.gov.tw/pxweb/Dialog/statfile9L.asp>.

Taiwan's exports to U.S. grew by 7.07 percent, and imports from U.S. rose 8.81 percent mainly driven by robust US economy with rising domestic demand and strong US dollar appreciation against New Taiwan dollar (Table 1-2-3).

Table 1-2-3 Taiwan's Trade with Its Main Trading Partners in 2014

Unit: 100 million US\$, %

Indicator 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	3,137	100.00	2.70	2,740	100.00	1.53	397	11.61
China (Hong Kong included)	1,247	39.75	2.17	497	18.14	1.56	749	-2.66
China	425	13.55	7.86	17	0.62	1.57	408	8.14
Hong Kong	821	26.17	0.41	480	17.52	12.8	341	-13.06
U.S.A.	348	11.11	7.07	274	10.01	8.81	74	1.10
Japan	199	6.34	3.55	417	15.22	-3.4	-218	-8.98
South Korea	127	4.05	5.03	149	5.44	-6.2	-21	-42.98
ASEAN (10 member nations)	595	18.98	1.29	341	12.45	4.63	254	-2.86
EU	287	9.15	3.46	307	11.20	2.38	-20	-10.95
Others	333	10.63	-1.45	756	27.58	-4.24	-422	-6.34

Note: China and Hong Kong are sub-items. ASEAN includes Singapore, Malaysia, Indonesia, Vietnam, Thailand, Philippine, Cambodia, Burma, Brunei and Laos.

Source: DGBAS, National Statistics, accessed June 2015, <http://ebas1.ebas.gov.tw/pxweb/Dialog/statfile9L.asp>.

4. Private Investment: Stable Growth

Private investment in 2014 rose 3.46 percent, mainly driven by ICT sector (information and communications technology), followed by metal, electronics, and chemical industry. Re-shoring investments from Taiwanese businesses slowed down, so did investment from mainland China.

5. Rise of Mainland China's Own Autonomic Supply Chain

Mainland China in recent years provided significant support to its own industries and actively explored cooperation opportunities with large international companies to form so-called “China’s own autonomic supply chain.” Share of imported components of mainland China’s export dropped sharply from 60 percent in the 1990s, the highest, to about 35% at present. Therefore, many manufacturers in mainland China have begun to place orders to local supply chain. This has posed significant challenge to Taiwan SMEs, especially those play an important OEM role in the upstream value chain supporting large enterprises’ production and exports in traditional industries such as textile, clothing, furniture, cement, iron and steel, petrochemical, as well as high-tech areas such as ICT and optical equipment.

6. Wage Growth Falling behind GDP

2014 saw good economic growth in Taiwan but only limited improvement in unemployment rate and regular earnings. Average annual employment grew to a total of 7.28 million in Taiwan, an increase of 137 thousand from 2013. Regular monthly earnings (excluding bonuses) averaged NT\$38,208, representing a mere 1.81 percent increase from 2013, far behind the pace of GDP growth.

Executive Yuan has formed a team to promote the talent strategy to strengthen Taiwan’s competitiveness in four areas: overseas network, global recruiting, competitive resource and offer, and friendly environment for talent retention.

7. Taiwan's Economy: Mild Growth in 2015

Taiwan economy is expected to have mild growth in 2015 (3.84 percent and 0.52 percent growth in the first and second quarter 2015, respectively) amid the positive factors such as robust US economy, low oil price, and strong US dollar, as well as negative one such as slowing growth in China, competitive devaluation, intense competition particularly from mainland China, Japan and South Korea, Geopolitical tensions, and slow FTA negotiation.

III Development of SMEs in Major Nations

This section examines the state of development of SMEs in selected nations in light of the global economic environment mentioned above.

1. 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. Currently, the Chinese government does not compile data regarding the number of SMEs in China. It is estimated that 99 percent of enterprises in China are SMEs. Therefore, the “*2014 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.

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As of the end of 2013, there were 15.2784 million actually existing business enterprises, and 44.3629 million actually existing small private businesses, for a total of 59.6413 million.

In 2013, 15.2784 million actually existing business enterprises represented an increase of 11.80 percent from 2012: the total consisted of 2.2938 million domestic enterprises, down 3.14 percent; 12.5386 million private enterprises, up 15.49 percent; and 0.4460 million foreign-invested enterprises, up 1.23 percent. The 44.3629 million actually existing small private businesses represented an increase of 9.29 percent from 2012.

Recent years saw slowing economic growth, inflation pressure, and monetary tightening in mainland China. From Q3 2011, the Small and Medium-Sized Enterprises Development Index (SME index) fell below 100. A reading below 100 represented contraction sequentially. In Q1 2013, the index was 95.2, up 4.4 percentage points from Q4 2012; in Q2 2013, the index fell to 93.1, down 2.1 percentage points from Q1 2013; in Q3 2013, the index rose slightly to 93.3, up 0.2 percentage points from Q2 2013. In Q3 2013, the index resumed an rising trend and increased to 95.7, up 2.4 percentage points from Q2 2013, but still below the benchmark 100 representing contraction.

Based on the content of *2012-2014 Blue Book of Small and Medium Enterprises in China*, it is noticeable that the main theme of policy measures supporting SMEs has shifted from employment growth, funding source, and tax treatment to more focus on SME transformational upgrade and microenterprise innovation development.

In 2013, the General Office of the State Council issued opinions on “Strengthening the Dominant Position of Enterprise Technological Innovation to Comprehensively Improve Innovation Capabilities of Enterprises” to facilitate the cultivation of innovation capability, R&D funding, intellectual property protection, and strengthening SMEs’ technological innovation and funding channels. Apart from heavy tax burden and elevated production cost, 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 have announced multiple measures to make it easier to meet the productive private sectors’ credit needs. The key to help SMEs’ innovation and transformation is to provide funding. Multiple direct and indirect financing channels have been introduced, including security market, subsidy, angel fund, venture capital, P2P, crowd-funding, and national investment fund (RMB 40 billion) for emerging industry start-ups.

In May 2015, mainland China's Ministry of Industry and Information Technology said that in the future it will actively promote entrepreneurship and innovation development of SMEs in three major areas:

- (1) Strengthen policy guidance: the General Office of the State Council will draft opinions on supporting the healthy development of small and microenterprises, and on further improving employment and entrepreneurship under the new situation. Specific measures will be issued to create business friendly environment for entrepreneurship and innovation to foster SMEs and microenterprises.
- (2) Create favorable conditions: introduce cultivation and demonstration base for small and microenterprises entrepreneurship and management practices to optimize environment for small and microenterprises entrepreneurship and innovation; encourage use of idle plants and

land, and the establishment of small business entrepreneurial base in existing industrial parks; improve the public service system to provide multi-level, comprehensive network of services.

- (3) Launched special activities: allow more SMEs to participate in mainland China's scientific and technological research programs.

Mainland China's economy is still in the stage of transformation and upgrade amid serious industrial overcapacity and difficult operating and financing environment for SMEs. The government has been promoting the "new normal" of modest economic growth through services, consumer spending and private entrepreneurship as new drivers that focus on service globalization and internalization, emerging industries, as well as transformation and upgrade of traditional manufacturers.

2. SMEs in Japan

A 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 White Paper on Small and Medium Enterprises in Japan*, there were approximately 3,852,934 SMEs in Japan (excluding primary industrial sectors), accounting for 99.7 percent of the 3,863,530 business enterprises in the country. SMEs employed 24.34 million people, representing 62.7 percent of all employed people in Japan by the end of 2013.

Overall the whole-year performance was improved. In 2014, business conditions improved slightly in the first and third quarters, but slightly worsened in the second and fourth quarters. Both manufacturing and non-manufacturing sectors performed worse in the second half of the year. Both showed business conditions worsened in the second and fourth quarters with slight pick-up in the third quarter.

In the Manufacturing sector: in the first quarter, business conditions improved in Iron and Steel, Non-ferrous Metals industry, Chemical industry, Ceramic, Wood Products, Stone and Clay Products industry, etc. while business conditions worsened in Food Products and Paper Products; in the second and fourth quarters, all industries worsened; in the third quarter, most industries improved slightly while Transportation Machinery and Fiber industry worsened.

In the Non-manufacturing sector: In the first quarter, Construction, Communications and Advertising industry improved; in the second quarter, all industries worsened with Wholesale down the most; in the third quarter, Wholesale, Retail, and Services improved while Hotel and Dining, and Construction worsened; in the fourth quarter, Construction, Hotel and Dining, and Services improved slightly while Wholesale and Retail worsened.

The unprecedented aggressive monetary easing – "The First Arrow" of Abenomics - led to significant yen devaluation, which did help the exporters of auto and machine tools. However, imports of raw materials became too expensive resulting in the closure of many SMEs. According to corporate research firm Teikoku Databank (TDB), 401 Japanese companies were out of business partially due to the collapse of yen, an increase of 125.3 percent over the previous year; three quarters of these 401 companies were SMEs with debt less than 500 million Yen.

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In June 2014, Abe Cabinet announced revised edition of “New Growth Strategy” to accelerate and promote start-ups and create virtuous circle for new ventures. Concrete measures will be taken to encourage business startups in Japan for each of the three goals: creating interests in starting businesses, ensuring a stable living after starting businesses, and reducing costs and procedures for business startups. The Ministry of Economy, Trade and Industry leads the mutual cooperation among the national government, prefectures and municipalities, academia, and industry. It outlines comprehensive action plans and the framework for supporting business startups. Five main areas under the framework are:

- (1) Match business opportunities and promote collaboration between new ventures and existing companies.
- (2) Encourage existing companies to create new business or new business models: through the cooperation among The Ministry of Economy, Trade and Industry, “Japan Innovation Network” and “Innovation 100 Committee,” help large or medium-sized companies facilitate innovation and create new business or new business models from within; internalize and activate entrepreneurial seeds.
- (3) Establish Japan’s national award of outstanding new businesses.
- (4) Promote talent cultivation and entrepreneurship education: establish national exchange platform inviting lecturers from industry, consulting firms, and academia.
- (5) Establish exchange channels for policy measures for business start-ups: actively engage the start-ups opinion leaders forum to examine and review the current policies and offer suggestions on directions of new policy measures (the main theme is: how to create Japan’s Apple, Google and Facebook).

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 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. In 2013 Japanese government also set up a new SME group subsidy program for overseas expansion for a group of over 10 SMEs in order to promote SMEs in formation of industrial clusters for overseas expansion (subsidy ceiling: 20 million Yen).

From 2015, the Ministry of Economy, Trade and Industry, through the “Support the Creation of New Business Plan” - a three-year plan, expects to help 67 new ventures get listed in OTC (over the counter), and 280 new ventures access to private venture capital funds.

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 (for wholesale and retail: annual sales under 20 billion Won) or employees under 300. According to the National Statistic Office, as of 2012, there were 3,351,404 SMEs in South Korea, accounting for 99.9 percent of the 3,354,320 all enterprises in the country (96 percent are small enterprises). SMEs employed 13,059,372 people in 2012, representing 87.7 percent of all employed people and contributed to 45.7 percent GDP (amounting to 717.2 trillion South Korea Won). In 2013, there were 75,574 new SMEs, up 1,412 from 2012 – the fifth consecutive annual increase; among them 29,135 were categorized as new venture, up 942 from 2012 – the eleventh consecutive annual increase.

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. A conservative banking culture makes obtaining financing in South Korea far more difficult for SMEs. The need for more dynamic start-ups and SMEs became one of the dominant themes in presidential election. President Park Geun Hye promised to pare back the dominance of the chaebol.

In February 2014, President Park Geun-hye announced details of a three-year plan (the “474 vision”) designed to change the very nature of the Korean economy by reaching 4 percent annual GDP growth, a 70 percent overall employment rate and \$40,000 in per capita income. The main idea of the plan is to reform the structure of the economy from public-led to private-led, from manufacturing-focused to service-focused and from export-centered to domestic market-centered. It will boost the number of start-ups and small businesses and foster growth in the service industry, shifting away from an economy dominated by conglomerates and centered on manufacturing. By 2017, the government will inject 3.9 trillion won into promoting the growth of start-ups. It aims to encourage more than 13,000 entrepreneurs and wants to boost the number of start-ups bouncing back from failure to above 500. The government will increase its R&D budget for small businesses up to 18 percent. By creating a 20 billion won fund, it will help local start-ups go public on overseas securities markets. The government also plans to boost investment in the Kosdaq, a securities market for IT start-ups, by operating it independently from the Kospi.

The government wants the private sector, especially the service industry, to thrive without excessive government regulations that have squeezed economic growth for the past few years. It also focuses on encouraging more large firms to acquire new start-ups, and merger and acquisition between new business, providing assistance in the application of information technology and R&D in different stages of emerging SMEs; and helping talent cultivation, recruit and retention.

South Korea has actively negotiated and signed FTAs (Free Trade Agreement) to help large enterprises and SMEs expand into emerging markets. Recently, the Korean government opens 24 hour helpline and 24 hour online consulting, such as “OK FTA Consulting,” providing advices on application for certificates of origin, documentation, manuals, etc. The government hopes to increase

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SMEs' FTA utilization ratio from 60 percent to 65 percent in the future.

4. SMEs in Germany

According to the German definition, an SME is an enterprise up to 500 employees and up to €50 million annual turnover. Based on the estimates from Institut für Mittelstandsforschung Bonn, by the end of 2013, there were approximately 3.70 million small businesses in Germany, accounting for 99.6 percent of the 3.72 million business enterprises in the country. Based on 2012 data from Federal Statistical Office and Federal Employment Agency, SMEs employed 15.97 million people, representing 59.4 percent of all employed people, and contributed €2.149 trillion sales (35.3 percent of GDP). 84.2 percent of all employed people have training experience in SMEs.

Germany's recovery from the global recession has been among the fastest of major economies, surging at a 6.1% annualized rate in the first quarter of 2011 alone. Its budget deficit is a small fraction of those in the U.S., Britain and Japan. Whereas the U.S. faces chronic unemployment for years after global financial crisis, Germany's jobless rate is at a 20-year low. SMEs collectively known as Mittelstand, have powered Germany's export-driven economy for more than a century. Mittelstandspolitik and Mittelstandsbeirat, under Bundesministeriums für Wirtschaft und Technologie, are responsible to help SMEs by analyzing changing environment of science, technology and economy domestically and internationally and offering SME related policy advices.

The Federal Ministry for Economic Affairs and Energy is using a variety of measures to improve the policy environment for SMEs, including (1) strengthen innovation capability, (2) assist in talent recruit, (3) active venture capital, (4) ensure free and open competitive environment; ensure lowering tariffs and non-tariff trade barriers through active WTO negotiations and free trade agreements, (5) ensure access to funding source; relaxation of restrictions on credit guarantee for SMEs (6) promote green technology, (7) accelerate and simplify the administration of export procedures (logistics, overseas exhibitions, etc.); reduce the administrative burden on SMEs, as well as help them develop overseas markets. While past policy measures focus more on helping SMEs expand overseas markets, the most recent policies are more directed toward strengthening innovation capabilities and start-ups.

Hermann Simon in his renowned book "Hidden Champions: Lessons from 500 of the World's Best Unknown Companies" (1996), revealed the secrets of success of the best unknown companies. Simon selected them according to three criteria: they must be #1 or #2 in a world market or in their European market; they must be small-to-midsized; and they must have low public visibility. Although Germany is best known for giants such as BMW, Siemens and BASF, its SMEs, "Hidden Champions" in particular, are the economy's driving force and the reason why Germany has been the most competitive exporter in Europe for decades. The current version of the book showed that the Hidden Champions prove that even management in the 21st Century should be based on healthy common sense, vision, and flexibility. By improving upon the small things every day, a company can ascend to world market leadership.

CHAPTER 2

Major Trends in the Development of SMEs

Although the pace of global economic recovery has been uneven and full of uncertainties, global economy was better in 2014 than previous year. Benefited from the robust growth in the United States and exports, Taiwan's economic grew 3.77 percent in 2014, a significant improvement from 2.23 percent growth in 2013. Looking forward to 2015 and beyond: domestic business environment would be challenged by lack of foreign investment but benefited by some expected deregulation geared to be in line with international standards; in terms of external environment, mainland China in recent years provided significant support to its own industries and actively explored cooperation opportunities with large international companies to form so-called "China's own automatic supply chain," which will pose significant challenge to Taiwan SMEs, especially those play an important role in the upstream value chain as component OEMs. Taiwan's export-oriented economic structure has always been sensitive to the impact of the global economy, and SMEs, accounting for over 97 percent of the number of enterprises in Taiwan, are not immune to the impact. Upgrade and transformation are the keys for Taiwan SMEs to remain viable as going concerns.

This chapter consists five sections to examine main indicators and survey results from government units to understand the development of Taiwan SMEs in 2014. Section I mainly discusses the general business environment of SMEs. 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. Section II shows the distribution of the number of enterprises, employees, and total annual sales in different regions in terms of sectors and counties / cities. Section III focuses on the current situation of female enterprises based on the four indices mentioned above. 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 offers an overview of SMEs' R&D, innovation, and business development.

Statistics on number of enterprises and total annual sales in this chapter are from value-added business tax (VAT) data of Fiscal Information Agency, Ministry of Finance, while statistics on employed persons (not in tax data) comes from Directorate-General of Budget, Accounting and Statistics (DGBAS), Manpower Survey data. When it comes to SME scale defined by annual sales or capital one needs to pay attention that in good time, a 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.

I General Business Environment of SMEs

All major indices (number of enterprises, total annual sales, domestic sales, and export sales) show growth in 2014 from 2013; employment improved slightly during the same period.

Number of SMEs set records several times after contraction during 2007-2009 global financial crisis. As of 2014, there were a total of 1,353,049 SMEs in Taiwan, accounting for 97.61 percent of the total number of business enterprises in Taiwan, a record high. SMEs are mostly concentrated in the Service sector, with the proportion being around 80 percent, of which Wholesale and Retail Trade accounts for 49.40 percent. 55.04 percent SMEs are sole proprietorships. One of the major features of SMEs is that they are more flexible in market entry and exit than large enterprises. That explains the left side concentration of the distribution of the years in existence for SMEs: share of SMEs in existence below 10 years is 50.67 percent (vs. 25.12% percent of large enterprises). Newly-established SMEs, defined as those that have been in existence for less than one year, account for 6.94 percent; about 30 percent SMEs have been in existence for less than 5 years although about half (49.33 percent) SMEs have been in existence for 10 year or more. In 2014, SMEs' sales totaled NT\$11,839.9 billion, accounting for 29.42 percent of total sales of all enterprises; domestic share of total SMEs' sales accounted for 87.38 percent.

SMEs are heavily concentrated in northern Taiwan. In 2014, 46.57 percent (630 thousand) of all SMEs were concentrated in Northern Taiwan; in terms of regions, Taiwan's Six Special Municipalities are the top six with largest number of SMEs: 973 thousand or 71.95 percent of total SMEs combined. In terms of employees, number of employed persons in SMEs reaches 3,979,000 (45.90 percent); Taiwan's Six Special Municipalities are the top six employers with total 6,346,000 (73.19 percent) employed persons.

In 2014, female-owned enterprises account for over 30 percent of all enterprises. 62 percent of female-owned enterprises are sole proprietorships mainly in retail and wholesale. About 99 percent female-owned enterprises are SMEs. Domestic share of female-owned SMEs' sales accounted for 90.62 percent showing highly oriented toward domestic markets, higher than 87.29 percent domestic share of male-owned SMEs' sales; similar pattern holds for female-owned large enterprises. In terms of longevity, newly-established female-owned enterprises account for 6.97 percent of all female-owned enterprises. Share of female-owned enterprises in existence below 10 years is 52.41 percent (vs. 48.46 percent male-owned enterprises in existence below 10 years). However, 47.59 percent female-owned enterprises have been in existence for at least 10 years, slightly lower than 51.54 percent male-owned enterprises in existence for at least 10 years. This could be explained by the factor that female-owned enterprises are more flexible in market entry and exit, or by the factor that male-owned enterprises are more resilient.

Here are further details of the performance and condition of Taiwan SMEs.

1. A Total of 1,353,000 SMEs in 2014, a Record High; Growth Slowed Down

Number of SMEs set records several times after contraction during 2007-2009 global financial crisis. As of 2014, there were a total of 1,353,049 SMEs in Taiwan, accounting for 97.61 percent of the total number of business enterprises in Taiwan, a record high. This figure represented an increase of 21,867 enterprises or 1.64 percent from 2013 but growth rate slowed down. The number of large enterprises was 33,079 enterprises, up 2.69 percent from 2013, accounting for 2.39 percent of the total number of business enterprises (Table 2-1-1).

Table 2-1-1 The Number of Enterprises, Annual Sales, the Number of Employed Persons and the Number of Paid Employees in Taiwan in 2013 and 2014

Unit: Enterprises; million NTS; thousand persons; %

Enterprise size Indicator	All enterprises		SMEs		Large enterprises	
	2013	2014	2013	2014	2013	2014
No. of enterprises	1,363,393	1,386,128	1,331,182	1,353,049	32,211	33,079
Share of total	100.00	100.00	97.64	97.61	2.36	2.39
Annual growth rate	1.91	1.67	1.87	1.64	3.37	2.69
Total annual sales	38,460,894	40,240,506	11,321,842	11,839,868	27,139,052	28,400,638
Share of total	100	100.00	29.44	29.42	70.56	70.58
Annual growth rate	2.16	4.63	-0.53	4.58	3.32	4.65
Domestic sales	28,624,527	30,019,115	9,897,617	10,345,095	18,726,910	19,674,021
Share of total	100	100.00	34.58	34.46	65.42	65.54
Annual growth rate	2.97	4.87	2.74	4.52	3.10	5.06
Export sales	9,836,367	10,221,390	1,424,225	1,494,773	8,412,142	8,726,617
Share of total	100	100.00	14.48	14.62	85.52	85.38
Annual growth rate	-0.15	3.91	-18.53	4.95	3.81	3.74
No. of employed persons	10,967	11,079	8,588	8,669	1,359	1,387
Share of total	100.00	100.00	78.30	78.25	12.39	12.52
Annual growth rate	0.99	1.02	1.22	0.95	0.76	2.06
No. of paid employees	8,615	8,737	6,237	6,329	1,357	1,385
Share of total	100.00	100.00	72.40	72.44	15.76	15.85
Annual growth rate	1.41	1.42	1.89	1.48	0.82	2.06

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 1,023,000 government employees, accounting for 9.23 percent of all employed persons and 11.71 percent of all paid employees.
- The term "SME" 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 above and had its sales revenue of NT\$100 million or less in the previous year, according to the Standards for Identifying Small and Medium Enterprises.
- Representative office of foreign company in the form of organization is excluded in the data since 2014.

Source:

- Fiscal Information Agency, Ministry of Finance, VAT data, 2013-2014.
- Directorate-General of Budget, Accounting and Statistics (DGBAS), Manpower Survey data, 2013-2014.

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2. About 80 Percent of SMEs in Service Sector; 50 Percent in Wholesale and Retail Trade

In terms of the sectors, shares of SMEs by sectors have been quite stable and share of SMEs in Industry grew slightly while share of SMEs in Service decreased slightly after 2010. In 2014, SMEs are mostly concentrated in the Service sector, with the proportion being 79.72 percent, and the Industrial sector accounts for 19.43 percent. As of 2014, there were a total of 1,078,648 SMEs in Service sector, representing an increase of 14,890 SMEs or 1.40 percent from 2013; there were a total of 262,833 SMEs in Industrial sector, representing a growth at 2.91 percent, faster than that in Service sector. (Table 2-1-2).

Table 2-1-2 Shares of All SMEs in Taiwan Held by Individual Sectors, 2009-2014

Unit: Enterprises; million NT\$; %

Year Sector	2009	2010	2011	2012	2013	2014
All SMEs	1,232,025	1,247,998	1,279,784	1,306,729	1,331,182	1,353,049
Agricultural sector	0.90	0.91	0.90	0.90	0.90	0.85
Industrial sector	18.75	18.67	19.01	19.07	19.19	19.43
Service sector	80.24	80.42	80.09	80.02	79.91	79.72
Total sales	9,189,463	10,709,005	11,226,933	11,381,770	11,321,842	11,839,868
Agricultural sector	0.18	0.17	0.16	0.18	0.19	0.20
Industrial sector	45.85	49.41	50.13	50.13	48.67	49.27
Service sector	53.96	50.42	49.7	49.69	51.13	50.53
Domestic sales	7,873,111	9,088,972	9,567,948	9,633,690	9,897,617	10,345,095
Agricultural sector	0.19	0.18	0.17	0.19	0.19	0.20
Industrial sector	42.35	45.47	46.28	45.65	45.72	46.23
Service sector	57.46	54.36	53.55	54.16	54.09	53.58
Export sales	1,316,352	1,620,033	1,649,985	1,748,080	1,424,225	1,494,773
Agricultural sector	0.15	0.14	0.12	0.10	0.19	0.22
Industrial sector	66.82	71.52	72.5	74.82	69.21	70.36
Service sector	33.03	28.34	27.38	25.08	30.60	29.42

Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2009-2014.

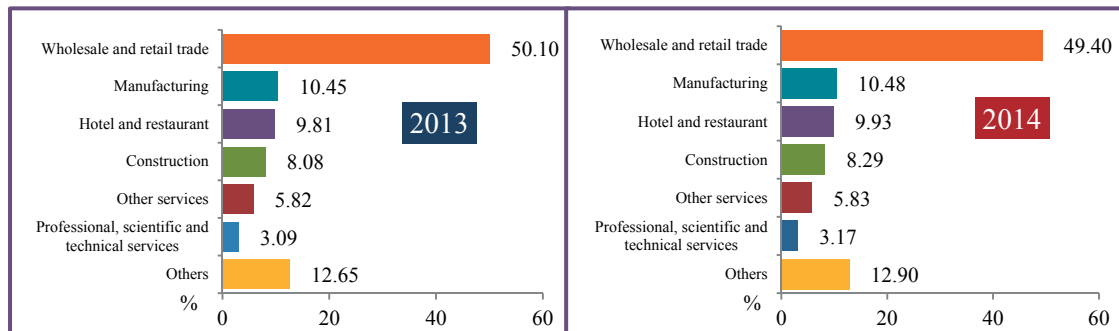
In terms of the industries, 49.40 percent of SMEs are in Wholesale and Retail Trade, a total of 668,428 in 2014, followed by Manufacturing with 10.48 percent of SMEs, a total of 141,817, and 3rd in Hotel and Restaurant industry with 9.93 percent, a total of 134,326 (Figure 2-1-1).

3. The Number of Employed Persons in SMEs Reached 8,669,000 in 2014, a Record High

In 2014, number of employed persons in SMEs reached 8,669,000, of which 6,329,000 were paid employees; both were record high. However, the growth rate was down slightly after 2011. SMEs

contributed 78.25 percent of total employed persons and 72.44 percent of total paid employees (Table 2-1-1).

Figure 2-1-1 SME Distribution by Industry in 2013 and 2014

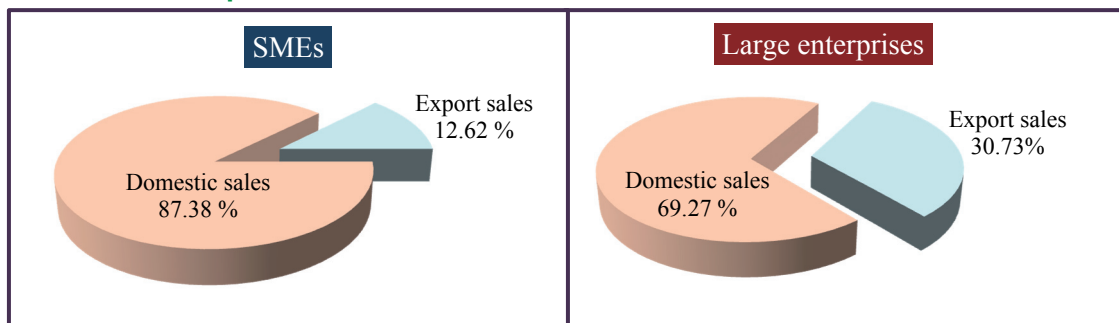


Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2013-2014.

4. Domestic Share of Total Sales of SMEs in 2014 Accounted for 87 Percent

In 2014, SMEs' sales totaled NT\$11,839.9 billion, accounting for 29.42 percent of total sales of all enterprises; domestic share of total SMEs' sales accounted for 87.38 percent (NT\$10,345.1 billion), up about 4.52 percent from 2013 (Figure 2-1-2 and Table 2-1-1).

Figure 2-1-2 Shares of Domestic and Export Sales in Total Sales by Enterprise Size in 2014



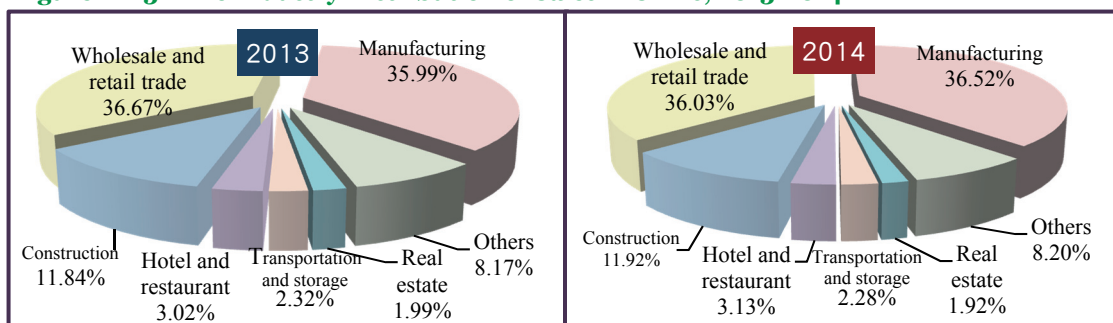
Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2014.

5. Wholesale and Retail Trade and Manufacturing Remained Top Contributors of Sales

In terms of shares of sales by industry, top three industries in 2014 were Manufacturing with share of 36.52 percent (NT\$4,323.8 billion), followed by Wholesale and Retail Trade share of 36.03 percent (NT\$4,266.1 billion) and Construction share of 11.92 percent (NT\$1,411.7 billion). Sales of the top three industries combined accounted for 84.47 percent of total sales of SMEs (Figure 2-1-3).

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Figure 2-1-3 The Industry Distribution of Sales in SMEs, 2013-2014



Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2013-2014.

6. Total Export Sales of SMEs Rose 4.95 Percent in 2014

Taiwan's economic growth rate improved from 2.23 percent in 2013 to 3.77 percent in 2014. The total sales of SMEs, total domestic sales of SMEs, and total export sales SMEs grew by 4.58 percent, 4.52 percent, and 4.95 percent, respectively (Table 2-1-1).

In 2014, SMEs' export contribution rate was 14.62 percent (of total exports), up only 0.14 percentage points from 2013, near the lowest in six years; SMEs' export propensity (SME export sales' share of the SMEs' total sales) also was near bottom at 12.62 percent, up only 0.04 percentage points, near the lowest in six years (Table 2-1-3).

Table 2-1-3 The Number of SMEs and SMEs' Sales, 2009-2014

Unit: Enterprises; million NT\$; %

Indicator \ Year	2009	2010	2011	2012	2013	2014
No. of SMEs	1,232,025	1,247,998	1,279,784	1,306,729	1,331,182	1,353,049
Ratio	97.91	97.68	97.63	97.67	97.64	97.61
Annual growth rate	-0.22	1.3	2.55	2.11	1.87	1.64
SME sales	9,189,463	10,709,005	11,226,933	11,381,770	11,321,842	11,839,868
Ratio	30.65	29.55	29.64	30.23	29.44	29.42
Annual growth rate	-12.17	16.54	4.84	1.38	-0.53	4.58
SME domestic sales	7,873,111	9,088,972	9,567,948	9,633,690	9,897,617	10,345,095
Ratio	35.5	34.67	34.51	34.66	34.58	34.46
Annual growth rate	-10.72	15.44	5.27	0.69	2.74	4.52
SME export sales	1,316,352	1,620,033	1,649,985	1,748,080	1,424,225	1,494,773
Ratio (export contribution)	16.87	16.16	16.29	17.74	14.48	14.62
Export propensity	14.32	15.13	14.7	15.36	12.58	12.62
Annual growth rate	-19.96	23.07	1.85	5.95	-18.53	4.95

Note:

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

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

3. Export propensity = (the export value of SMEs / the sales value of SMEs) × 100%.

Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2009-2014.

The low export contribution rate and the low export propensity of SMEs are generally attributed to the transformation in the structure of Taiwan's industries and external impacts. Competing countries' aggressive quantitative easing policy made Taiwan exporters less competitive due to currency appreciation. Besides, in recent years, mainland China and other neighboring countries adopted aggressive export expansion strategy that posed significant challenge to Taiwan's export. Some of Taiwan's key roles in the international supply chain were replaced by competitors. Slow progress in regional economic integration also eroded Taiwan's competitiveness.

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 towards indirect exports via large enterprises. Besides, SMEs' export has become more sensitive to overseas business environment as they play a role of OEMs and move upward across value chain as ODMs and OBM.

The low total exports of SMEs in 2013 and 2014 was mainly driven by the Manufacturing sector. We show the breakdown of SMEs exports by industry in Manufacturing sector in Appendix C Table C-9. In terms of export amount within the Manufacturing sector, the dominant driver was Electronic Components exports that accounted for 44.43 percent of all Manufacturing sector export, amounting to NT\$575.58 billion in 2012. It was down about 50 percent to NT\$287.53 billion in 2013 (or 29.52 percent of all Manufacturing sector export), and then rose only 2.70 percent in 2014, amounting to NT\$295.30 billion (or 28.44 percent of all Manufacturing sector export).

Three main drivers for this structural change in electronic components' export: (1) the overall challenging overseas environment for exports, induced by significant currency devaluation across several Taiwan's major trading partners such as Japan and EU countries; (2) intensified competition from mainland China, which in recent years provided significant support to its own industries and actively explored cooperation opportunities with large international companies to form so-called "China's own autonomic supply chain," which poses significant challenge to Taiwan SMEs, especially to those who play an important role in the upstream supply chain supporting large enterprises' production and exports; (3) declining price of electronic components as well as ever declining number of electronic components due to technological advancement and industrial consolidation.

SMEs in different countries play different roles in globalization (measured by export contribution). Take Japan and South Korea, Taiwan's main competitors, for examples:

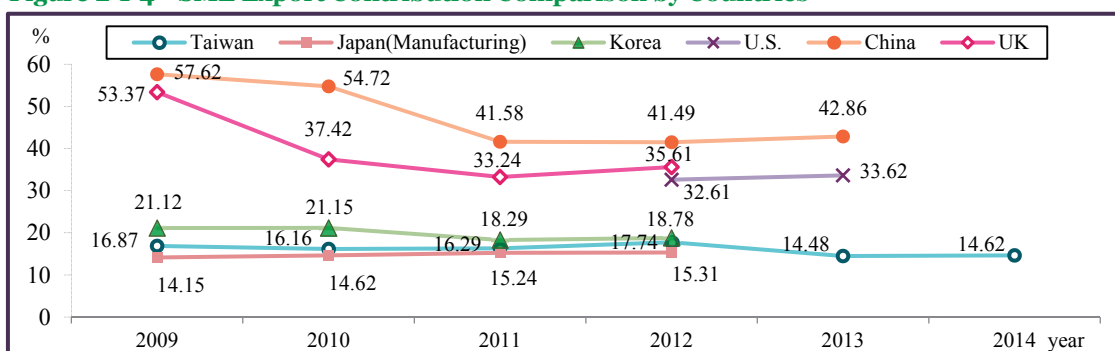
Japan SMEs used to be more domestic market oriented. Due to globalization and cost concern, Japanese large manufacturers have aggressively outsourced and relocated businesses globally. This plus intensified competition from imported products in domestic market with limited growth, has made more Japan SMEs turn to overseas markets for expansion, as indicated by the modest rise of their export contribution from 14.15 percent in 2009 to 15.31 percent in 2012 (Figure 2-1-4).

Although the global success of chaebol (a typical business conglomerate structure in South

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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 SMEs that supply and compete with them. Since 1980s, Government has pared back the dominance of the chaebol and allocated more resources to SMEs. In 1990s, SMEs' export contribution passed that of large enterprises for the first time. However, facing challenge of cost control, technology and business transformation, and heightened price competition from cheap products of Mainland China (South Korea have signed FTAs with many countries including China), South Korea SMEs' export contribution showed similar volatile but generally downward trend (2010-2012) to that of Taiwan SMEs (2010-2014) (Figure 2-1-4).

Figure 2-1-4 SME Export Contribution Comparison by Countries



Note: Export contribution = (the export value of SMEs / the export value of all enterprises) × 100%.

Source: Taiwan data from *White Paper on SMEs in Taiwan*; Japan data collected by the Japan Small and Medium Enterprise Agency; U.S. data from the U.S. Census Bureau database; Korean data collected by the Korean Statistical Information Service; the rest from OECD database.

7. About 94 Thousand New Enterprises in 2014; Most Sales Came from Domestic Market

Newly-established enterprises are defined as those that have been in existence for less than one year. In 2014, there were about 94 thousand newly-established SMEs in Taiwan, representing 99.79 percent of the total of 94,162 newly-established enterprises. 93.55 percent of newly-established SMEs' total sales came from domestic market in 2014, higher than 84.76 percent for newly-established large enterprises (Table 2-1-4).

Table 2-1-4 The Number of Newly-Established and Their Sales Performance, 2014

Unit: Enterprises; million NT\$; %

Enterprise size Indicator	Total	SMEs ratio	Share of SMEs total	Large enterprises ratio	Share of large enterprises total
No. of enterprises	94,162	99.79	-	0.21	-
Total sales	206,808	85.17	100.00	14.83	100.00
Domestic sales	190,771	86.37	93.55	13.63	84.76
Export sales	16,037	70.85	6.45	29.15	17.98

Notes: “-”: not applicable.

Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2014.

In terms of the sectors, the Service sector accounted for the largest number of newly-established SMEs (78,108 or 83.12 percent of newly-established SMEs) in 2014, and accounted for about 71.89 percent sales and 52.70 percent exports of newly-established SMEs (Table 2-1-5)

Table 2-1-5 The Number of Newly-Established SMEs and Their Sales Performance by Sector, 2014

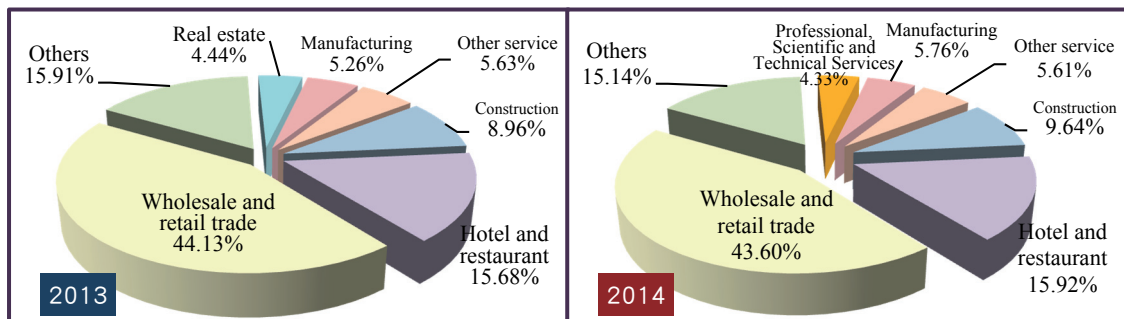
Unit: Enterprises; million NT\$; %

Sector \ Indicator	No. of enterprises	Share of total	Total sales	Share of total	Domestic sales	Share of total	Export sales	Share of total
All sectors	93,968	100.00	176,134	100.00	164,772	100.00	11,362	100.00
Agricultural sector	744	0.79	673	0.38	617	0.37	56	0.49
Industrial sector	15,116	16.09	48,843	27.73	43,525	26.42	5,318	46.81
Service sector	78,108	83.12	126,618	71.89	120,630	73.21	5,988	52.70

Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2014.

In terms of the industries, 43.60 percent of newly-established SMEs were in Wholesale and Retail Trade, followed by Hotel and Restaurant at 15.92 percent, and Construction at 9.64 percent in 2014 (Figure 2-1-5).

Figure 2-1-5 The Industry Distribution of Newly-Established SMEs, 2013-2014



Source : Fiscal Information Agency, Ministry of Finance, VAT data, 2013-2014.

8. SMEs Are More Flexible in Entry / Exit Than Large Enterprises

As of 2014, 6.94 percent of SMEs had been in existence for less than one year. 31.10 percent of SMEs had been operating within five years, and 50.67 percent within 10 years. The corresponding shares for large enterprises were only 0.59 percent, 9.66 percent and 25.12 percent, respectively. 74.88 percent large enterprises had been in existence for 10 years or more. These figures show that, in terms of market entry and exit, SMEs display more flexibility than large enterprises. However, share of SMEs in existence for 20 years or more was in the range of 21% to 25%, far below the average 35% (not shown in Table 2-1-6) of large enterprises. This shows the business succession / transition remains a major challenge to SMEs as going concerns. Further, compared to large enterprises, SMEs in existence for 20 years or more suffered significant sales decline and “the crisis of the elderly age” as their first-generation entrepreneurs got into old age and lost their vitality and creativity. It has become an important issue for sustainable development of SMEs to rediscover and activate the entrepreneurial spirit, combined with sound “second-generation succession” and

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business transformation strategy. There were over 49 percent SMEs had been going concerns for 10 years or more (Table 2-1-6).

Table 2-1-6 Share of All SMEs Held by SMEs of Particular Ages, 2010-2014

Unit: Enterprises; %

Age \ Year	2010	2011	2012	2013	2014	
					SMEs	Large enterprises
Total no. of SMEs	1,247,998	1,279,784	1,306,729	1,331,182	1,353,049	33,079
Less than 1 year	7.50	7.78	7.34	7.42	6.94	0.59
1 – 2 years	6.95	7.20	7.44	7.12	7.59	1.90
2 – 3 years	5.75	5.88	6.15	6.37	6.16	2.00
3 – 4 years	5.38	5.04	5.14	5.39	5.61	2.48
4 – 5 years	5.75	4.79	4.51	4.59	4.80	2.69
5 – 10 years	21.95	22.30	21.53	20.43	19.57	15.46
10 – 20 years	25.33	25.05	24.93	25.17	25.03	34.10
20 years or more	21.39	21.96	22.95	23.52	24.30	40.78

Source : Fiscal Information Agency, Ministry of Finance, VAT data, 2010-2014.

9. About 55 Percent SMEs Are Sole Proprietorships

Sole proprietorships constituted the largest group of SMEs, with 744,654 firms or 55.04 percent of the total, followed by limited corporations, with 398,992 firms (29.49 percent of the total), and corporations limited by shares, with 114,599 firms (8.47 percent). These three types accounted for a combined total of 93 percent of all SMEs in Taiwan. On the other hand, corporations limited by shares constituted the largest group of larger enterprises, at 54.77% of the total, followed by limited corporations at 23.89% and subsidiaries at 10.15%. These three types accounted for a combined total of 88.81% of all larger enterprises in Taiwan (Table 2-1-7).

Table 2-1-7 Business Enterprises in Taiwan by Form of Organization, 2014

Unit: Enterprises; %

Form of Organization \ Year	2014			
	SMEs	Share of SMEs total	Large enterprises	Share of total
Total	1,353,049	100.00	33,079	100.00
Corporation limited by shares	114,599	8.47	18,117	54.77
Limited corporation	398,992	29.49	7,904	23.89
Unlimited corporation	103	0.01	1	0.00
Unlimited corporation with limited liability shareholders	28	0.00	-	-
Partnership	25,908	1.91	92	0.28
Sole proprietorship	744,654	55.04	153	0.46
Foreign company	3,796	0.28	794	2.40
Subsidiary of domestic company	32,912	2.43	3,357	10.15
Others	32,057	2.37	2,661	8.04

Note: Representative office of foreign company in the form of organization is excluded in the data since 2014.

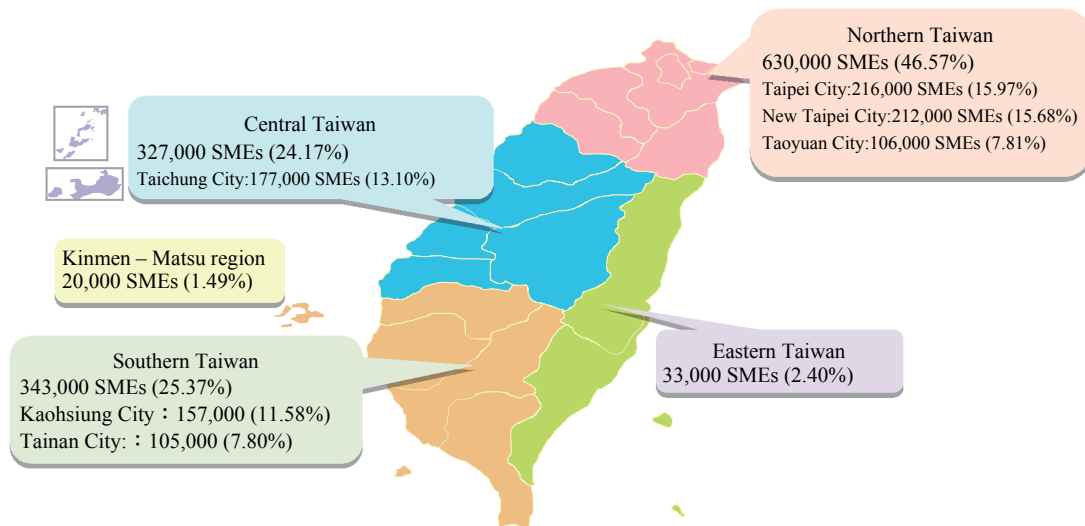
Source : Fiscal Information Agency, Ministry of Finance, VAT data, 2014.

II SMEs and the Regional Development

1. 47 Percent SMEs Are Concentrated in Northern Taiwan

In regional terms, in 2014, 46.57 percent (630 thousand) of SMEs were concentrated in Northern Taiwan; 24.17 percent (327 thousand) were located in Central Taiwan and 25.37 percent (343 thousand) in Southern Taiwan (Figure 2-2-1).

Figure 2-2-1 The Distribution of SMEs by Region in 2014



Note: Northern Taiwan includes Taipei City, New Taipei City, Keelung City, Ilan County, Taoyuan City, 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: Fiscal Information Agency, Ministry of Finance, VAT data, 2014.

Taiwan's Six Special Municipalities are the top six with largest number of SMEs: 973 thousand or 71.95 percent of total SMEs combined. As can be seen from the data presented in Table 2-2-1, of the Six Special Municipalities, Taipei City had the largest number of SMEs: 216 thousand or 15.97 percent of all SMEs, followed by 212 thousand or 15.68 percent in 2nd ranked New Taipei City, 13.10 percent in 3rd ranked Taichung City, 11.58 percent in 4th ranked Kaohsiung City, 7.81 percent in 5th ranked Taoyuan City, and 7.80 percent in 6th ranked Tainan City. Compared to 2013, the Six Special Municipalities reported rising numbers of SMEs. Newly upgraded Taoyuan City showed the largest growth (2.64 percent) in number of SMEs (Table 2-2-1).

Examination of the distribution of SMEs among the Six Special Municipalities by sectors shows that, Kaohsiung City had the largest share of Agriculture SMEs at 36.24 percent, while Taipei City, the commercial and financial center of Taiwan, had the largest share of Service SMEs.

Industry clusters or concentration usually lead to positive economic benefits but at the same time widens the gap between urban and rural areas. However, a more feasible development strategy is not to reverse the rural-urban gap, but to take deep dive into the characteristics of rural counties and help local SMEs develop products of local specialties.

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Table 2-2-1 The Number of SMEs and the Total Sales of Taiwan's Six Municipalities in 2014
- by the Size of Enterprise

Unit: Enterprises; million NT\$; %

Major cities Enterprise Size	Total	Combined total for the Six Special Municipalities	Taipei City	New Taipei City	Taoyuan City	Taichung City	Tainan City	Kaohsiung City
Number								
All enterprises	1,386,128	1,001,010	226,628	217,301	108,548	181,083	107,392	160,058
SMEs	1,353,049	973,487	216,031	212,215	105,718	177,307	105,481	156,735
Ratio	100	71.95	15.97	15.68	7.81	13.10	7.80	11.58
Annual growth rate	1.64	1.80	1.73	1.73	2.64	2.28	1.58	1.07
Large enterprise	33,079	27,523	10,597	5,086	2,830	3,776	1,911	3,323
Total sales								
All enterprises	40,240,506	31,411,600	12,717,852	4,528,647	3,578,362	3,876,845	2,366,897	4,342,997
SMEs	11,839,868	9,112,580	1,919,749	1,973,811	1,204,940	1,728,058	937,829	1,348,193
Ratio	100.00	76.97	16.21	16.67	10.18	14.60	7.92	11.39
Annual growth rate	4.58	4.38	1.67	4.27	5.68	7.08	4.11	4.20
Large enterprise	28,400,638	22,299,020	10,798,103	2,554,837	2,373,422	2,148,787	1,429,068	2,994,804

Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2014.

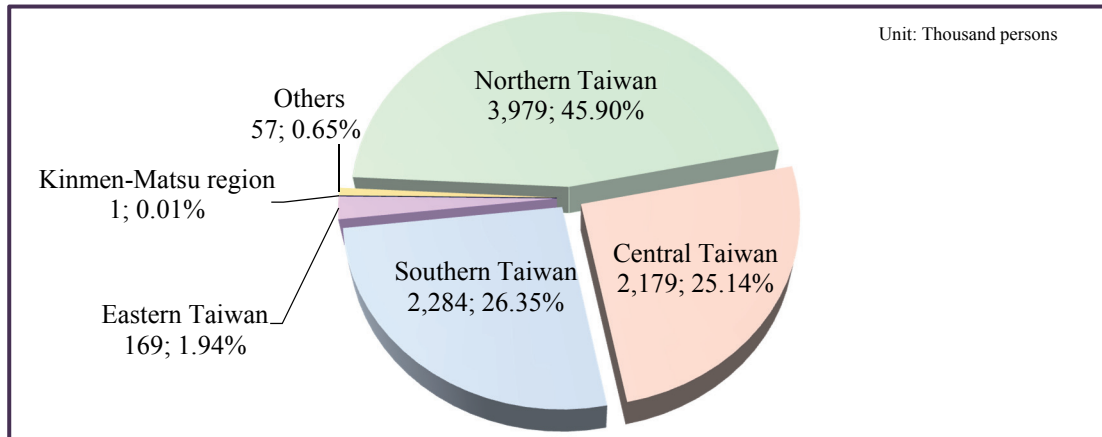
2. SME Sales by City: New Taipei City on Top

Examination of SME sales in 2014 by city shows that the largest share of overall SME sales was held by those SMEs located in New Taipei City with 16.67 percent of total sales, followed by Taipei City in the second place with 16.21 percent, Taichung City (14.60 percent), Kaohsiung City (11.39 percent), Taoyuan City (10.18 percent), and Tainan City (7.92 percent). Compared to 2013, all Six Special Municipalities SME sales rose in 2014 with fastest growth (up 7.08 percent) in Taichung City (Table 2-2-1).

3. Northern Region Had about 46 Percent of Employed Persons by SMEs

As can be seen from the 2014 data presented in Figure 2-2-2, of the four regions, Northern region had the largest number of employed persons by SMEs (3,979 thousand or 45.90 percent), followed by Southern region (26.35 percent), and Central region (25.14 percent).

Of the Six Special Municipalities, New Taipei City had the largest number of employed persons by SMEs in 2014 (1,349 thousand or 15.56 percent), followed by Taipei City (1,345 thousand or 15.51 percent), and Taichung City (1,181 thousand or 13.62 percent). The Six Special Municipalities had combined employment of 6,346 thousand or 73.19 percent of all people employed by SMEs (Table 2-2-2).

Figure 2-2-2 The Regional Distribution of SME Employment in 2014

Notes: Others denote domicile record of an employed person is in Taiwan but works for SMEs overseas in 2014.

Source: DGBAS, Manpower Survey data, 2014.

Table 2-2-2 The Number of People Employed in Taiwan's Six Municipalities, 2014

Unit: Thousand persons; %

Major cities Enterprise size	Total	Combined total for the Six Special Municipalities	Taipei City	New Taipei City	Taoyuan City	Taichung City	Tainan City	Kaohsiung City
All enterprises	11,079	8,122	1,899	1,590	1,021	1,399	916	1,297
SMEs	8,669	6,346	1,345	1,349	732	1,181	735	1,004
Share of total	100.00	73.19	15.51	15.56	8.44	13.62	8.48	11.58
Large enterprises	1,387	1,059	302	132	220	119	115	172
Share of total	100.00	76.32	21.75	9.53	15.86	8.55	8.26	12.37
Government employees	1,023	718	252	108	69	100	67	121

Note: Share in the table represents the percentage of city's SMEs in all SMEs.

Source: DGBAS, Manpower Survey data, 2014.

III Female-Owned SMEs

Based on data from Fiscal Information Agency, Ministry of Finance, 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 SMEs.

1. Female-Owned Enterprises Account for Over 36 Percent of All Enterprises; about 99 Percent Female-Owned Enterprises Are SMEs

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In 2014, there were 1,373,006 business enterprises in Taiwan for which the sex of the business owner could be determined. Of these, 496,866 (36.19 percent of the total) were owned by women. Female-owned enterprises increased by 7,757 or 1.59 percent from 2013. 98.76 percent (490,688) of female-owned enterprises were SMEs (Table 2-3-1).

Table 2-3-1 The Number of Enterprises and Sales Performance in 2014 - by Sex of Business Owner

Unit: Enterprises; million NT\$; %

Enterprise size Indicator	All enterprises	SMEs	Large enterprises
No. of enterprises	1,373,006	1,342,027	30,979
Female-owned enterprises	496,866	490,688	6,178
Share of total ¹	100.00	98.76	1.24
Share of total ²	36.19	36.56	19.94
Male-owned enterprises	876,140	851,339	24,801
Total sales	36,148,091	11,462,439	24,685,652
Female-owned enterprises	5,413,359	2,844,426	2,568,933
Share of total ¹	100.00	52.54	47.46
Share of total ²	14.98	24.82	10.41
Male-owned enterprises	30,734,732	8,618,013	22,116,718
Domestic sales	27,630,633	10,100,211	17,530,422
Female-owned enterprises	4,637,186	2,577,696	2,059,490
Share of total ¹	100.00	55.59	44.41
Share of total ²	16.78	25.52	11.75
Male-owned enterprises	22,993,447	7,522,515	15,470,932
Export sales	8,517,458	1,362,228	7,155,230
Female-owned enterprises	776,173	266,730	509,443
Share of total ¹	100.00	34.36	65.64
Share of total ²	9.11	19.58	7.12
Male-owned enterprises	7,741,285	1,095,499	6,645,786

Note:

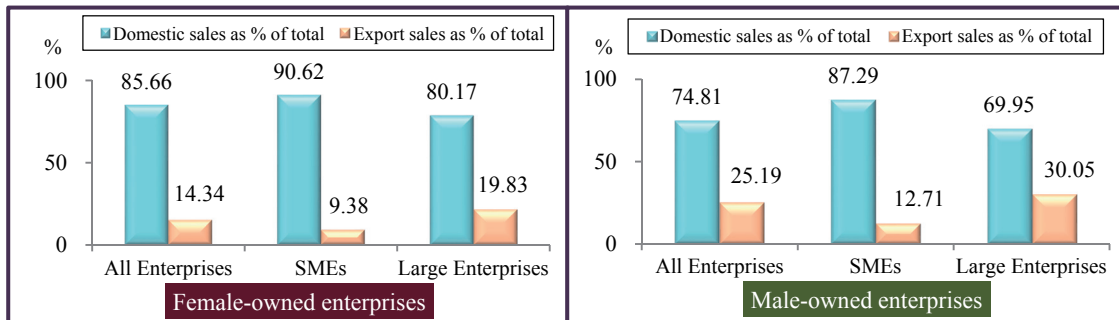
1. Whether an enterprise should be classified as male-owned or female-owned was determined using the registered identity of the business owner.
2. The totals for all enterprises given in this table do not conform to those given in Table 2-1-1 because some enterprises are registered as being owned by other enterprises or by foreigners; these enterprises were excluded from the data used in this table.
3. Share of total 1 in the table represents the percentages of SMEs and large enterprises in all female-owned enterprises; share of total 2 represents the percentage of female-owned enterprises in all enterprises.

Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2014.

2. Female-Owned Enterprises Are More Oriented toward Domestic Market

In 2014, domestic sales accounted for a dominant 90.62 percent of the total sales of female-owned SMEs, with export sales accounting for only 9.38 percent, (giving a disparity of 81.24 percentage points). For male-owned SMEs, export sales accounted for 12.71 percent and domestic sales accounted for 87.29 percent, giving a disparity of 74.58 percentage points (Figure 2-3-1).

Figure 2-3-1 Shares of Domestic Sales and Export Sales in 2014 - by Sex of Business Owner

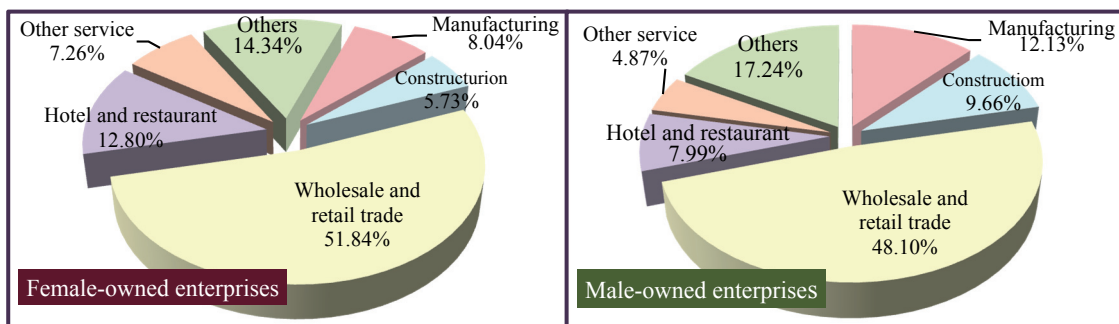


Note and source: See Table 2-3-1.

3. Female-Owned Enterprises Are Heavily Concentrated in the Wholesale and Retail Trade

The Service sector accounts for the largest share of the total number of female-owned enterprises at 85 percent, compared to 76 percent share of male-owned enterprises.

Figure 2-3-2 Industrial Distribution of SMEs in 2014 - by Sex of Business Owner



Note and source: See Table 2-3-1.

The Wholesale and Retail Trade 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 51.84 percent, 48.24 percent, 46.43 percent, and 59.03 percent respectively in 2014.

The same top 5 industries accounts for the largest share of the total number of both male and female-owned enterprises with slightly difference order. For female-owned enterprises, the order is Wholesale and Retail Trade at 51.84 percent, followed by Hotel and Restaurant at 12.80 percent, Manufacturing at 8.04 percent, Other Service at 7.26 percent, and Construction at 5.73 percent. For male-owned enterprises, the order is Wholesale and Retail at 48.10 percent, followed by Manufacturing at 12.13 percent, Construction at 9.66 percent, Hotel and Restaurant at 7.99 percent, and Other Service at 4.87 percent.

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4. 62 Percent of Female-Owned Enterprises Are Sole Proprietorships

Sole proprietorships were the most common form of organization for both female-owned enterprises (61.54 percent) and male-owned enterprises (50.04 percent), followed by limited corporations at 27.17 percent and 30.58 percent, and corporate limited at 6.35 percent and 11.12 percent, respectively (Table 2-3-2).

Table 2-3-2 The Number of Different Enterprises in 2014 - by Sex of Business Owner

Unit: Enterprises; %

Indicator \ Sex of owner	All enterprises		Female-owned enterprises		Male-owned enterprises	
	No. of enterprises	Share of total	No. of enterprises	Share of total	No. of enterprises	Share of total
Total	1,373,006	100.00	496,866	100.00	876,140	100.00
Corporation limited by shares	128,968	9.39	31,568	6.35	97,400	11.12
Limited corporation	402,911	29.35	135,002	27.17	267,909	30.58
Unlimited corporation	101	0.01	36	0.01	65	0.01
Unlimited corporation with limited liability shareholders	27	0.00	10	0.00	17	0.00
Partnership	25,971	1.89	9,247	1.86	16,724	1.91
Sole proprietorship	744,202	54.20	305,796	61.54	438,406	50.04
Foreign company	2,496	0.18	919	0.18	1,577	0.18
Subsidiary of domestic company	34,859	2.54	6,633	1.33	28,226	3.22
Others	33,471	2.44	7,655	1.54	25,816	2.95

Note and source: See Table 2-3-1.

IV Business Environment for SME Manufacturing Sector

To provide a clear picture of the current state of Taiwan's Manufacturing sector, this section presents data from the *Manufacturing Investment and Operation of the Survey Report* published by the Department of Statistics, Ministry of Economic Affairs.

1. Overseas Investment by Manufacturing Sector

(1) 13.02 percent of medium-sized enterprises and 5.53 percent of small-sized enterprises had plans for overseas investment; “potential for overseas market” and “to meet the needs of customers” were the top two reasons regardless of size

Based on the 2014 *Manufacturing Investment and Operation of the Survey Report* by the Department of Statistics, Ministry of Economic Affairs, 13.02 percent of medium-sized enterprises and 5.53 percent of small-sized enterprises had plans for overseas investment in 2013, much lower than 27.58 percent of large enterprises who had plans for overseas investment, with “potential for overseas market” and “to meet the needs of customers” as the top two reasons regardless of size (“to meet the

needs of customers” was number one for small-sized enterprises while (“potential for overseas market” was number one for large and medium-sized enterprises). The number three reason was “overseas foundation and relationship” for large and medium-sized enterprises but “low cost” for small-sized enterprises (Table 2-4-1).

Table 2-4-1 Whether Manufacturers Establish Overseas Investment and Reasons for Overseas Investment, 2014

Unit: %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
No overseas investment plan	84.66	72.42	86.98	94.47
With overseas investment plan	15.34	27.58	13.02	5.53
Reasons for overseas investment (multiple responses)				
Potential for overseas market	55.07	57.95	54.12	43.28
To meet the needs of customers	45.81	45.36	44.71	49.25
Overseas foundation and relationship	37.89	39.07	36.47	34.33
Low cost	28.63	25.83	29.41	40.30
Limited potential for domestic market	19.82	18.87	16.47	28.36
Competitors in overseas market	14.76	15.23	8.24	20.90
Tax concession and other incentives overseas	11.23	11.26	8.24	14.93
Sources of raw materials	7.49	8.61	3.53	7.46
Others	2.64	2.32	3.53	2.99

Note:

1. The sample size of the survey is 2,960 enterprises, including 1,095 large enterprises, 653 medium-sized enterprises, and 1,212 small enterprises.
2. An enterprise with 200 employees or more is classified as a large enterprise; medium-sized enterprise: employees equal to 100 or more but less than 200; small enterprise: less than 100 employees.

Source: Ministry of Economic Affairs, *Manufacturing Investment and Operation of the Survey Report, Quarter I*, June 2014.

(2) Mainland China (Hong Kong and Macao included) was the top choice of overseas investment

Mainland China (Hong Kong and Macao included) was the top choice of overseas investment for large and small and medium-sized enterprises as well as large enterprises. Over 60% of all enterprises (total 453 enterprises) who had plan for overseas investment picked “mainland China” as the top choice, followed by “Vietnam” and “North America” (Table 2-4-2).

(3) “Own fund” was the main source of overseas investment, regardless of the size of an enterprise

Regardless of the size, over 80% of enterprises planned to use their “own fund” for overseas investment (over 91 percent for large and medium-sized enterprises and over 83% for small-sized enterprises). Over 30% of enterprises planned to use their “fund from financial institution” for overseas investment, over 43 percent for large enterprises and over 30% for small and medium-sized enterprises, showing that large enterprises typically have more borrowing capacity and are more aggressive in overseas expansion (Table 2-4-3).

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Table 2-4-2 Choice of Overseas Investment Region for the Manufacturing

Unit : %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
Mainland China (Hong Kong and Macao included)	72.25	74.50	68.24	67.16
Vietnam	13.66	11.92	18.82	14.93
North America	7.71	6.95	11.76	5.97
Thailand	5.29	5.30	5.88	4.48
Indonesia	4.85	4.97	7.06	1.49
Japan	3.52	3.31	5.88	1.49
Malaysia	3.52	2.98	3.53	5.97
India	3.08	3.31	3.53	1.49
EU	3.08	3.64	1.18	2.99
S. Korea	1.76	2.32	1.18	0.00
Others	7.27	6.95	4.71	11.94

Note and source: See Table 2-4-1.

Table 2-4-3 Sources of Funding for Manufacturing Overseas Investment

Unit: %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
Own fund	90.53	91.39	92.94	83.58
Fund from financial institution	39.43	43.71	30.59	31.34
Publicly listed or OTC	6.83	6.29	8.24	7.46
Issue corporate bond	6.17	7.62	0.00	7.46
Outside investors	5.95	4.30	7.06	11.94
Others	1.10	0.99	0.00	2.99

Note and source: See Table 2-4-1.

2. Domestic Investment by Manufacturing Sector

(1) 23.43 percent of medium-sized enterprises and 13.20 percent of small-sized enterprises had plans for domestic investment; “to strengthen the intra-industry competitiveness” was the top reason regardless of size

In 2013, 23.43 percent of medium-sized enterprises and 13.20 percent of small-sized enterprises had plans for domestic investment, much lower than 40.82 percent of large enterprises who had plans for domestic investment, with “to strengthen the intra-industry competitiveness” as the top reason by about 70 percent enterprises regardless of size. The number two and three reasons were: “strong domestic R&D and technology” and “labor quality and stability” for large and medium-sized enterprises; “labor quality and stability” and “market demand” for small-sized enterprises (Table 2-4-4)

Table 2-4-4 Whether Manufacturers Had Plans for Domestic Investment and Reasons for Domestic Investment, 2014

Unit: %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
No plan for domestic investment	74.32	59.18	76.57	86.80
With plan for domestic investment	25.68	40.82	23.43	13.20
Reasons for domestic investment (multiple responses)				
To strengthen the intra-industry competitiveness	71.71	71.59	69.28	74.38
Labor quality and stability	23.16	24.16	21.57	21.88
Strong domestic R&D and technology	21.58	24.83	22.22	11.88
Market demand	16.71	19.46	10.46	15.00
Convenient to financing	10.79	9.17	13.73	12.50
Similar land or plant cost to overseas investment	5.39	3.13	9.15	8.13
Improvement of investment environment in Taiwan	4.74	2.91	7.19	7.50
Domestic tax concession and other incentives	4.61	4.25	5.88	4.38
Opportunity due to ECFA	3.95	4.25	3.92	3.13
Others	10.13	9.62	11.11	10.63

Note and source: See Table 2-4-1.

(2) “Own fund” was the main source of domestic investment, regardless of the size of an enterprise

Regardless of the size, over 80% of enterprises planned to use their “own fund” for domestic investment (over 84 percent for large and medium-sized enterprises and over 81% for small-sized enterprises). Over 50% of enterprises planned to use their “fund from financial institution” for domestic investment. Much fewer enterprises chose “publicly listed or OTC,” “outside investors,” or “issue corporate bond” as funding source for domestic investment (Table 2-4-5).

Table 2-4-5 Sources of Funding for Manufacturing Domestic Investment

Unit: %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
Own fund	85.53	87.47	84.31	81.25
Fund from financial institutions	55.39	55.03	58.17	53.75
Publicly listed or OTC	5.66	5.59	9.15	53.75
Outside investors	5.00	4.25	5.23	6.88
Issue corporate bond	4.74	6.94	2.61	0.63
Others	1.45	1.34	0.00	3.13

Note and source: See Table 2-4-1.

(3) “Tax concessions and other incentives” given by government was the top choice to enhance the willingness to investment, regardless of the size of an enterprise

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“Tax concessions and other incentives” given by government is the top choice to enhance the willingness to investment, regardless of the size of an enterprise, followed by “R&D subsidy” and “assistance in upgrade” for large and medium-sized enterprises, or by “assistance in upgrade” and “loans with favorite terms” for small-sized enterprises.

Table 2-4-6 Assistance Needed by Manufacturers with Willingness of Domestic Investment

Unit: %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
Tax concessions and other incentives	56.01	65.66	57.12	46.70
R&D subsidy	37.13	49.32	40.43	24.34
Assistance in upgrade	32.16	29.86	34.15	33.17
Loans with favorite terms	29.86	28.49	29.25	31.44
Increase quota of blue collar foreign employment	21.96	23.11	24.20	19.72
Help resolve the water, electricity and environmental assessment and other issues	18.89	21.19	19.75	16.34
Technology transfer counseling	13.92	15.98	14.24	11.88
Assistance in obtaining land	11.32	10.96	12.10	11.22
Assistance in brand name development	11.08	11.87	12.40	9.65
Shorten lead time of plant building	8.72	10.32	8.12	7.59
Release restrictions of foreign talent employment	7.34	7.58	6.28	7.92
Others	5.61	4.38	5.21	6.93

Note and source: See Table 2-4-1.

3. Challenges Faced by SMEs in Manufacturing Sector

(1) The top two challenges were “intensified competition within the industry” and “higher raw material cost”

Based on the third quarter *Manufacturing Investment and Operation of the Survey Report* by the Department of Statistics, Ministry of Economic Affairs, over 60 percent enterprises picked “intensified competition within the industry” as the top challenge, followed by “higher raw material cost” as the next challenge by over 50 percent enterprises regardless of the size (Table 2-4-7).

(2) The top internal challenge was “difficult to develop new business”

Based on the Survey Report, the top internal challenge was “difficult to develop new business” picked by over 61% of enterprises regardless of size.

Small and medium-sized enterprises ranked “lack of basic and professional manpower” and “insufficient product innovation” as the No. 2 and No. 3 internal challenges. More medium-sized enterprises were challenged by “inefficient production operation” than large and small-sized enterprises; more small-sized enterprises were challenged by “lack of basic and professional manpower” than large and medium-sized enterprises (Table 2-4-8).

Table 2-4-7 External Difficulties Faced by the Manufacturing Operation, 2014
(Multiple Responses)

Unit: %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
Intensified competition within the industry	66.0	73.9	63.6	60.1
Higher raw material cost	55.1	51.7	59.0	56.2
Rising labor cost	42.9	45.4	45.3	39.4
Decreased domestic demand	42.5	38.4	42.4	46.3
Decreased overseas demand	29.8	31.8	29.7	28.1
Variation of exchange rate	20.4	24.6	22.9	15.3
Tax burden	18.3	19.2	18.0	17.7
Tariff or other trade barriers	13.3	18.3	15.1	7.9
Law and regulation restriction	10.2	11.3	9.9	9.3
Environmental assessment issue	10.0	11.5	9.6	8.9
Difficulties in land acquisition	6.5	5.9	8.8	5.7
Difficulties in water and electricity acquisition	1.5	1.4	1.3	1.8
Others	3.5	3.0	3.5	4.0

Note: 1. The sample size of the survey is 2,916 enterprises, including 1,081 large enterprises, 634 medium-sized enterprises, and 1,201 small enterprises.

2. An enterprise with 200 employees or more is classified as a large enterprise; medium-sized enterprise: employees equal to 100 or more but less than 200; small enterprise: less than 100 employees.

Source: Ministry of Economic Affairs, *Manufacturing Investment and Operation of the Survey Report, Quarter 3, December 2014*.

Table 2-4-8 Internal Difficulties Faced by the Manufacturing Operation, 2014
(Multiple Responses)

Unit: %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
Difficult to develop new business	63.4	65.0	64.4	61.5
Lack of basic and professional manpower	31.1	28.3	32.3	33.1
Insufficient product innovation	25.1	29.4	27.6	20.0
High staff turnover rate	24.0	28.5	24.6	19.7
Unable to grasp the market demand	11.6	11.9	11.0	11.7
Lack of brand name image and reputation	11.6	12.9	11.0	10.8
Inefficient production operation	11.0	11.6	12.0	10.1
Unable to control product quality	8.6	8.1	9.5	8.7
Fund dispatching problems	6.3	4.1	4.4	9.4
Others	5.8	5.0	6.2	6.2

Note and source: See Table 2-4-7.

4. Overview of “Servitization” in Manufacturing

(1) Regardless of size, “designing” service was on top of the list of services

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Of the surveyed manufacturers, 45.8 percent of large enterprises, 37.1 percent of medium-sized enterprises and 22.2 percent of the small-sized enterprises offered services other than pure manufacturing of products.

Regardless of size, “designing” service was on top of the list of services (picked by about 50 percent of enterprises). Comparatively, higher percent of medium-sized enterprises offered services such as marketing, product value-added, and cross-industry alliance, while higher percent of small-sized enterprises offered services such as maintenance and testing (Table 2-4-9).

Table 2-4-9 Servitization in Manufacturing and Operation Approaches (Multiple Responses)

Unit: %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
No servitization in manufacturing	60.5	47.6	56.8	73.9
With servitization in manufacturing	34.2	45.8	37.1	22.2
Not yet but are willing to go for servitization in manufacturing	5.4	6.6	6.2	3.8
Operation approaches of servitization in manufacturing (multiple responses)				
Designing service	50.2	52.7	48.5	47.3
Repair service	38.1	37.8	35.4	40.9
Marketing service	37.6	35.9	42.0	37.1
Inspection service	30.4	30.0	29.2	32.3
Procurement service	26.4	28.1	26.6	23.0
Product value-added service	21.6	21.7	25.9	17.6
Logistics service	21.4	23.7	21.5	17.3
Cross-industry alliance	11.6	11.8	14.6	8.6
Others	1.5	2.1	0.7	1.0

Note and source: See Table 2-4-7.

(2) Regardless of size, “no need in business” was the main reason for no “Servitization”

Of the surveyed manufacturers, regardless of size, “no need in business” was the main reason for no “Servitization.” 68.3 percent of small-sized enterprises chose not to go for “Servitization,” much higher than 57.3 percent of large enterprises and 59.4 percent of small-sized enterprises.

Comparatively, much higher percent of small-sized enterprises picked “no need in business” and “lack of fund” for not going for “Servitization” than large and medium-sized enterprises did (Table 2-4-10).

(3) Priority list of needs to be expected from government measures to support “Servitization” in manufacturing sector

Based on the *Survey Report*, regardless of size, the top four needs to be expected from government measures to support “Servitization” in Manufacturing sector were “truly understand the needs of enterprises,” “funding,” “counseling and consultation,” and “talent training” (Table 2-4-11).

Table 2-4-10 Reasons of Not Yet Going for Servitization in Manufacturing (Multiple Responses)

Unit: %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
No need in business	63.1	57.3	59.4	68.3
Talent shortage	22.1	20.3	23.8	22.5
Lack of knowledge and technology	21.6	25.3	23.8	18.4
No relevant consultancy services and counseling measures	20.1	24.4	24.3	15.5
Lack of successful business role model	14.5	18.9	17.3	10.5
Lack of funds	8.9	4.3	7.5	12.4
Others	4.0	4.6	3.8	3.6

Note and source: See Table 2-4-7.

Table 2-4-11 Needs to Be Expected from Government Measures to Support Servitization Manufacturing (Multiple Responses)

Unit: %

Item	Total	Large enterprise	Medium-sized enterprise	Small-sized enterprise
Truly understand the needs of enterprises	43.6	42.7	43.9	44.3
Funding	38.4	41.2	42.0	34.1
Counseling and consultation	37.9	40.3	41.6	33.6
Talent training	37.4	40.8	40.1	32.9
Successful business role model	26.0	31.1	28.4	20.2
Strengthen policy and advocacy measures	22.9	27.8	24.8	17.5
Construct business cooperation platform	20.4	26.4	21.1	14.6
Strengthen R&D capability	17.8	22.9	17.8	13.2
Assist to build ICT equipment	14.6	15.6	16.1	12.8
Others	7.1	5.6	6.3	8.8

Note and source: See Table 2-4-7.

V Overview of SMEs in R&D, Innovation, and Business Development

Innovation, R&D, own technology, e-commerce and viable business model are very important for SMEs to remain competitive and profitable, and to develop new niche markets in ever changing environment. To measure enterprises' innovation and R&D impact, 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 strategies of SMEs, we will also analyze the original data from the *Manufacturing Investment and Operation of the Survey Report*, the *Commerce Operations Surveys* published by the Department of Statistics, Ministry of Economic Affairs, and other source, to provide a comprehensive picture of

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the current state of innovation, R&D, and e-commerce of Taiwan enterprises.

With the rising trend of “design led innovation,” Taiwan SMEs should start bold thinking to craft strategies more oriented toward driving innovation and value through integrating design element into the whole value added process of R&D, production, marketing and service, and redefining enterprise-customer relationship as “co-innovation.” The dawning of the era of the knowledge economy has had a huge impact on the macro environment for the manufacturing sector. Strategies that worked in the past - mass production, focusing on cost reduction, and working to grab market share - are no longer as effective as they used to be. Data from the annual surveys conducted by the Directorate General of Budget, Accounting and Statistics, Executive Yuan indicates that the performance of manufacturing in Taiwan as a whole has been deteriorating steadily. Given the growing importance of knowledge intensive business models, manufacturing enterprises are being forced to transform themselves. Companies need to focus on the two ends of the “smile curve”, building up their R&D capabilities and developing the ability to provide high value-added services. This process can be described as the “Servitization” of Manufacturing industry, with “designing” as of particular importance.

1. SMEs: Innovation and R&D Overview

(1) National R&D expenditure increased 5.47 percent in 2013

According to the data presented in the 2014 edition of Taiwan’s *Indicators of Science and Technology*, in 2013 total R&D expenditure in Taiwan came to NT\$454,891 million, rising 5.47 percent from 2012. 75.50 percent of this spending was in the business sector; 13.41 percent was undertaken by government; 10.77 percent was in the higher education sector, and just 0.32 percent was in the nonprofit sector. All sectors showed growth in 2013 except government. 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, 2009-2013

Sector	2009	2010	2011	2012	2013	Unit: Million NT\$, %	
						Ratio	Growth rate
All	367,174	394,960	413,293	431,296	454,891	100.00	5.47
Business	257,405	282,546	300,358	319,906	343,456	75.5	7.36
Public	61,587	63,020	62,546	61,172	60,993	13.41	-0.29
Higher education	46,823	47,970	48,978	48,898	48,987	10.77	0.18
Private non-profit	1,359	1,424	1,410	1,321	1,455	0.32	10.14

Source: Ministry of Science and Technology, *Indicators of Science and Technology*, 2014.

(2) R&D spending in the business sector: SMEs’ growth lower than large enterprises

In terms of size, 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 percent in 2008, 2.05 percent in 2009 and 4.46 percent in 2010. It was down 6.19 percent only in 2011, but grew 3.07 percent in 2012 and 4.75 percent in 2013. R&D spending by large enterprises had risen

consistently from 2008 to 2013, with a growth rate of 6.68 percent, 3.98 percent, 10.89 percent, 8.78 percent, 7.10 percent, and 7.79 percent respectively. The growth rates of R&D expenditure of large firms in recent four years (2009-2013) were significantly higher than the corresponding growth rates of SMEs (Table 2-5-2).

Table 2-5-2 Business Sector R&D Expenditure by Enterprise Size, 2009-2013

Unit: Million NT\$; %

Item	2009	2010	2011	2012	2013	Ratio	Growth rate
Total	257,405	282,546	300,358	319,906	343,455	100.00	7.36
SME sub-total	44,764	46,759	43,865	45,213	47,361	13.8	4.75
0 - 99 employees	23,600	23,115	23,431	24,725	24,701	7.2	-0.10
100 - 199 employees	21,164	23,644	20,434	20,488	22,660	6.6	10.60
Large enterprises sub-total	212,640	235,787	256,493	274,693	296,094	86.2	7.79
200 – 499 employees	35,401	38,530	40,889	45,561	46,593	13.6	2.27
500 employees or above	177,239	197,257	215,604	229,132	249,501	72.6	8.89

Source: See Table 2-5-1.

2. SMEs in Manufacturing: Innovation, R&D and E-commerce Overview

(1) 67.8 percent of medium-sized manufacturers and 35.6 percent of medium-sized manufacturers had their own R&D departments

Based on 2014 *Manufacturing Investment and Operation of the Survey Report*, large manufacturers typically have more capital to invest in R&D in multiple ways. Of the 2,916 surveyed manufacturers, 85.8 percent of large manufacturers had set up their own R&D department, significantly higher than that of medium-sized manufacturers (67.8 percent) and small-sized manufacturers (35.6 percent). However, among the 1,785 surveyed manufacturers who set up their own R&D department, small-sized manufacturers had the highest growth in percentage points (plus 3.8) in 2014 from 2013 than large manufacturers (plus 1.3) and medium-sized manufacturers (minus 0.7) (Table 2-5-3).

Table 2-5-3 Manufacturers with or without R&D Department, 2013-2014

Unit: Enterprises; %

Item	Total	Large enterprises	Medium-sized enterprises	Small-sized enterprises
With R&D sector	1,785	927	430	428
2013	55.1	84.5	68.5	31.8
2014	61.2	85.8	67.8	35.6
Without R&D sector	1,131	154	204	773
2013	44.9	15.5	31.5	68.2
2014	38.8	14.3	32.2	64.4

Note: An enterprise with 200 employees or more is classified as a large enterprise; medium-sized enterprise: employees equal to 100 or more but less than 200; small enterprise: less than 100 employees.

Source: Ministry of Economic Affairs, *Manufacturing Investment and Operation of the Survey Report, Quarter 3, December 2014*.

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(2) Top one motivation to set up own R&D: “product and service expansion” for medium-sized enterprises; “support production” for small-sized enterprises

Based on *Manufacturing Investment and Operation of the Survey Report*, among the 1,785 surveyed manufacturers who set up their own R&D department, over 50 percent of them pick the following top three motivations: “product and service expansion,” “support production,” and “grow market share or market expansion.” The top motivation to set up own R&D was “product and service expansion” for medium-sized enterprises; “support production” for small-sized enterprises (Table 2-5-4).

Table 2-5-4 Motivation of Manufacturers R&D Department Establishment, 2014 (Multiple Responses)

Unit: %

Item	Total	Large enterprises	Medium-sized enterprises	Small-sized enterprises
Product and service expansion	60.7	62.4	64.2	53.5
Support production	60.1	61.5	57.2	59.8
Grow market share or market expansion	59.7	60.2	63.5	54.7
Obtain advanced technology	47.5	54.3	44.4	35.8
Cost reduction	47.1	50.4	46.3	40.7
Grasp the technology development of competitors	28.6	28.9	31.6	24.8
Use of high-quality personnel	23.3	27.2	22.6	15.7
Measure of government tax cut or subsidy	11.3	14.9	8.4	6.5
Abundant technical and scientific resources	8.5	10.1	7.0	6.3
Prepare for technology transfer from parent company	8.4	9.7	7.9	5.8
Others	0.4	0.4	0.2	0.5

Note and source: See Table 2-5-3.

(3) No. one challenge for R&D in Manufacturing sector: “lack of R&D talent”

Regardless of size, the top four challenges were “lack of R&D talent,” “short product cycle due to fast changing demand,” “lack of technical information or unable to make breakthrough,” and “high turnover rate of R&D talent” (Table 2-5-5).

(4) About 19 percent of medium-sized manufacturers and 13 percent of small-sized manufacturers conducted or planned to set up e-commerce (mainly in B2B model)

Overall, 13.89 percent of all manufacturers conducted e-commerce in 2013. 14.55 percent of medium-sized manufacturers and 9.82 percent of small-sized manufacturers conducted e-commerce, far below 17.99 percent of large manufacturers that conducted e-commerce; 4.90 percent of medium-sized manufacturers and 3.47 percent of small-sized manufacturers planned to set up e-commerce, also below 5.66 percent of large manufacturers that planned to set up e-commerce.

Regardless of size, B2B is the most used model for e-commerce (55 percent for large and small-sized manufacturers; 45 percent for medium-sized manufacturers). Only a few adopted B2C or B2C-B2B combined model (Table 2-5-6).

Table 2-5-5 Difficulties Encountered in Manufacturing R & D, 2014 (Multiple Responses)

Unit: %

Item	Total	Large enterprises	Medium-sized enterprises	Small-sized enterprises
Lack of R&D talent	58.6	58.1	61.2	57.0
Short product cycle due to fast changing demand	42.9	47.0	36.5	40.2
Lack of technical information or unable to make breakthrough	29.1	28.7	32.1	26.9
High turnover rate of R&D talent	24.8	26.3	24.2	22.2
Competitors already invested or established patent barriers	16.5	20.0	15.1	10.5
Low R&D success rate	13.1	14.2	10.9	12.6
Shortage of fund	11.3	9.9	11.2	14.3
Others	3.8	4.2	3.3	3.3

Note and source: See Table 2-5-3.

Table 2-5-6 Whether Manufacturers Conduct E-commerce and Model for E-commerce, 2013

Unit: Enterprises; %

Item	Total	Large enterprises	Medium-sized enterprises	Small-sized enterprises
Whether manufacturers conduct e-commerce				
No plan to conduct e-commerce so far	2,413	836	526	1,051
ratio	81.52	76.35	80.55	86.72
With e-commerce	411	197	95	119
ratio	13.89	17.99	14.55	9.82
Planning to conduct e-commerce	136	62	32	42
ratio	4.59	5.66	4.90	3.47
Model for e-commerce				
B2C	25.41	24.32	30.71	22.98
B2B	53.20	55.98	44.88	55.28
B2B and B2C	21.39	19.69	24.41	21.74

Note: 1. The sample size of the survey is 2,960 enterprises, including 1,095 large enterprises, 653 medium-sized enterprises, and 1,212 small enterprises.

2. An enterprise with 200 employees or more is classified as a large enterprise; medium-sized enterprise: employees equal to 100 or more but less than 200; small enterprise: less than 100 employees.

Source: Ministry of Economic Affairs, *Manufacturing Investment and Operation of the Survey Report, Quarter 3, June, 2014*.

(5) About 80 percent manufacturers chose to build e-commerce platform by themselves, regardless of size

Regardless of size, among the manufacturers that conducted or planned to set up e-commerce, about 80% of them chose to build e-commerce platform to have more control over their own shopping process, followed by joining “PChome Mall” or “Yahoo! Kimo Super Mall” (about 30% combined), and suppliers’ platforms (Etmall, Momo, Umall, etc.) (Table 2-5-7).

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Table 2-5-7 E-commerce Platform Used by Manufacturers' Online Store, 2013
(Multiple Responses)

Unit: %

Item	Total	Large enterprises	Medium-sized enterprises	Small-sized enterprises
Build own platform	79.16	79.92	80.31	77.02
PChome Mall	18.28	17.76	22.83	15.53
Yahoo! Kimo Super Mall	12.98	14.67	10.24	12.42
Shopping site supplier	8.04	9.65	8.66	4.97
Rakuten	3.47	4.25	3.94	1.86
Taobao	2.01	1.54	3.15	1.86
Postmall	1.83	1.16	3.15	1.86
Ruten	1.65	0.39	3.15	2.48
Aircamel	0.00	0.00	0.00	0.00
Others	8.78	9.65	9.45	6.83

Note and source: See Table 2-5-6.

3. Overview of SMEs in Service Sector: Introducing “Design and Planning”

(1) 10.9 percent of wholesale SMEs had their own department of design or planning, while 38.6 percent of large wholesalers had their own department of design or planning

Based on the *Survey Report*, in 2012, 10.9 percent of wholesale SMEs had their own department of design or planning, far below 38.6 percent of large wholesale enterprises that had their own department of design or planning; 18.7 percent of wholesale SMEs had design or planning personnel but no department of design or planning, slightly over 16.7 percent of large wholesale enterprises that had design or planning personnel but no department of design or planning (Table 2-5-8).

Table 2-5-8 Whether Wholesalers Set Up Design or Planning Department, 2012

Unit: %

Item	Total	SMEs	Large enterprises
With design or planning department	14.58	10.93	38.60
Without design or planning department			
With design or planning personnel	18.46	18.73	16.67
Without design or planning personnel	66.96	70.33	44.74

Note: 1. The sample size of the survey is 3,044 enterprises, including 505 large enterprises and 2,539 SMEs. The sample size of wholesalers, of retailers and of restaurants are 1,728, 1,106 and 210, respectively.

2. An enterprise with 100 employees or more is classified as a large enterprise; SMEs: less than 100 employees.

Source: Department of Statistics, Ministry of Economic Affairs, *Commerce Operations Surveys*, September 2013.

28.9 percent of wholesale SMEs had the demand to have their own department of design or planning, far below 56.6 percent of large wholesale enterprises that had the demand to have their own department of design or planning; the top four demands of wholesale SMEs were “product appearance” (56.8 percent SMEs), “advertising design and planning,” “graphic visual design,” and “prototype and model;” the top demand of large wholesalers was “advertising design and planning” (over 60 percent) (Table 2-5-9).

Table 2-5-9 Whether or What Wholesalers Demand for Design or Planning, 2012 (Multiple Responses)

Unit: %

Item	Total	SMEs	Large enterprises
Whether wholesalers demand for design or planning			
No	67.48	71.13	43.42
Yes	32.52	28.87	56.58
What wholesalers demand for design or planning			
Product appearance	54.98	56.81	48.84
Advertising design and planning	51.07	47.11	64.34
Graphic visual plane	24.91	22.86	31.78
Prototype and model	18.15	16.86	22.48
Others	4.98	5.54	3.10

Note and source: See Table 2-5-8.

(2) 11.1 percent of retail SMEs had their own department of design or planning, while 54.0 percent of large retailers had their own department of design or planning; top demand was “advertising design and planning”

Based on the *Survey Report*, in 2012, 11.1 percent of retail SMEs had their own department of design or planning, far below 54.0 percent of large retailers had their own department of design or planning; 21.2 percent of retail SMEs had design or planning personnel but no department of design or planning, much higher than 14.9 percent of large wholesale enterprises that had design or planning personnel but no department of design or planning (Table 2-5-10).

Table 2-5-10 Whether Retailers Set Up Design or Planning Department, 2012

Unit: %

Item	Total	SMEs	Large enterprises
With design or planning department	19.44	11.11	53.95
Without design or planning department			
With design or planning personnel	19.98	21.21	14.88
Without design or planning personnel	60.58	67.68	31.16

Note and source: See Table 2-5-8.

35.6 percent of retail SMEs had the demand to have their own department of design or planning, far below 72.6 percent of large retailers that had the demand to have their own department of design or planning; the top four demands of retail SMEs were “advertising design and planning” (55.2 percent SMEs), “product appearance,” “graphic visual design,” and “prototype and model;” the top demand of large retailers was “advertising design and planning” (75 percent) (Table 2-5-11).

(3) 15.5 percent of SMEs in restaurant had their own department of design or planning, while 53.2 percent of large enterprises in restaurant had their own department of design or planning; top demand was “advertising design and planning”

Based on the *Survey Report*, in 2012, 15.5 percent of SMEs in hotel and restaurant had their own department of design or planning, far below 53.2 percent of large enterprises in hotel and restaurant had their own department of design or planning; 22.3 percent of SMEs in hotel and restaurant had

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design or planning personnel but no department of design or planning, slightly higher than 21.0 percent of large enterprises in hotel and restaurant that had design or planning personnel but no department of design or planning (Table 2-5-12).

Table 2-5-11 Whether or What Retailers Demand for Design or Planning, 2012 (Multiple Responses)

Unit: %

Item	Total	SMEs	Large enterprises
Whether retailers demand for design or planning			
No	57.23	64.42	27.44
Yes	42.77	35.58	72.56
What retailers demand for design or planning			
Advertising design and planning	61.73	55.21	75.00
Product appearance	49.89	49.84	50.00
Graphic visual plane	34.04	33.12	35.90
Prototype and model	13.32	13.88	12.18
Others	4.23	2.84	7.05

Note and source: See Table 2-5-8.

Table 2-5-12 Whether Enterprises in Restaurant Set Up Design or Planning Department, 2012

Unit: %

Item	Total	SMEs	Large enterprises
With design or planning department	26.67	15.54	53.23
Without design or planning department			
With design or planning personnel	21.90	22.30	20.97
Without design or planning personnel	51.43	62.16	25.81

Note and source: See Table 2-5-8.

46.6 percent of SMEs in hotel and restaurant had the demand to have their own department of design or planning, far below 75.8 percent of large enterprises in hotel and restaurant that had the demand to have their own department of design or planning; the top three demands of SMEs in hotel and restaurant were “advertising design and planning” (62.3 percent SMEs), “product appearance,” and “graphic visual design;” the top demand of large enterprises in hotel and restaurant was “advertising design and planning” (83.0%) (Table 2-5-13).

Table 2-5-13 Whether or What Enterprises in Restaurant Demand for Design or Planning, 2012 (Multiple Responses)

Unit: %

Item	Total	SMEs	Large enterprises
Whether enterprises in restaurant demand for design or planning			
No	44.76	53.38	24.19
Yes	55.24	46.62	75.81
What enterprises in restaurant demand for design or planning			
Advertising design and planning	70.69	62.32	82.98
Product appearance	42.24	44.93	38.30
Graphic visual plane	23.28	27.54	17.02

Chapter 2 Major Trends in the Development of SMEs

Item	Total	SMEs	Large enterprises
Prototype and model	7.76	11.59	2.13
Others	2.59	1.45	4.26

Note and source: See Table 2-5-8.

CHAPTER 3

Financial and Funding Analysis of SMEs

Financial analysis has a vital role to play in understanding of the current state of Taiwan's SMEs and the outlook for their future development. The first two sections of this chapter presents an overview of the financial status of Taiwan's SMEs as well as ratio analysis, using Business Income Tax Return data for 2013 provided by the Fiscal Information Agency of the Ministry of Finance; there is thus a one-year time lag as compared with the data presented in the other chapters of this *White Paper*. The third section examines the interaction between SMEs and the banking sector, using survey data from the Central Bank of the Republic of China (Taiwan) or statistics collected by the Financial Supervisory Commission.

I SMEs: Consolidated Financial Analysis

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

1. Asset Allocation Analysis

(1) Cash increase showing conservatism

As can be seen from Table 3-1-1, for SMEs in 2013, the shares of total assets accounted for by current assets and current liabilities both rose modestly. Cash share of total assets up by 1.60 percentage points contributed the most to the rise of current asset share of 1.21 percentage points, showing conservatism.

(2) Funds and long-term investment dropped

Funds and 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 SMEs, the long-term investments share of total assets declined by 1.86 percentage points in 2013, combined with cash increase mentioned above, indicating conservatism in liquidity facing challenging environment with high degree of uncertainty.

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(3) Fixed assets increased modestly

Fixed assets share of total rose modestly by 0.7 percentage points in 2013 for SMEs, combined with decrease of funds and long-term investments mentioned above, slight increase of land and buildings, and rise of machinery, indicating guarded optimism in long-term growth and conservatism in short-term liquidity (Table 3-1-1).

Table 3-1-1 Consolidated Financial Data for Taiwanese Enterprises, 2012-2013

Unit: %

Item	Enterprise size / Year		SMEs		Large enterprises	
			2012	2013	2012	2013
Current assets			44.67	45.88	46.09	57.67
Cash			15.30	16.90	17.69	21.51
Accounts receivable			12.31	11.79	17.55	28.55
Inventories			14.32	14.13	8.75	5.09
Advance payments			1.28	1.39	0.69	0.45
Other current assets			1.46	1.66	1.41	2.07
Funds and long-term investments			31.66	29.80	24.76	26.03
Fixed assets			20.86	21.56	24.90	11.55
Land and buildings			12.77	13.40	10.60	5.37
Machinery			6.86	6.90	12.06	5.50
Other fixed assets			1.23	1.26	2.24	0.68
Intangible and other assets			2.81	2.76	4.25	4.75
Total assets = liabilities + net worth			100.00	100.00	100.00	100.00
Liabilities			50.87	52.64	60.79	77.22
Current liabilities			42.30	44.58	44.64	52.35
Short-term loans			11.26	13.04	25.01	37.23
Accounts payable			12.95	13.02	13.74	7.75
Income received in advance			3.21	3.76	2.68	3.41
Other current liabilities			14.88	14.76	3.21	3.96
Long-term liabilities			7.32	6.81	11.38	15.48
Other liabilities			1.25	1.25	4.78	9.39
Net worth			49.13	47.36	39.21	22.78

Note: Figures in 2012 are recalculated using corrected Business Income Tax Return data for 2012.

Source: Fiscal Information Agency, Ministry of Finance, Business Income Tax Return data, 2012-2013.

2. Analysis of SME Financial Structure

Looking at the SMEs' debt structure with above examination of the asset allocation of SMEs can give a more comprehensive picture of the SMEs' overall financial status.

(1) Share of current liabilities rose faster than that of current assets, adding short-term pressure

As can be seen from Table 3-1-1, in 2013 SMEs' share of current liabilities rose 2.28 percentage points, almost doubled the increased share (1.21 percentage points) of current assets, adding short-term pressure.

(2) Slight decline in long-term liabilities

In 2013, SMEs' long-term liabilities ratio declined slightly by 0.51 percentage points to 6.81 percent, while large enterprises long-term liabilities ratio rose sharply by 4.10 percentage points to 15.48 percent. 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 increase of long-term liabilities ratio in large enterprises that suggested a much optimistic stance to take advantage of low cost funding (Table 3-1-1).

3. Analysis of SMEs' Profit and Loss

(1) Gross margin improved slightly

As regards operating costs share of net revenue, operating costs of both large enterprises and SMEs declined slightly from 2012 to 2013. As a result, both SMEs and large enterprises showed slight gross margin improvement in 2013 (Table 3-1-2).

Table 3-1-2 Profit and Loss of Taiwanese Enterprises, 2012–2013

Unit: %

Item	Enterprise size / Year	SMEs		Large enterprises	
		2012	2013	2012	2013
Net operating revenue		100.00	100.00	100.00	100.00
Minus: Operating costs		78.82	78.79	88.77	88.51
Gross operating profit		21.18	21.21	11.23	11.49
Minus: Operating expenses		18.83	18.69	8.33	7.93
Net operating profit		2.36	2.53	2.91	3.56
Plus: Non-operating profit		1.74	1.55	5.94	3.15
Minus: Interest expenses		0.52	0.55	0.42	0.36
Minus: Other non-operating expenses		0.64	0.56	5.29	1.79
Current term profit (before tax)		2.94	2.98	3.13	4.55

Note: Figures in 2012 are recalculated using corrected Business Income Tax Return data for 2012.

Source: Fiscal Information Agency, Ministry of Finance, Business Income Tax Return data, 2012–2013.

(2) Operating expense declined slightly

The term “operating expenses” is used to refer to expenditure derived from an enterprise's selling, general & administrative (SG&A) activities, including sales, management, and R&D expenses, and so on. Regardless of size, firms need to constantly think of ways to cut costs and reduce operating expenses.

In 2013, SMEs' operating expenses declined slightly by 0.14 percentage points to 18.69 percent; large enterprises' operating expenses was down by 0.40 percentage points to 7.93 percent. 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 (Table 3-1-2).

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(3) Net operating profit improved with lower operating costs and expense

In 2013, SMEs' net operating profit improved 0.17 percentage points to 2.53 percent with lower operating costs and expense; large enterprises showed similar pattern but much stronger improvement as their net operating profit rose 0.65 percentage points to 3.56 percent with lower operating costs and expense (Table 3-1-2).

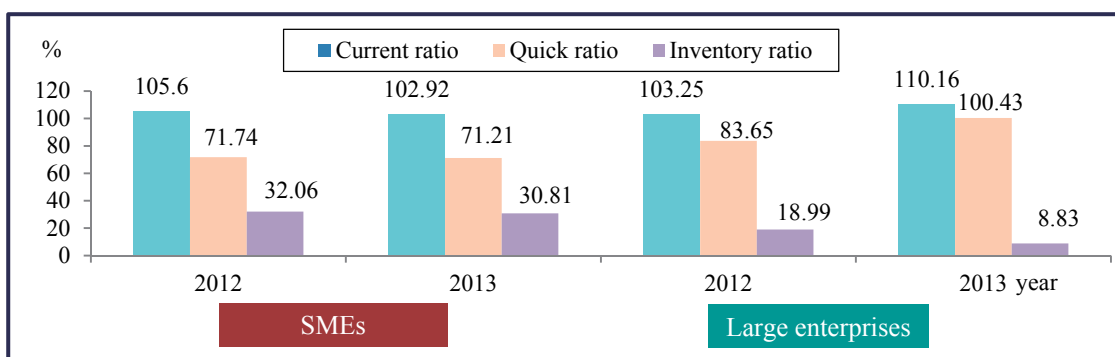
II Analysis of SMEs' Financial Ratios

1. SMEs' Short-Term Debt Servicing Ability Eroded Slightly

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 percent, indicating that the enterprise has NT\$2 of current assets available to repay every NT\$1 in current liabilities (exception: companies with superior cash generation capability and/or fast turnover ratios could maintain much lower current ratio, hence superior financial efficiency). The reference value for the quick ratio is 100 percent, 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 2013, the current ratio (down 2.68 percentage points), quick ratio, and inventory ratio of SMEs all declined; they stood at 102.92 percent, 71.21 percent, and 30.81 percent, respectively. These ratios showed that SMEs short-term repayment ability deteriorated. On the other hand, the current ratio of large enterprises rose sharply from 103.25 percent to 110.16, an increase of 6.91 percentage points, indicating much higher short-term liquidity and debt servicing ability. 2013 also saw huge improvement in large enterprises' quick ratio (up 16.78 percentage points) and a quick decline of inventory ratio by 10.16 percentage points (Figure 3-2-1).

Figure 3-2-1 Short-Term Liquidity of Taiwanese Enterprises, 2012-2013



Note:

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).
4. Figures in 2012 are recalculated using corrected Business Income Tax Return data for 2012.

Source: Fiscal Information Agency, Ministry of Finance, Business Income Tax Return data, 2012-2013.

2. SMEs: Declining Long-Term Stability with Rising Debt-to-Net-Worth Ratio

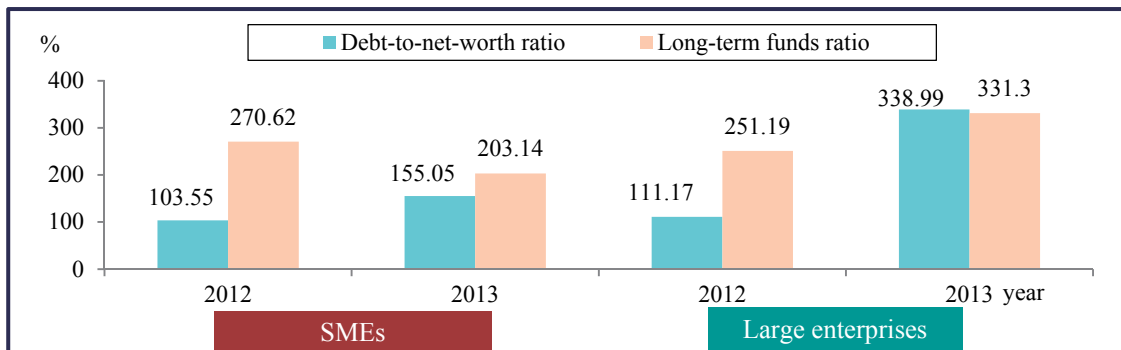
For the debt-to-net-worth ratio, a reference value of 100 percent is normally used, indicating that the enterprise has NT\$1 of capital available for every NT\$1 of debt. The higher the debt-to-net-worth ratio, the more heavily leveraged the enterprise is.

In 2012, the average debt-to-net-worth ratio of SMEs was 103.55 percent; in 2013 it rose significantly by 51.50 percentage points to 155.05 percent. For large enterprises, the debt-to-net-worth ratio in 2013 rose sharply by 227.82 percentage points to 338.99 percent (Figure 3-2-2).

The fact that the SMEs' debt-to-net-worth ratio was elevated compared to the reference value meant higher credit risk, and potentially declining long-term financial stability. 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 to achieve higher earnings; however, enterprises must be careful not to become over-leveraged, otherwise the firm's financial health may be threatened.

The long-term funds ratio is mainly used to gauge whether a firm's long-term funding operations are appropriate. Ideally, enterprises should rely mainly on long-term funds for their funding of fixed asset purchases. In 2013, the long-term funds ratios of SMEs fell substantially to 203.14 percent, down 67.48 percentage points. During the same period, the long-term funds ratios of large enterprises rose substantially to 331.30 percent, up 80.11 percentage points. They were much closer to the reference value of 100 percent. This indicated that SMEs assumed more credit risk year on year, however, they were still far conservative than large enterprises which had much higher debt-to-net-worth ratio but at the same time had more resource in investment as shown by much higher long-term funds ratio (Figure 3-2-2).

Figure 3-2-2 Long-Term Stability of Taiwanese Enterprises in 2012 and 2013



Note:

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).
3. Figures in 2012 are recalculated using corrected Business Income Tax Return data for 2012.

Source: Fiscal Information Agency, Ministry of Finance, Business Income Tax Return data, 2012-2013.

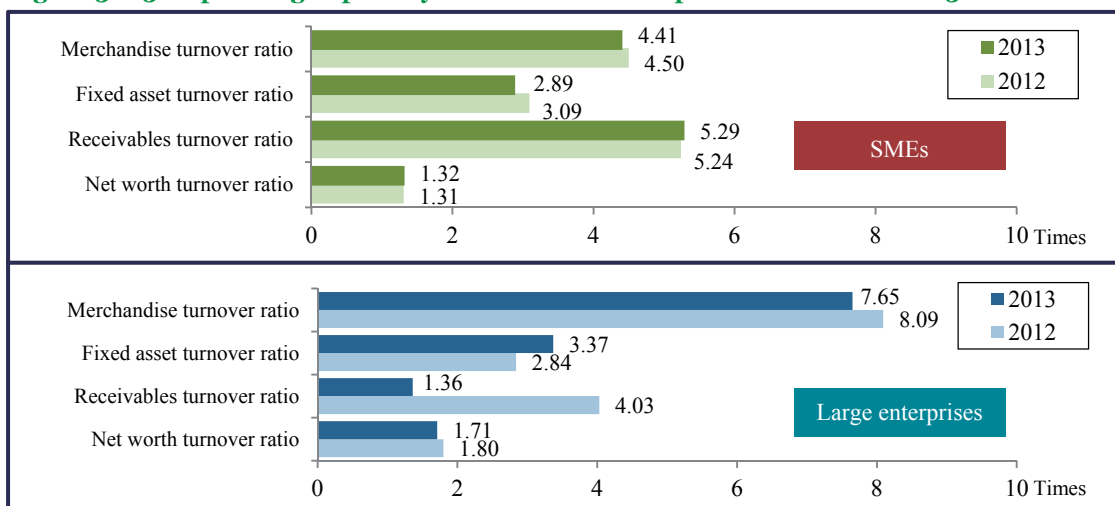
3. SMEs' Operational Efficiency Remained Stable

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 income on its net worth than a company with a low turnover rate.

Examination of the data in 2013 shows that receivables turnover for SMEs rose slightly to 5.29 from 5.24 in 2012, while merchandise turnover decreased slightly from 4.50 to 4.41. Receivables turnover for large enterprises fell sharply to 1.36 from 4.03 in 2012, and merchandise turnover fell modestly from 8.09 to 7.65, suggesting that the SMEs' operating efficiency remained stable while that of the large enterprises deteriorated significantly in 2013 (Figure 3-2-3).

Examination of the net worth turnover and fixed asset turnover indicators shows that, for SMEs, fixed asset turnover declined from 3.09 in 2012 to 2.89 in 2013, while net worth turnover remained stable from 1.31 to 1.32. For large enterprises, fixed asset turnover rose from 2.84 in 2012 to 3.37 in 2013, while net worth turnover declined from 1.80 to 1.71. It is clear that SMEs performed relatively worse in fixed asset efficiency as they lacked the scale that large enterprises had (Figure 3-2-3).

Figure 3-2-3 Operating Capability of Taiwanese Enterprises in 2012 and 2013



Note:

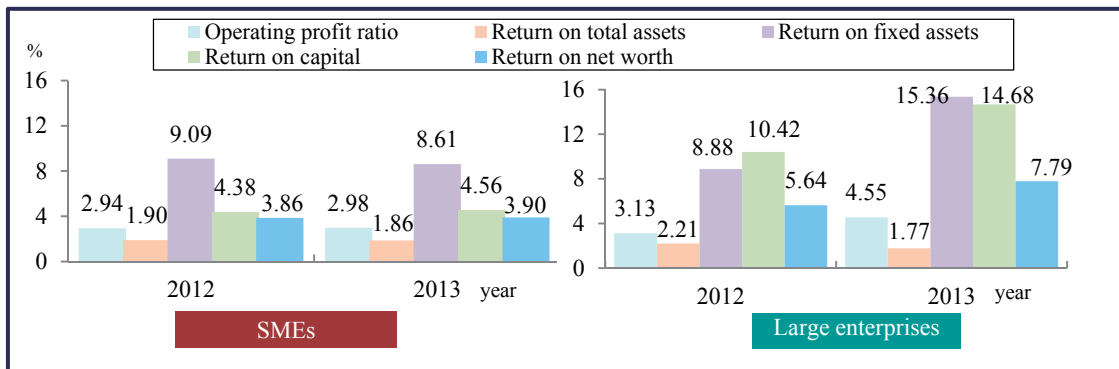
1. Net worth turnover ratio = net sales / net worth. 2. Receivables turnover ratio = net sales / receivables.
3. Fixed asset turnover ratio = net sales / fixed assets. 4. Merchandise turnover ratio = net sales / inventories.
5. Figures in 2012 are recalculated using corrected Business Income Tax Return data for 2012.

Source: Fiscal Information Agency, Ministry of Finance, Business Income Tax Return data, 2012-2013.

4. Improved Profitability

2013 saw an obvious improvement profitability for both SMEs and large enterprises, reflected in three profitability indicators - including operating profits, return on capital, and return on net worth. Relatively, large enterprises performed much better than SMEs in three indicators. Large enterprises also performed far better in return on fixed assets due to the scale advantage, but slightly underperformed in return on total assets (Figure 3-2-4).

Figure 3-2-4 Profitability of Taiwanese Enterprises in 2012 and 2013



Note:

1. Operating profit ratio = current profit ÷ net operating income × 100%.
2. Return on total assets = current profit ÷ total assets × 100%.
3. Return on fixed assets = current profit ÷ fixed assets × 100%.
4. Return on capital = current profit ÷ net worth × 100%.
5. Return on net worth = current profit ÷ net worth × 100%.
6. Figures in 2012 are recalculated using corrected Business Income Tax Return data for 2012.

Source: Fiscal Information Agency, Ministry of Finance, Business Income Tax Return data, 2012-2013.

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. Ready 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; the channels of finance are direct financing through financial markets (stock and bond) and indirect financing through financial intermediaries, such as banks and finance companies.

1. Indirect Financing Remains Main Funding Source

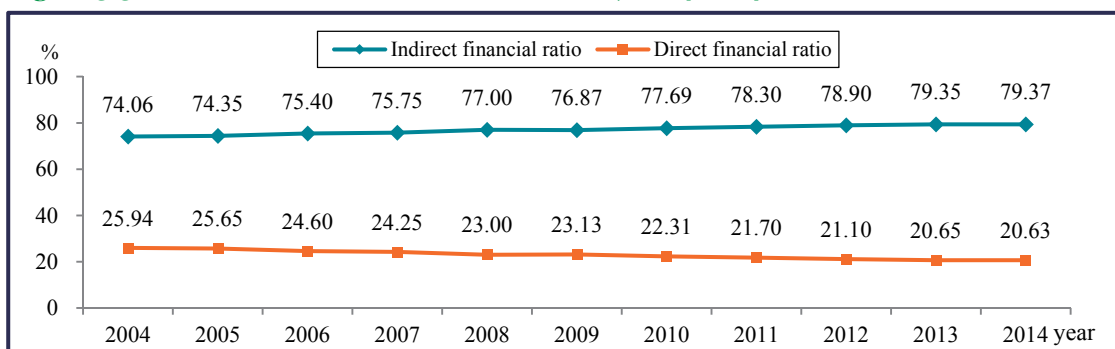
The trend towards diversification in financial services has been accompanied by a similar broadening of the funding channels available to business enterprises. However, SMEs and their owners tend to have insufficient knowledge of the range of financing tools that are now available, and in many cases they are unable to provide the comprehensive financial statements needed to secure direct financing. As a result, indirect financing has been growing for SMEs with the help from the government policy measures, while direct financing currently accounts for only a very small percentage of overall SME

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financing, partly attributable to elevated stock market volatility in global financial crisis and the ensuing European debt crisis.

According to the report *Direct Financial and Indirect Financial Stock Analysis*, compiled by Central Bank of the Republic of China (Taiwan), since 2004, indirect financing continued to show steady growth while the proportion of direct financing has been declining, but the growing pace of indirect financing slowdown in recent years. In 2014 indirect financing accounted for 79.37 percent while the remaining 20.63 percent was direct financing. (Figure 3-3-1)

Figure 3-3-1 Direct and Indirect Financial Ratios, 2004-2014

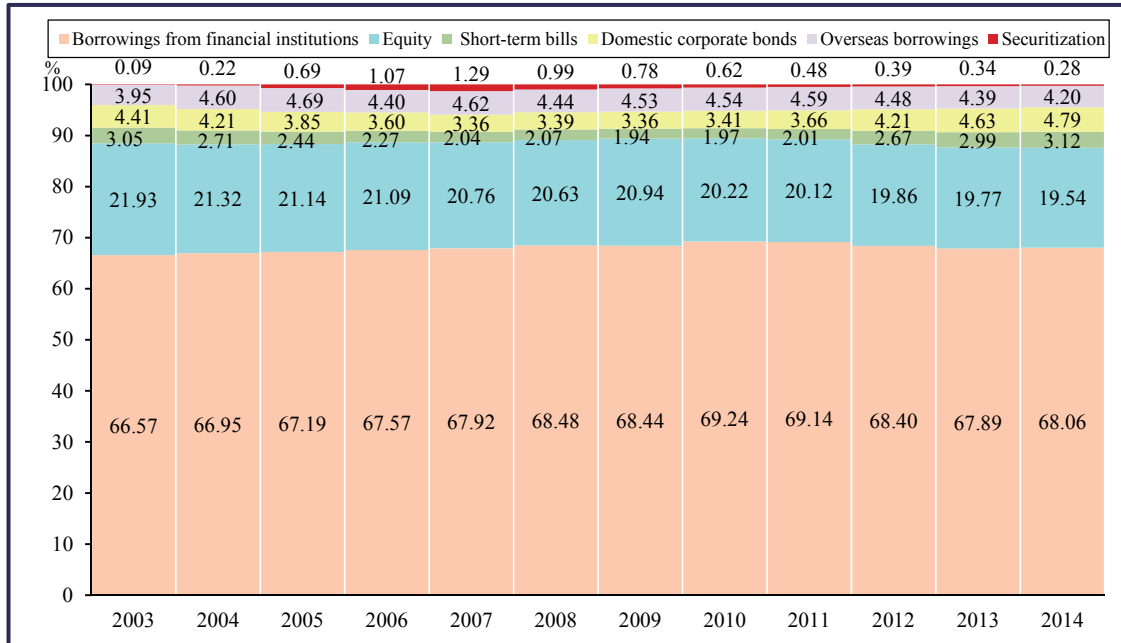


Source: Central Bank of the Republic of China, *Direct Financial and Indirect Financial Stock Analysis*, May 2015.

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 accounting for 68.06 percent of the total debt in 2014 for all enterprises. The direct financing such as equity and securitization accounted for a small percentage of overall financing (19.54 percent and 0.28 percent, respectively) and trended down partly attributable to elevated stock market volatility after global financial crisis and the ensuing European debt crisis. Share of domestic corporate bonds and short-term bills picked up modestly (4.79 percent and 3.12 percent, respectively) due to ultra-low interest rate aggressive monetary easing. Since 2011, share of overseas borrowings has been down from 4.59 percent to 4.20 percent in 2014 (Figure 3-3-2).

2. Borrowing Cost Was Down Slightly in 2014

Borrowing cost, measured by the average interest rate on new loans extended by Taiwan's five largest banks was down slightly at 1.68 percent in 2014 from 1.70 percent in 2013. From June 2010 to July 2011, the Central Bank increases its benchmark discount rate five times from 1.250 percent to 1.875 percent 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 8.26 percent in 1998 to 2.24 percent in 2004. In 2005, the rate rose to 2.31 percent, and in 2008 it climbed further to 2.80 percent. The average interest rate on new loans fell back to 1.50 percent in 2009 and remained low over the course of 2009 to 2014 due to aggressive easing of the Central Bank amid global financial crisis and recession (Figure 3-3-3).

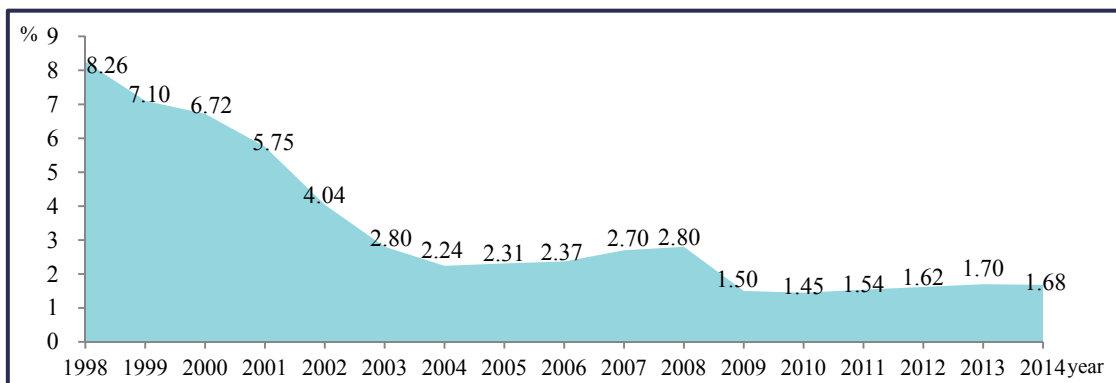
Figure 3-3-2 Comparison of Enterprise Financing Channels, 2003–2014

Note: 1. Financial institutions include Central Bank, other monetary institutes and life insurance companies.

2. Financial institutions loan includes collection and bad debt write-off.

3. Enterprise financing channels do not include financial institutions investments and government bond.

Source: Central Bank of the Republic of China, *Direct Financial and Indirect Financial Stock Analysis*, May 2015.

Figure 3-3-3 The Average Interest Rate on New Loans Extended by Taiwan's Five Largest Banks, 1998–2014

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

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

Source: Central Bank of the Republic of China, Statistical database, accessed May 2015, <http://www.pxweb.cbc.gov.tw/dialog/statfile9.asp>.

3. SMEs: Narrow Funding Sources

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

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needed to secure direct financing. As a result, SMEs' funding sources were mostly limited to borrowings from financial institutions (47.67 percent) and commercial credit (51.61), a combined share of 99.28 percent in 2014. Large enterprises' share of funding from domestic corporate bonds increased to 5.06 percent in 2014, showing growing incentive to take advantage of low cost funding (Table 3-3-1).

Table 3-3-1 Corporate Liability Structure as of the End of 2014

Unit: Thousand NT\$; %

Item	Large enterprises		Medium-sized enterprises		Small-sized enterprises	
	Amount	Share	Amount	Share	Amount	Share
Total liabilities	19,537,947,939	100.00	4,329,638,929	100.00	885,296,963	100.00
Borrowings from financial institutions	7,788,666,591	39.86	2,215,163,801	51.16	422,047,254	47.67
Government loans	14,763,460	0.08	2,804,465	0.06	147,039	0.02
Borrowings from firms and individuals	263,961,835	1.35	29,678,503	0.69	5,123,231	0.58
Overseas borrowings	80,942,534	0.41	1,580,987	0.04	140,513	0.02
Transactions with repurchase clause	-	-	-	-	-	-
Short-term bills	496,402,919	2.54	22,052,191	0.51	393,559	0.04
Domestic corporate bonds	988,775,561	5.06	-	-	-	-
Overseas securities	122,900,202	0.63	5,643	0.00	-	-
Commercial credit (trading liabilities)	9,342,145,338	47.82	2,040,789,088	47.14	456,868,503	51.61
Provisions and other liabilities	439,389,499	2.25	17,564,252	0.41	576,864	0.07

Note:

1. “-” denotes no data available or data uncertain; “0” is used to denote any figure of less than NT\$500.

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

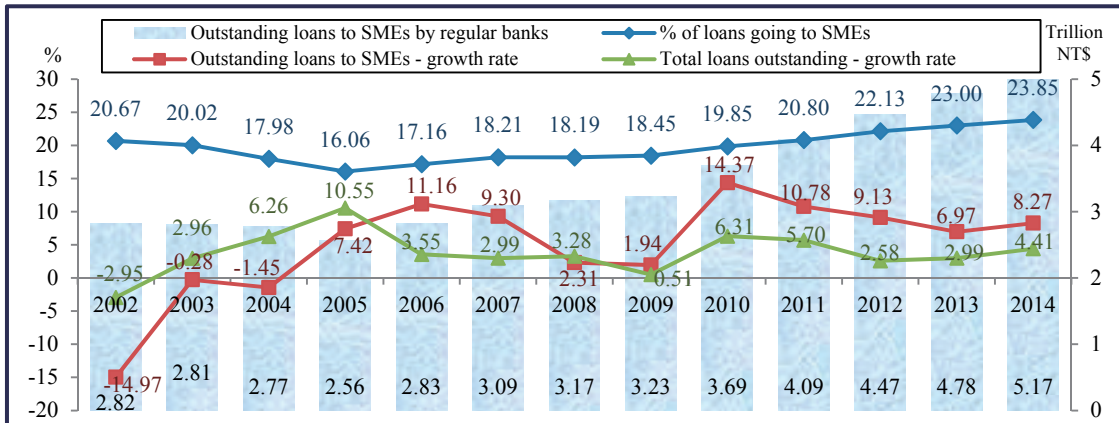
3. An enterprise with total asset more than NT\$300 million is classified as a large enterprise; a medium-sized enterprise: between NT\$25 million and NT\$300 million; a small enterprises: less than NT\$25 million.

Source: Central Bank of the Republic of China, *Survey of the Financial Conditions of Private and Public Enterprises*, January 2015.

4. Continuous Increase in Total Bank Loans to SMEs in 2014; State-Run Banks Accounted for the Most of the Loans to SMEs

As of the end of 2014, 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 over NT\$5 trillion, a record high, representing an increase of 8.27 percent compared to the end of 2013, significantly higher than the 4.41 percent overall growth rate of outstanding loans to all enterprises from ordinary commercial banks in Taiwan, mostly driven by government measures to strengthen SME financing from domestic banks. Share of total outstanding loans for SMEs also increased to 23.85 percent (Figure 3-3-4).

The top 10 banks with loans outstanding to SMEs are mostly state-run banks, with the market share up to 72.61 percent in 2014, of which 64.85 percent came from the top 8 state-run banks. The concentration, share of top 10 and top 8 banks was down slightly from the previous year, at 73.27 percent and 65.49 percent, respectively (Table 3-3-2).

Figure 3-3-4 Changes in Bank Loans to SMEs by Regular Banks, 2002-2014

Note: Total loans outstanding = (regular banks' outstanding loans to SMEs, overdue loans included) ÷ (loans to SMEs as a percentage of total loans).

Source: Banking Bureau, Financial Supervisory Commission, *Statistics of Banking Business*, 2002-2014.

Table 3-3-2 Top 10 Banks by Amount of Loans to SMEs in 2014

Unit: Million NT\$; %

Bank	Loans outstanding	Market share	Loans to SMEs as percent of total loans
Total	3,754,309	72.61	-
First Commercial Bank	585,538	11.32	47.11
Taiwan Cooperative Bank	520,200	10.06	31.07
Taiwan Business Bank	431,658	8.35	46.12
Hua Nan Commercial Bank	414,658	8.02	31.78
Chang Hwa Commercial Bank	363,930	7.04	33.96
Mega International Commercial Bank	359,006	6.94	31.21
Bank of Taiwan	343,229	6.64	16.24
Land Bank of Taiwan	334,901	6.48	19.12
E. Sun Commercial Bank	239,965	4.64	29.79
Taichung Commercial Bank	161,224	3.12	43.53

Notes: "-": not applicable.

Source: Banking Bureau, Financial Supervisory Commission, *Statistics of Banking Business*, 2015.

5. Private Banks Active in Lending to SMEs

Along with a wave of global monetary easing and the introduction of various government measures of providing preferential loans to SMEs, private banks' SME loans increased substantially in 2013 and 2014 as showed in Financial Supervisory Commission data. In terms of annual growth rate from 2013 to 2014, the top 10 private banks saw SME loans growth between 2.47 percent and 28.93 percent (except slight drop of one bank: Bank SinoPac), with loan balances between NT\$91 billion and NT\$240 billion (Table 3-3-3).

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Table 3-3-3 Top 10 Private Banks by Amount of Loans to SMEs in 2014

Unit: Million NT\$, %

Bank	Loans outstanding by the end of 2013	Loans outstanding by the end of 2014	Annual growth rate
E. Sun Commercial Bank	219,041	239,965	9.55%
Taichung Commercial Bank	149,172	161,224	8.08%
The Shanghai Commercial & Savings Bank	152,545	156,315	2.47%
CTBC Bank	111,758	128,686	15.15%
Shin Kong Bank	111,467	127,283	14.19%
Bank SinoPac	122,183	120,977	-0.99%
Cathay United Bank	107,550	116,454	8.28%
Yuanta Bank	83,423	94,360	13.11%
Taipei Fubon Bank	81,685	93,431	14.38%
Taishin International Bank	70,460	90,843	28.93%

Source: Banking Bureau, Financial Supervisory Commission, *Statistics of Banking Business*, 2015.

6. Rise of the Crowdfunding

Crowdfunding, once a niche model for those who couldn't get traditional financing, has gone mainstream. It is the process of raising money to fund what is typically a project or business venture through many donors using an online platform. Active global crowdfunding platforms generated \$16.2 billion in 2014 - a figure that is expected to more than double in 2015 to \$34.4 billion, according to crowdfunding research firm Massolution. That explosive growth has led to innovations, and Taiwan entrepreneurs, typically in tourism, cultural and creative design, are racing to keep up with the changes. In-depth discussion on this topic is presented in Chapter 8.

CHAPTER 4

SMEs: Human Resources

Global economy generally improved in 2014 from 2103. Taiwan's economic growth rate of 3.77 percent was the highest among the Asian tigers in 2014. In the first half of 2014, PMI (Purchasing Managers Index) was at highest and remained above 55 much longer than 2013, showing robust consecutive month expansion. However, the second half of 2014 saw downward trend of PMI until below 50 in November, and then back to 50.1 in December. Like PMI, the indicators by The National Development Council showed similar trend. Months from February to November of 2014 were given a "green light," longer than 2013, denoting strong and steady growth. The unemployment rate averaged 3.96 percent over the course of the year, a drop of 0.22 percentage points from 2013 (4.18 percent) with slightly improved labor participation rate at 58.54 percent.

This chapter is divided into three sections. Section I examines SME human resources utilization; Section II discusses working conditions; Section III covers talent development in 2014. An SME is defined as an enterprise with less than 200 paid employees in Mining and Quarrying, Manufacturing, and Construction industries, or an enterprise with less than 100 paid employees in other industries.

I Labor Utilization by SMEs

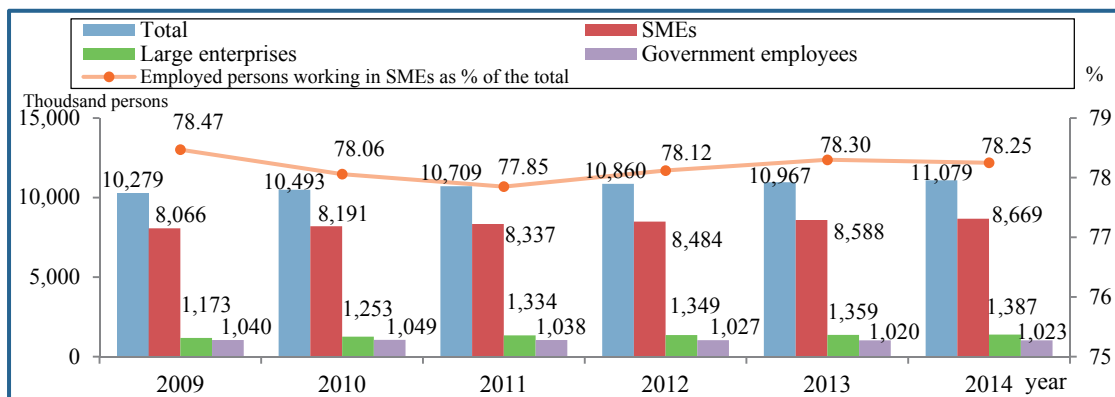
1. SMEs Provided Labor Market Stability

In 2014, employed persons (including employers, own-account workers, paid employees and unpaid family workers) in Taiwan totaled 11,079,000 people. The number of employed persons working in SMEs in Taiwan totaled 8,669,000, up 0.95 percent and accounted for 78.25 percent of all employed persons in Taiwan; large enterprises employed 1,387,000 persons and accounted for 12.52 percent, up 2.04 percent; the government employed 1,023,000 persons and accounted for 9.23 percent, up 0.27 percent.

Compared to large enterprise, SMEs have functioned as a more stabilizing force in labor market through business many cycles. In 2009, the total number of employed persons in Taiwan decreased by 1.19 percent after the global financial crisis; while number of employed persons in large enterprises fell 20.69 percent, SMEs still managed to hire 1.26 percent more persons (or 100,000 more). From 2010 to 2014 SMEs continued to hire more amid multiple challenges from tough business environment, showing consistent growth at 1.55 percent (or 125,000 in 2010), 1.78 percent (or 146,000 in 2011), 1.76 percent (147,000 in 2012), and 1.22 percent (or 104,000 in 2013) (Figure 4-1-1).

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Figure 4-1-1 The Number of Employed Persons in Taiwan, 2009-2014

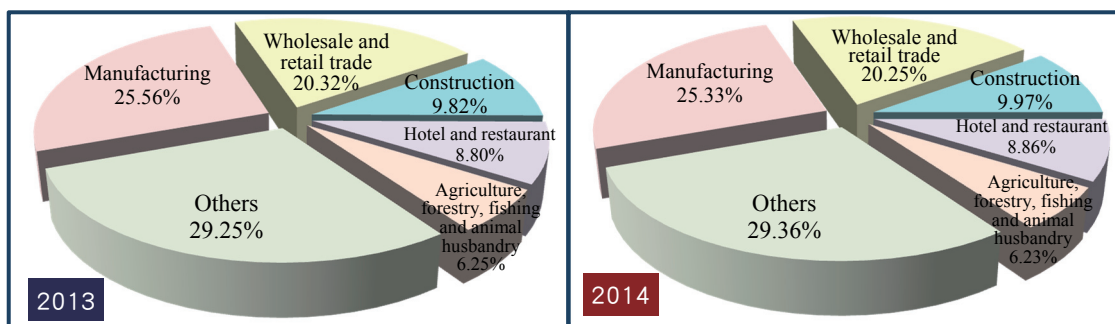


Note: An SME is defined as an enterprise with less than 200 paid employees in Mining and Quarrying, Manufacturing, and Construction industries, or an enterprise with less than 100 paid employees in other industries.

Source: Directorate-General of Budget, Accounting and Statistics (DGBAS), Manpower Survey data, 2009-2014.

In terms of industries, the number of employed persons working in SMEs in the Manufacturing sector in 2014 stood at 2,196,000, accounting for 25.33 percent of all SME employees. The Wholesale and Retail Trade industry had the second largest number of employed persons working in SMEs, or 1,756,000 (20.25 percent), followed by the Construction industry, with 865,000 employees (9.97 percent). 2014 saw employment growth in all sectors with stable distribution (Figure 4-1-2).

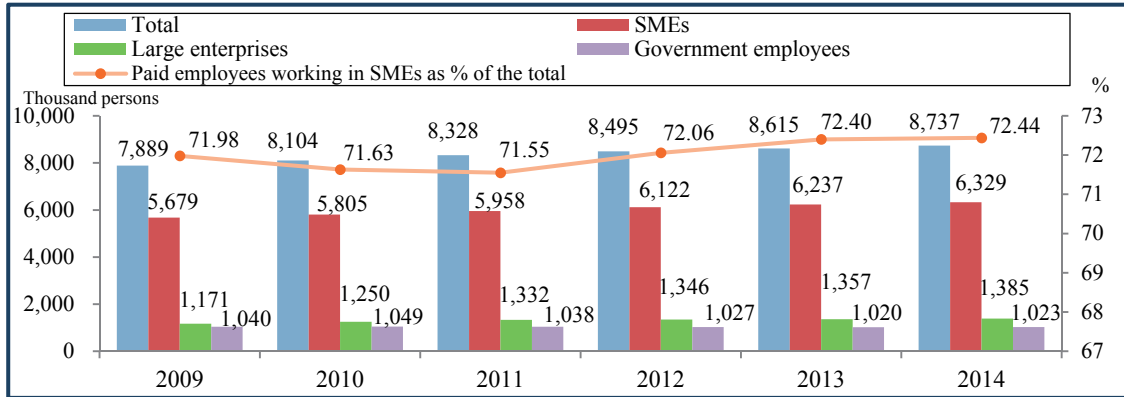
Figure 4-1-2 Top Five Industry Shares of Employed Persons Working in SMEs, 2013-2014



Note and source: See Figure 4-1-1.

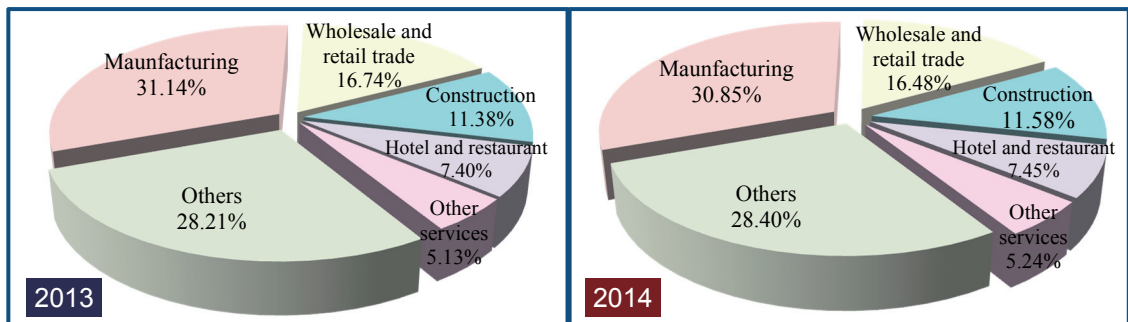
2. 72 Percent Paid Employees Working for SMEs in 2014

The total number of paid employees in Taiwan averaged 8,737,000 in 2014 (including government employees and private company employees), representing an increase of 1.42 percent from 2013; of the total paid employees, 6,329,000 or 72.44 percent were working in SMEs, up 1.48 percent compared to 2013; paid employees working in large enterprises and government was down up 2.06 percent and 0.29 percent, respectively. Share of paid employees working in SMEs has increased consistently since 2011 (Figure 4-1-3).

Figure 4-1-3 The Number of Paid Employees in Taiwan, 2009-2014

Note and source: See Figure 4-1-1.

In terms of industry distribution, paid employees showed the same pattern as employed persons. The number of paid employees working in SMEs in the Manufacturing sector in 2013 stood at 1,952,000, accounting for 30.85 percent of all SME paid employees. The Wholesale and Retail Trade industry had the second largest number of employed persons working in SMEs, or 1,043,000 (16.48 percent), followed by the Construction industry, with 733,000 employees (11.58 percent) (Figure 4-1-4).

Figure 4-1-4 Top Five Industry Shares of Paid Employees Working in SMEs, 2013-2014

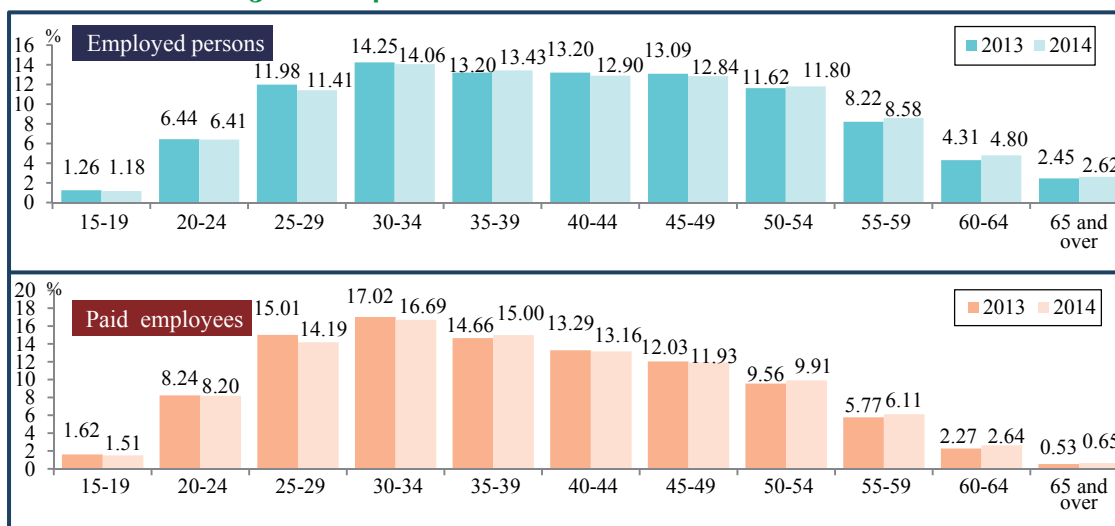
Note and source: See Figure 4-1-1.

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

In 2014, the proportion of employed persons working in SMEs was highest at 14.06 percent in between the ages of 30 and 34, followed by those between 35 and 39 and those between 40 and 44; the proportion of paid employees working in SMEs was highest at 16.69 percent between the ages of 30 and 34, followed by those between 25 and 29, those between 35 and 39, and afterwards; the more aged group, the lower the proportion (Figure 4-1-5).

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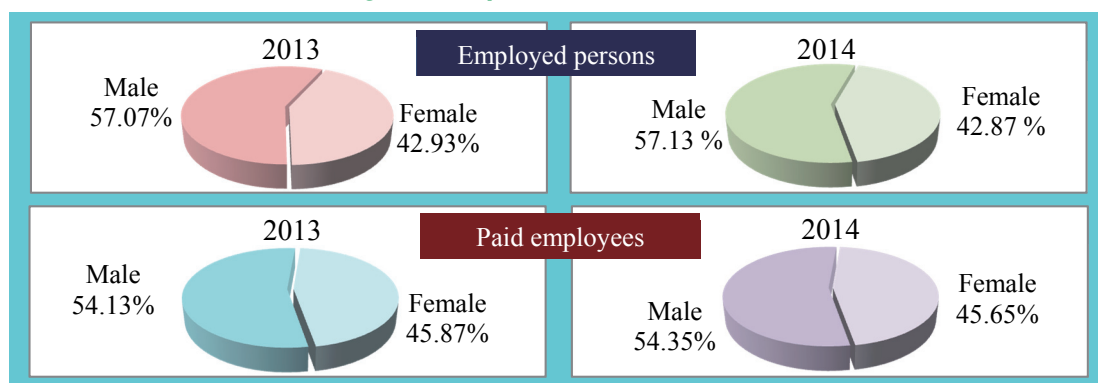
Figure 4-1-5 Age Structure of Employed Persons and Paid Employees Working in SMEs in 2013 and 2014



Note and source: See Figure 4-1-1.

In 2014, the male/female ratio of employed persons (57.13 percent/42.87 percent) or paid employees (54.35 percent/45.65 percent) in SMEs was far greater than one; in 2013, The male/female ratio of employed persons (57.07 percent/42.93 percent) or paid employees (54.13 percent/45.87 percent) in SMEs was far greater than one, which shows that employment continues to be male-oriented and more so in 2014 (Figures 4-1-6).

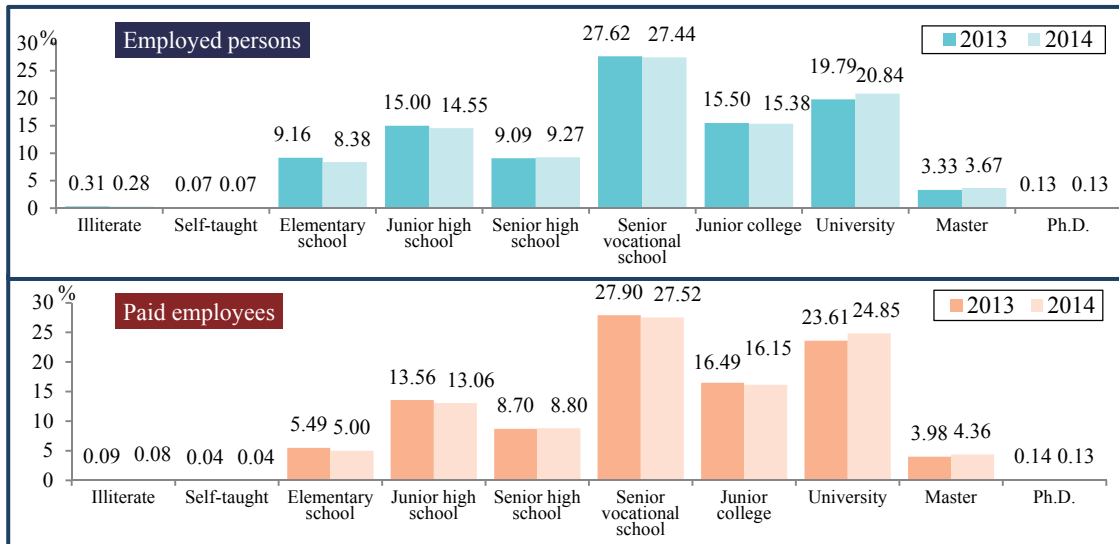
Figure 4-1-6 Male / Female Ratio of Employed Persons and Paid Employees Working in SMEs in 2013 and 2014



Note and source: See Figure 4-1-1.

As can be seen from the educational structure, the highest proportion of employed persons (or paid persons) working in SMEs consisted of those with a vocational education in 2013 at 27.44 percent (or 27.52 percent of paid persons), followed by those with university education (20.84 percent employed persons or 24.85 percent of paid persons) and was consistent with Taiwan's higher education expansion policy, and by those with college education (15.38 percent employed persons or 16.15 percent of paid persons) (Figures 4-1-7).

Figure 4-1-7 Educational Structure of Employed Persons and Paid Employees Working in SMEs in 2013 and 2014



Note and source: See Figure 4-1-1.

4. The Number of SME Employers Down by about 10 Thousand in 2014

Taiwan's GDP grew 3.77 percent in 2014, a 1.65 percentage increase over the growth rate in 2013 (2.23%) amid slowing down in emerging markets. The business environment for Taiwan enterprises was still very challenging. There were around 457,000 SME employers and approximately 1,370 large enterprise employers in 2014. The number of SME employers declined by about 10,000 or 2.13 percent in 2013 while the number of large enterprise employers decreased by about 160 or 10.46 percent. The age structures of SME employers showed that they were younger than large enterprise employers, and the educational structure distribution was broader (Table 4-1-1).

Table 4-1-1 Characteristics of Employers in 2013 and 2014

Unit: Thousand persons; %

Item \ Year	2013		2014	
	SMEs	Large enterprises	SMEs	Large enterprises
No. of persons	466.60	1.53	456.84	1.37
Share	99.67	0.33	99.70	0.30
Age	100.00	100.00	100.00	100.00
15 – 19	-	-	-	-
20 – 24	0.22	-	0.27	-
25 – 29	1.91	-	1.91	-
30 – 34	5.54	-	5.50	-
35 – 39	10.38	3.94	9.18	14.79
40 – 44	15.05	23.67	14.39	2.94
45 – 49	18.29	11.70	18.10	12.27

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Item \ Year	2013		2014	
	SMEs	Large enterprises	SMEs	Large enterprises
50 – 54	20.13	22.27	19.41	27.04
55 – 59	15.44	5.05	16.57	12.67
60 – 64	8.94	16.14	10.19	5.92
65 and over	4.11	17.23	4.47	24.38
Sex	100.00	100.00	100.00	100.00
Male	80.57	73.27	80.96	49.96
Female	19.43	26.73	19.04	50.04
Education	100.00	100.00	100.00	100.00
Illiterate	0.02	-	0.05	-
Self-taught	0.02	-	0.01	-
Elementary school	8.24	-	7.69	-
Junior high school	14.60	7.40	14.42	-
Senior high school	10.02	5.25	10.36	-
Senior vocational school	26.45	0.89	26.05	24.66
Junior college	18.97	34.21	20.00	3.77
University	16.85	31.88	16.36	35.34
Master	4.38	20.37	4.57	36.23
Ph.D.	0.44	-	0.49	-

Note: “-” denotes no available data. Source: DGBAS, Manpower Survey data, 2013-2014.

5. A Decline in the Number of Self-Employed Persons; the Share of Self-Employed over Age 55 Increased

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 classed 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 1,310,000 in 2014, down about 7,000 from 2013. As can be seen from the age structure, the shares of self-employed in the 50-54 age group was about 17.32 percent in 2014, followed by the 55-59 age group (16.14 percent) which was higher than that of 2013, and the 45-49 age group (15.54 percent). In terms of education, the share of self-employed with vocational education was the highest at 25.38 percent, followed by those with junior high school education at 22.04 percent, and by those with senior high school education at 21.21 percent, compared to 2013, the shares of self-employed with vocational, college, university, master, and PhD education and / or degree all increased slightly in 2014 (Table 4-1-2).

Table 4-1-2 Characteristics of Self-Employed Persons in 2013 and 2014

Item \ Year	2013		2014	
No. of persons	1,317		1,310	
Age	100.00		100.00	
15 – 19	0.04		0.05	
20 – 24	0.82		0.71	

Unit: Thousand persons; %

Item \ Year	2013	2014
25 – 29	2.48	2.45
30 – 34	5.48	5.53
35 – 39	8.09	8.25
40 – 44	12.57	11.69
45 – 49	16.13	15.54
50 – 54	17.34	17.32
55 – 59	15.89	16.14
60 – 64	11.44	12.11
65 and over	9.71	10.19
Sex	100.00	100.00
Male	74.81	74.45
Female	25.19	25.55
Education	100.00	100.00
Illiterate	0.98	0.98
Self-taught	0.19	0.18
Elementary school	23.63	22.04
Junior high school	21.65	21.21
Senior high school	10.17	10.68
Senior vocational school	24.68	25.38
Junior college	11.02	11.23
University	6.63	7.05
Master	0.99	1.20
Ph.D.	0.05	0.06

Source: DGBAS, Manpower Survey data, 2013-2014.

6. The Number of Unemployed Persons Previously Working for SMEs Fell in 2013

In 2014, the number of unemployed persons in Taiwan fell by approximately 21,000 (or 4.46 percent) and the unemployment rate fell to 3.96 percent from 4.18 percent in 2013. Apart from the first time job-seekers, the number of unemployed persons who had previously been working for SMEs fell 3.61 percent to 303,000 in 2014 from 314,000 in 2013; the number of unemployed who had previously been working for large enterprises declined 9.87 percent to 32,000 in 2014 from 35,000 in 2013; the number of unemployed who had previously been working for government declined 6.19 percent to 105,000 in 2014 from 112,000 in 2013 (Table 4-1-3).

In terms of age distribution of unemployed persons: those who had previously been working for government or SMEs, most were in age 25-29 group while those who had previously been working for large enterprises, most were in age 30-34 group (except for first time job-seekers, most unemployed were in age 20-24 group, accounting for 56.75 percent), showing serious youth unemployment problem (Table 4-1-3).

In terms of sex distribution of unemployed persons: those who had previously been working for government, most were women (56.76 percent) while those who had previously been working for large enterprise or SMEs, most were men (60.98 percent and 63.30 percent, respectively) (Table 4-1-3).

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Table 4-1-3 Characteristics of the Unemployed in 2013 and 2014

Unit: Thousand persons; %

Item \ Year	2013				2014			
	SMEs	Large enterprises	Government employees	First time job-seekers	SMEs	Large enterprises	Government employees	First time job-seekers
No. of persons	314.29	35.14	16.71	111.87	302.94	31.67	17.14	104.95
Share	65.75	7.35	3.50	23.40	66.33	6.93	3.75	22.98
Age	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
15 – 19	1.53	1.08	0.45	6.34	1.49	1.31	0.45	5.45
20 – 24	12.13	11.68	10.35	55.67	12.45	9.74	4.70	56.75
25 – 29	19.14	23.10	21.93	29.42	18.91	19.44	21.22	28.74
30 – 34	17.58	22.15	17.41	5.81	17.20	24.40	15.57	6.39
35 – 39	13.85	14.34	12.82	1.83	14.23	15.63	13.70	1.84
40 – 44	10.42	8.53	10.29	0.46	10.92	11.63	10.15	0.33
45 – 49	10.39	10.72	8.18	0.19	10.09	7.10	11.44	0.01
50 – 54	7.97	5.33	7.80	0.17	7.73	5.73	10.15	0.38
55 – 59	5.45	1.18	7.07	0.04	5.21	4.50	8.70	0.00
60 – 64	1.46	1.70	3.65	0.06	1.70	0.52	3.92	0.12
65 and over	0.08	0.19	0.04	0.00	0.08	0.00	0.00	0.00
Sex	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Male	62.97	62.57	44.83	52.52	63.30	60.98	43.24	53.98
Female	37.03	37.43	55.17	47.48	36.70	39.02	56.76	46.02
Education	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Illiterate	0.02	-	-	-	0.03	-	-	-
Self-taught	0.01	-	-	-	0.02	-	-	-
Elementary school	5.79	1.76	6.68	-	4.94	0.49	5.39	0.17
Junior high school	17.63	4.37	6.14	3.10	16.16	5.29	6.29	1.98
Senior high school	10.07	5.20	5.30	5.37	9.08	5.33	6.45	5.91
Senior vocational school	28.52	26.01	18.7	13.15	28.42	24.70	17.03	12.41
Junior college	13.35	17.21	17.69	6.34	14.02	17.92	18.38	5.99
University	22.44	35.43	36.80	60.24	24.39	36.80	39.02	62.89
Master	2.13	9.88	8.68	11.63	2.83	8.90	6.98	10.36
Ph.D.	0.04	0.14	0.01	0.18	0.10	0.56	0.46	0.29

Note: The enterprise size in the table is the size of last company the unemployed worked for.

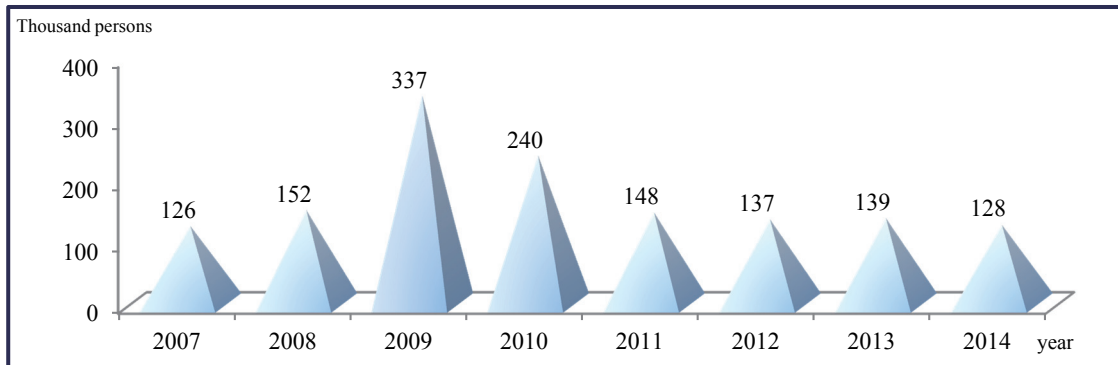
Source: DGBAS, Manpower Survey data, 2013-2014.

In terms of education distribution of unemployed persons: those who had previously been working for SMEs, most were people with vocational education (28.42 percent), followed by people with university education (24.39 percent); those who were first time job-seekers or had previously been working for large enterprises or government, most were with university education (62.89 percent, 36.80 percent, and 39.02 percent, respectively). The youth unemployment problem seemed getting worse in 2014 as 62.89 percent of first time job-seekers who were unemployed had university education, higher than the ratio in 2013 (Table 4-1-3).

In terms of the reasons for leaving the previous jobs, “the dissatisfaction with previous jobs” was the No. 1 reason for leaving SMEs (46.22 percent) or large enterprises (55.96 percent). However,

the No. 1 reason for leaving government was “end of seasonal or temporary jobs” (52.04 percent). The number of unemployed due to the layoffs or employers going out of business declined consistently from peak at 337,000 in 2009 to 128,000 in 2014 (Figure 4-1-8).

Figure 4-1-8 The Number of Paid Employees Becoming Unemployed Because of Layoffs or Factory Closures, 2007-2014



Source: DGBAS, Manpower Survey data, 2007-2014.

7. 60 Percent Foreign Employees Worked in SMEs

2014 saw a continuous 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 354,448, up 47,170 from 2013, while the number of foreign laborers actually working in Taiwan increased to 321,269, up 52,138.

Regardless of the size of enterprises that employ foreign laborers, both the number of applications to employ foreign laborers and the number of foreign laborers actually working in Taiwan rose in 2014. The number of foreign laborer approvals rose 13.45 percent for SMEs and 18.18 percent for large enterprises. Similarly, the number of foreign laborers actually in Taiwan and working for SMEs rose 24,757 (up 17.46 percent) in 2014, while the number of foreign laborers in Taiwan and working for large enterprises rose by 22,413 (up 22.14 percent). About 60 percent of all foreign labors working in Taiwan worked for SMEs. 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 (Table 4-1-4).

8. Temporary and Contract Workers Increased in SMEs

According to the data presented in the 2014 The Manpower Utilization Survey, there was a large increase of 107,000 full-time workers in SMEs, and a small increase of 7,000 in large enterprises (4,000 increase for government). The part-time workers in SMEs declined by 14,000 to 360,000, while in large enterprises the part-time manpower rose by 7,000. Overall, the share of part-time workers was at around 4.33 percent in SMEs but only around 1.72 percent in large enterprises or 1.48 percent in government.

The utilization of part-time workers is most common in the SMEs in Service sector, especially in the Wholesale and Retail Trade industry, followed by the Hotel and Restaurant industry.

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Table 4-1-4 The Number of Foreign Workers Introduced by Enterprises, 2007-2014

Unit: Persons; %

Year	Size	Valid approved number			Number in Taiwan		
		Total	SMEs	Large enterprises	Total	SMEs	Large enterprises
2007		211,821	100,064(47.24)	111,757(52.76)	191,923	90,632(47.22)	101,291(52.78)
2008		220,696	113,530(51.44)	107,166(48.56)	191,768	100,496(52.40)	91,272(47.60)
2009		188,185	104,502(55.53)	83,683(44.47)	169,621	95,623(56.37)	73,998(43.63)
2010		208,600	114,959(55.11)	93,641(44.89)	185,800	102,605(55.22)	83,195(44.78)
2011		250,498	142,639(56.94)	107,859(43.06)	219,136	123,412(56.32)	95,724(43.68)
2012		260,308	157,221(60.40)	103,087(39.60)	233,572	139,176(59.59)	94,396(40.41)
2013		307,278	184,008(59.88)	123,270(40.12)	269,131	159,334(59.20)	109,797(40.80)
2014		354,448	208,765(58.90)	145,683(41.10)	321,269	187,159(58.26)	134,110(41.74)

Note:

1. An SME is defined as an enterprise with less than 200 paid employees in Mining and Quarrying, Manufacturing, and Construction industries, or an enterprise with less than 100 paid employees in other industries.
2. Data in the parentheses denotes share of total by size of enterprises.

Source: Workforce Development Agency, Ministry of Labor, 2007-2014.

9. A Slight Increase in the Number of SME Employees Changing Jobs

In 2014, a total of 514,000 SME employees changed jobs; this figure was up about 5,000 from 2013. The rate of those taking up a position with another SME was the highest at 89.46 percent. Only 8.30 percent 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, but it could also mean that SMEs offer more opportunities than government or large enterprises for job seekers (Table 4-1-5).

Table 4-1-5 Choice of New Employers by Former SME Employees, 2006-2014

Unit: 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
2013	509	453	88.99	38	7.38	18	3.63
2014	514	460	89.46	43	8.30	11	2.24

Note: Enterprises in industries other than Mining and Quarrying, Manufacturing and Construction that have less than 200 paid employees are classified as SMEs.

Source: DGBAS, Manpower Utilization Survey data, 2006-2014.

II Labor Conditions in SMEs

1. SMEs in Real Estate Had the Longest Average Working Hours

In 2014, for SMEs, the Real Estate industry had the longest average working hours at 47.31 hours per week (and employed 103,120 workers, accounting for 1.36 percent of all employed workers in SMEs), followed by Supporting Services industries at 45.61 hours per week (and employed 274,470 workers, accounting for 3.63 percent of all employed workers in SMEs), and Other Services at 45.44 hours per week (accounting for 5.24 percent of all employed workers in SMEs), the Education Service had the shortest average working hours at 39.49 hours per week (accounting for 3.18 percent of all employed workers in SMEs) (Table 4-2-1).

Table 4-2-1 Working Hours per Week and the Number of Employed Workers in 2014 by Size of Enterprise

Unit: Thousand persons; hours per week

Item Industry	No. of employed worker			Weekly working hours		
	SMEs	Large enterprises	Government employees	SMEs	Large enterprises	Government employees
Agriculture, Forestry, Fishing and Animal Husbandry	96.52	0.17	7.75	40.23	45.38	40.23
Mining and Quarrying	3.73	-	0.63	44.53	-	40.90
Manufacturing	2,333.81	93.83	30.33	43.33	43.96	40.92
Electricity and Gas Supply	4.80	0.30	26.87	42.68	44.63	40.50
Water Supply and Remediation Services	36.61	0.25	50.69	43.85	44.31	41.57
Construction	873.17	1.07	9.59	41.08	43.73	41.00
Wholesale and Retail Trade	1,247.10	7.37	9.19	44.44	43.57	40.66
Transportation and Storage	280.93	8.00	57.97	44.93	44.54	41.66
Hotel and Restaurant	563.96	2.81	0.47	44.53	45.38	45.24
Information and Communication	187.65	8.44	0.71	43.21	43.26	44.37
Finance and Insurance	372.76	10.05	19.43	42.48	42.68	41.63
Real Estate	103.12	0.35	1.37	47.31	45.97	38.59
Professional, Scientific and Technical Services	255.98	5.16	27.46	42.72	43.13	40.67
Supporting Services	274.47	2.63	0.56	45.61	47.66	38.46
Public Administration and Defense; Compulsory Social Security	0.72	-	449.83	40.14	-	42.89
Educational	240.68	7.14	383.32	39.49	38.26	38.80
Human Health and Social Work Services	224.66	16.17	95.34	43.64	44.94	43.13
Arts, Entertainment and Recreation	64.15	0.67	16.12	44.72	45.25	40.46
Other Services	396.07	0.53	2.81	45.44	43.91	40.87

Notes:

1. Employed persons with non-zero main working hours are classified as employed workers here. Hence the figure of the sum of employed workers in each industry is different from the number of employed persons in SMEs as noted in Figure 4-1-1.

2. "-" denotes no available data.

Source: DGBAS, Manpower Survey data, 2014.

2. The Highest Average Salary Level for SME Employees Was in the Professional, Scientific and Technical Services Industry

In 2014, the highest average salary level for SME paid employed persons was in the Professional, Scientific and Technical Services industry at NT\$47,000 per month (3.37 percent of all SMEs' paid employed persons), followed by Finance and Insurance at NT\$43,000 per month (3.82 percent of all SMEs' paid employed persons), and Electricity and Gas Supply at NT\$41,000 per month (0.06 percent of all SMEs' paid employed persons). The lowest average salary level for SME employees was in the Agriculture, Forestry, Fishing and Animal Husbandry at NT\$23,000 per month (4.91 percent of all SMEs' paid employed persons) (Table 4-2-2).

Table 4-2-2 The Number of Paid Employed Persons and Average Wage of Main Work in 2014 by Size of Enterprise

Unit: Thousand persons; thousand NT\$ per month

Industry	No. of paid employed persons			Average wage of main work			
	SMEs	Large enterprises	Government employees	Total	SMEs	Large enterprises	Government employees
Agriculture, Forestry, Fishing and Animal Husbandry	397.06	1.32	6.43	23.89	23.69	23.75	36.03
Mining and Quarrying	3.59	-	0.23	39.11	37.81	-	59.65
Manufacturing	2,155.62	754.68	26.04	35.84	34.37	39.56	50.30
Electricity and Gas Supply	4.56	2.06	22.25	55.29	41.81	47.30	58.80
Water Supply and Remediation Services	37.82	1.78	42.71	35.59	33.86	38.52	36.99
Construction	835.79	9.74	6.99	36.82	36.50	56.91	46.23
Wholesale and Retail Trade	1,567.74	55.10	7.64	35.15	34.81	44.08	40.11
Transportation and Storage	307.51	61.66	53.94	39.90	36.76	50.00	46.25
Hotel and Restaurant	668.03	24.37	-	29.78	29.75	30.63	-
Information and Communication	162.06	76.84	0.42	45.07	41.50	52.62	41.04
Finance and Insurance	308.25	97.03	13.00	46.71	43.97	53.76	59.21
Real Estate	92.60	1.66	0.84	38.16	37.63	71.63	30.16
Professional, Scientific and Technical Services	272.15	46.56	20.33	48.65	47.46	52.14	56.52
Supporting Services	250.10	19.24	-	29.25	28.77	35.51	-
Public Administration and Defense; Compulsory Social Security	0.77	-	376.57	47.76	48.15	-	47.63
Educational	217.95	66.97	356.89	46.10	33.31	56.97	51.88
Human Health and Social Work Services	218.23	132.42	77.40	44.00	41.76	45.51	47.73
Arts, Entertainment and Recreation	77.33	4.96	10.44	33.77	32.70	46.07	35.79
Other Services	502.57	4.44	3.06	30.50	30.40	37.40	36.99

Note:

1. Employed persons with working hours 15 or over are classified as paid employed persons here. Hence the figure of the sum of paid employed persons in each industry is different from the number of employed persons in SMEs as noted in Figure 4-1-1.
2. “-” denotes no available data.

Source: DGBAS, Manpower Utilization Survey data, 2014.

The average salary level for SME employees declined in 6 industries in 2014 from 2013. The sharpest decline came from Human Health and Social Work Services, down NT\$1,500, followed by Information and Communication, down NT\$800, Electricity and Gas Supply, Professional, Scientific and Technical Services, Transportation and Storage, and Education Service. The average salary level for SME employees rose modestly at around NT\$1,000 in the rest industries (except the Agriculture, Forestry, Fishing and Animal Husbandry at NT\$2,400). This showed the labor condition of SMEs lagged in the period of economic growth (Table 4-2-2).

3. Recent Amendments to Labor Law

On the Labor Pension Act (January 15, 2014): allows self-employed persons and workers with no fixed employer to voluntarily join the program; about 131,000 self-employed persons could benefit from this Amendment. On the new Working Hour Regulation (May 16, 2015): normal working hour limit: no more than 8 hours a day and 48 hours a week.

III Manpower Cultivation in SMEs

1. Various Subsidized Programs for SMEs in Talent Cultivation

Various government agencies such as Ministry of Labor and SME Administration of Ministry of Economic Affairs (SMEA of MOEA) provide 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 by the Ministry of Labor for SMEs with below 50 employees providing professional and individual counseling and training, no long requiring lengthy and costly application and expense verification process. A few main programs and agencies are listed as followed covering main areas such as digital learning, incubation, professional training for various industries, R&D and technology management training, international trade, service, and executive training.

- (1) SMEA of MOEA: business and management training; incubation service; cultivation of international SME talent.
- (2) Industrial Development Bureau, MOEA: professional training by industries.
- (3) Department of Industrial Technology, MOEA: R&D and management cultivation.
- (4) Bureau of Foreign Trade, MOEA: international business management training
- (5) Department of Commerce: service talent training.
- (6) Ministry of Labor: talent enhance and entrepreneurship incubation
- (7) Ministry of Education: Industrial Master Degree Program.

In 2014, Industrial Development Bureau proposed 20 programs for professional training by industries including Chemical industry, Smart Electronics, Food, Textile, ICT, IT Application Services, Green Energy, Network Communications, Digital Content, Machinery and Equipment

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Manufacturing, Medical Instrument, etc.

Industry-specific Masters Degree courses are tailored to meet the needs of industry. The business enterprises and universities 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) others. 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.iiedu.org.tw>).

2. Subsidized Training Programs

In 2014, the number of individual training and the number of joint training plans reached 2,802 and 242 respectively. The number of enterprises taking part, number of classes organized and number of employees undergoing training employees all increased (Table 4-3-1).

Table 4-3-1 Provision of Assistance to Enhance Manpower Cultivation by Business Enterprises, 2008-2014

Unit: Enterprises; classes; persons; projects

Year \ Item	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
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
2013	1,687	33,554	757,812	174	863	1,840	93,266
2014	2,802	45,151	753,720	242	966	2,766	91,412

Source: Workforce Development Agency, Ministry of Labor, 2008-2014.

3. The Number of SME Trainees Reached 5.2 Million in 2013

According to data compiled by the Workforce Development Agency, Ministry of Labor, in 2013, the number of SME trainees per annum was around 5.2 million, or 22.56 percent of all trainees, costing NT\$4.74 billion, or 26.01 percent of total training expenditure (Table 4-3-2).

4. Government Actively Promotes Entrepreneurship

Ministry of Labor sponsored the staged classes for entrepreneurs. A total of 12,790 people took the class in 2014 (7,476 for introduction class; 3,924 for mid-level class; 1,390 for advanced class); a total of 960,000 people took these classes from 2008 to 2014.

In 2013, Ministry of Labor provided start-up consultation and counseling to a total of 3,944 people, and helped 1,321 people start their new businesses that created 3,366 new jobs. A total of 32,000 jobs were created through these programs from 2008 to 2014.

Table 4-3-2 Enterprises, Persons and Expenditure of Joint Vocational Training, 2013

Unit: Enterprises; persons; million NT\$; %

Item	Total	SMEs	Large enterprises
Number of joint enterprise	124,270	119,736 (96.35)	4,535 (3.65)
Number of person	23,246,580	5,244,788 (22.56)	18,001,792 (77.44)
Expenditure	18,231	4,742(26.01)	13,490(73.99)

Note: Percentage in parentheses.

Source: Workforce Development Agency, Ministry of Labor, Report on Vocational Training Survey, 2013.

5. Manpower Demand Expected to Rise

According to the results from the 2015 Manpower Requirements Survey (conducted over the period January 12 to January 30 by the Ministry of Labor, targeting enterprises with 30 or more employees; a total of 3,030 SMEs answered the survey), enterprises showed improved expectation over increasing hiring amid improved domestic market, low oil price, and global recovery including robust US economy (Table 4-3-3).

Table 4-3-3 Anticipated Increase in the Number of Personnel Employed by Business Enterprises during the Period from January 31, 2015 to April 30, 2015

Unit: Persons

Industry	Item	Net increase in the no. of employees	Change in manpower requirements		Net increase in the no. of employees			
			New positions	Positions eliminate	Craftsmen, machinery operators and assembly line workers	Technicians and assistant specialists	Service and sales personnel	Pro-fessionals
Total		45,063	50,111	5,048	17,049	12,622	5,757	4,683
Manufacturing		21,560	23,826	2,320	14,515	3,654	137	1,632
Remediation Services		90	90	-	62	11	-	-
Constructing		777	1,071	294	26	613	-	85
Wholesale and Retail Trade		5,130	5,978	848	440	2,259	1,640	194
Transportation and Storage		1,761	2,187	426	1,241	193	26	-
Hotel and Restaurant		3,357	3,893	536	70	167	2,604	-
Information and Communications		2,679	2,776	97	68	1,479	140	840
Finance and Insurance		3,052	3,088	36	-	2,734	16	42
Real Estate		541	575	34	2	495	-	1
Professional, Scientific and Technical Services		1,630	1,720	90	36	408	113	793
Support Services		2,238	2,527	289	442	176	793	82
Human Health and Social Work Services		1,443	1,443	-	-	217	113	1,004
Arts, Entertainment and Recreation		457	532	75	-	165	173	10
Other Service		402	405	3	147	51	2	-

Source: Workforce Development Agency, Ministry of Labor, Report on Manpower Requirements Survey, January 2015.

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It is anticipated that net manpower demand will rise by 45,100 net jobs (add 50,100; reduce 5,000) from the end of January to the end of April 2015. For the same period, 62.38 percent of enterprises will not add net manpower; 24.87 percent of enterprises will add net manpower; only 2.51 percent of enterprises will reduce net manpower.

The most increase in demand will be in the Manufacturing sector, with a net increase of 22,000 (of which 2,800 in the metal work, 5,100 in electronic components, etc.), followed by 5,100 in Wholesale and Retail, and 3,400 in Hotel and Restaurant industry. Most of the increased demand by skills sets will be for craftsmen, machinery operators and assembly line workers (17,049), followed by technicians and assistant specialists (12,622). The top two factors account for new hiring are market expansion (53.02 percent) and pent-up openings (24.65 percent).

CHAPTER 5

Strategies for SMEs in Response to Changes in the Business Environment

Global economic recovery strengthened in 2014. The impulse has come mainly from advanced economies, US economy in particular, although their recoveries remain uneven. However, activity in many emerging market economies has disappointed in a less favorable external financial environment, such as the normalization of monetary policy in US and potential decision on raising interest rates by Federal Reserve. Going forward, the US economy could again become the major driving force of the global economic growth.

The dominant ongoing themes in recent years and going forward will greatly affect Taiwan's economy and SMEs have been entrepreneurship and innovation through industry upgrade and transformation, which drives emerging technologies and new business models and has become a focal point of major economies' national industry development strategy, evidenced by the U.S. Reindustrialization policy toward re-shoring of advanced manufacturing and development of emerging industries. Similar strategies have been adopted by Japan on new businesses and innovation, mainland China on supporting small and micro-enterprises, and South Korea on innovative economy.

Taiwan's economic growth rate of 3.77 percent was the highest among the Asian tigers in 2014. However, economic growth in 2015 was expected to be much lower than 2014 due to the uneven recovery of world economy that still lacks momentum, intensified competition across the strait and among global brands, slowing growth in mainland China, and capital outflow facing emerging economies induced by strong dollar and Federal Reserve's potential decision on raising interest rate in 2015. Other major challenges, such as the regional economic integration - FTAs (Free Trade Agreement) and ECAs (Economic Cooperation Agreement) signed by Taiwan's major competitors, intensified competition from China's own autonomic supply chain, and domestic talent supply, will pose significant threat to Taiwan SMEs, especially those play an important role in the upstream supply chain supporting large enterprises' production and exports. Chinese firms have become increasingly competitive in moving upward across the value chain through both traditional cost advantage and proprietary technologies and brands, forcing many companies including some of their former partners to move out setting up plants in Southeast Asia. Upgrade and transformation are the keys for Taiwan SMEs to remain viable as sustainable long-term going concern.

This chapter is divided into two sections. Section I reviews a series of policy measures in response to changes in the global environment; section II examines opportunities and challenges for SMEs and the corresponding strategies.

I Government Measures in Response to the Changes in the Economic and Business Environment

Facing significant uncertainties and challenges to its economy, the government is taking a series of policy measures spanning short-, mid- and long-term to mitigate the risks and revive the economy, such as “Industrial Upgrade and Transformation Action Plan,” “HeadStart Taiwan,” “ide@ Taiwan 2020,” “Project for Social Enterprises Action Plan,” “Project to Strengthen Promotion of Investment in Taiwan by Overseas Taiwanese,” and so on.

1. Industrial Upgrade and Transformation Action Plan

To adjust the domestic industrial structure and create momentum for the next wave of economic growth, the government launched “Three Industries, Four Reforms” in October 2012 (timeframe: 2012 to 2020), adopting the theme of a service-oriented manufacturing industry, an internationalized and high-tech services industry, as well as a specialty-oriented traditional industry to promote the upgrade and transformation of Taiwan's industrial structure and replace the past emphasis on “cost down” with a new focus on “value up.” Based on this theme, the MOEA has selected demonstrative industries, such as smart living, machine tools, logistics, information services, innovative fashion textiles, and so on.

To facilitate the “Three Industries, Four Reforms” Plan and optimize Taiwan's industrial structure, Taiwan's Executive Yuan approved and launched the “Industrial Upgrading and Transformation Action Plan”, on the 13th of October 2014, focusing on three main themes: “revitalize the traditional industries,” “solidify the main industries.” and “incubate emerging industries.”

(1) Vision

High quality, forward looking industries (timeframe: October 2014 to end of December 2024)

(2) Goals

Main goals include: (A) manufacturing industry output value of NT\$ 19.46 trillion in 2020 (from NT\$ 13.93 trillion in 2013); (B) high quality industry (smart technologies, cultural and creative industries, alternative energy, etc.) output value of NT\$ 11.69 trillion in 2020 (from NT\$ 5.93 trillion in 2013) and share of output value reaching 60.40 percent in 2020 (from 42.61 percent in 2013); (C) high quality industry export value of NT\$ 7.21 trillion in 2020 (from NT\$ 3.15 trillion in 2013) and share of export value reaching 63.12 percent in 2020 (from 47.20 in 2013).

(3) Implementation: four strategies

Four strategies aim at reforming traditional industries, reinforcing core manufacturing capacities and fostering innovative enterprises:

- A. **Upgrading of product grade and value:** the manufacturing industry should strive to evolve itself to be more qualitative and value-added oriented, starting from the development of high-end products, including accordingly high-value research efforts in

harnessing essential technologies, in the Metallic Materials, Screws and Nuts Manufacturing sector, Aviation, Petrochemical, Textile, Food industries, etc. Action items include: Furtherance of quality research, facilitating the formation of research alliances with upper-, mid- and downstream enterprises, integrative development assistance in Testing and Certification, and establishment of international logistics center.

- B. **Establishment of complete supply chain:** establish a robust and comprehensive supply chain that is sovereign and self-sustaining, without having to depend on foreign corporations. This is attained through the securing of key materials, components and manufacturing capabilities in the field of Machine Tool Controllers, Flat Panel Display Materials, Semiconductor Devices (3D1C), High-End Applications Processor AP, Solar Cell Materials, Special Alloys for the Aviation industry, Panel Equipment, Electric Vehicle Motors, Power Batteries, Bicycle Electronic Speed Controller (ESC), Electrical Silicon Steel, Robotics, etc. Action items include: review of industry gaps, coordination of research and development unions, application-theme-based research programs, and promotion of cross-industry cooperation to expand fields of mutual application.
- C. **Setting-up of system integration solutions capability:** expand turnkey-factory and turnkey-project system integration capabilities, in order to increase and stimulate export growth; combination of smart automation systems to strengthen hardware and software integration, hence, boosting system integration solution capacity, allowing stand-alone machinery to evolve into a total solution plant, thus creating additional fields of application and services, effectively expanding the value-chain. These type of transitions are to be seen in the following areas: Turnkey-Factory and Turnkey-Project exports, Intelligent Automated Manufacturing, Cloud industry, Lifestyle (key example: U-Bike in Taipei City) industry, Solar Factory, Wood-Working Machinery, Machine Tools, Food/Paper Mills, Rubber and Plastic Machines sector. Action items include: listing of national export capability - using domestic market as test bed for future global business opportunities, formation of system integration business alliances, and establishing of financial assistance schemes to help national enterprises in their overseas bidding efforts.
- D. **Acceleration of growth in the innovative sector:** given Taiwan economy's over-dependence on the growth of the electronics industry, a new mainstream industry replacement should be developed. Moreover, the blur distinction between the manufacturing, service and other industries presses Taiwan to develop cross-fields of application markets, so that the market opportunities of the future can be fully explored. Examples of these markets include: Smart Campus, Intelligent Transportation System, Smart Health, Smart City, B4G/5G Communications, Strategic Service industries, Next-Generation Semiconductors, Next-Generation Visual Display, 3D Printing, New Drugs and Medical Instruments, Smart Entertainment, Lifestyle industry (for instance the combination of plan factory and leisure tourism), and Offshore Wind Power plant, Digital Content. Action items include: promotion of cooperation between enterprises and research institutions to increase efficiency in the functioning of the national innovation process, creating the ideal ecosystem for innovation industries, and integration of Cross-Branch

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Advisory Resources and Deregulation to further support industrial development.

(4) Policy measures as listed in Table 5-1-1

Table 5-1-1 Industrial Upgrade and Transformation Action Plan

Main Tools	Contents
Tax treatment	<ul style="list-style-type: none">• Tax incentives to retain talent for technology transfer, stock compensation, etc.
Securing financing /Funding	<ul style="list-style-type: none">• The National Development Fund• Plan to offer NT\$100 billion loans for industrial upgrade and transformation
Venture investment	<ul style="list-style-type: none">• The National Development Fund• NT\$10 billion investment in upgrade and transformation of strategic manufacturing industries• NT\$20 billion investment in industrial revitalization
R&D budget	<ul style="list-style-type: none">• Additional NT\$10 billion budget for R&D subsidy in industrial upgrade and transformation
Infrastructure	<ul style="list-style-type: none">• Building trial production / testing infrastructure
Land acquisition	<ul style="list-style-type: none">• Efficient use of existing land• Plan to set up new industrial parks
Talent cultivation	<ul style="list-style-type: none">• Establishing industrial talent center: certification, training, cross-industry leadership cultivation, etc.

Source: Ministry of Economic Affairs (MOEA), 2014.

2. HeadStart Taiwan

In *The Global Competitiveness Report 2013-2014*, the World Economic Forum categorized Taiwan as one of the world's 37 innovation-driven economies, alongside such countries as Japan, South Korea and the United States. Nevertheless, Taiwan's startup environment is still considered incomprehensive because of a legal environment unfavorable to the growth of startups, the insufficiency of funding for businesses in the early expansion phase, and weak linkage with the international community.

To encourage innovative startups, the National Development Council (NDC) has mapped out the "HeadStart Taiwan" program, which focuses on innovation and high value-added innovative businesses.

(1) Vision

Accelerate industrial transformation and the development of innovation and entrepreneurship.

(2) Goals

Removing legal barriers, bring in international capital, and establishing international startup parks

(3) Implementation: three strategies

Three strategies strive to bring together local private-sector and global businesses to create a positive, comprehensive and effective entrepreneurial ecosystem in order to mold Taiwan into a hub for innovative businesses with international branding:

- A. **Remove legal barriers to innovative startups:** coordinate with related agencies, and amend laws and regulations not conducive to the development of innovative startups.
- B. **Bring in international capital and professional knowledge:** usher in cooperation among venture capitalists at home and abroad and employ creative incentive mechanisms to funnel investment capital into startup businesses, especially in their early phase.
- C. **Set up international startup parks:** use Taipei Expo Park as the base for innovative startups, and bring in domestic and overseas startup accelerators, venture capital, professionals and other resources to create a positive startup ecosystem.

3. ide@ Taiwan 2020

An *Internet White Paper* “ide@ Taiwan 2020” aimed at mapping out the development of information communications technology-related policymaking and implementation in Taiwan was passed by the Cabinet on July 2nd, 2015. “Ide@” stands for intelligent, digital, e-government, and accessible (public access right).

“Ide@ Taiwan 2020” lays a solid foundation for countrywide digitalization in five years and strategic promotion of related sectors. Proposed by the NDC, the initiative comprises 192 existing projects and 70 newly formulated plans aimed at enhancing Taiwan’s inclusive, interconnected and intelligent capabilities.

(1) Goals

Removing legal barriers, bring in international capital, and establishing international startup parks.

(2) Policy priority

According to the NDC, top priority will be given to expanding transmission access, improving laws regulating the cyber world and protecting information security in regard to Internet infrastructure development:

- A. **Internet infrastructure development and friendly business environment:** the government is set to propose regulatory easing on a number of key issues relating to the virtual world such as cross-border transactions taxation, digital assets, online petitions and voting and virtual currency. In addition, efforts will be made to foster innovative startups, promote e-commerce and spur internet finance when it comes to expanding cyber economy; 4G fast internet and fiber to household: release 4G broadband and cumulative release of 410MHz by 2017.
- B. **Transparent governance:** no stone will be left unturned in working to digitalize government services, encourage public involvement in policymaking and provide access to government data.
- C. **Smart living:** create smart holistic health care passport, build remote community care smart service system (including emergency system) for elderly people living alone, improve last-mile campus network infrastructure, strengthen IT education and information management mechanism; promote integration of actual/virtual and online/offline for

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industrial transformation.

- D. **Cyber economy:** establish a one-stop government resource site and government service window, create Taiwan's innovation and entrepreneurship ecosystems, set up domestic and international e-commerce platform to promote two-way cooperation, develop O2O (Online To Offline) and other e-commerce technologies.
- E. **Intelligent homeland:** on intelligent homeland planning and smart living, a premium is to be placed on harnessing public information to create more opportunities in digital learning, disaster management and mitigation, health care services, integrated transportation and personal safety.

4. Project for Social Enterprises Action Plan

A social enterprise is a new type of organization that incorporates civil society's reciprocities and market efficiency. It applies commercial strategies to maximize improvements in human and environmental well-being rather than maximize profits for external shareholders.

To promote the continuous innovation, growth, and development of social enterprises in Taiwan and to encourage young people to join social enterprises, the Executive Yuan approved the Project for Social Enterprises Action Plan in September 2014. In order to facilitate the implementation of the plan, the SMEA (Small and Medium Enterprise Administration of the MOEA (Ministry of Economic Affairs) commissioned KPMG in 2014 to be in charge of its execution. Three consecutive social enterprise conventions were held in Northern, Central, and Southern Taiwan to consolidate social enterprise resource networks from various industries in Taiwan and link up social enterprises in different locations to build a social enterprise network platform. Experts and scholars will be invited to share on an array of topics and local social enterprises will gather to share their management experiences, facilitating an exchange of opinions on this platform.

The SMEA will continue to work with relevant departments, industries, and academia to manage four program strategies: (1) adjustment of laws and regulations - to create a reasonable legal environment for social enterprises, (2) platform building - to promote cross-sectional collaborations, and global connections: mutual learning and sharing will be conducted to help discover the unique and favorable environments for social enterprises and create a mutual learning platform in Central Taiwan, (3) fund raising - to provide multiple funding sources through angels, VCs, credit guarantee, and so on: SMEA will commence with the nurturing of social enterprises and providing them with the necessary capital, and will integrate different industries and resource networks by linking Taiwan social enterprise startups with venture capitalists and facilitate the sharing of business experience between local students, teachers and entrepreneurs, and (4) nurturing of social enterprises - to build supporting system for social enterprises' developments: benchmark social enterprises will be selected for case studies and used as learning models for other social enterprises. This will complement the development of social enterprises and achieve the Social Enterprise Action Plan objectives, including providing a friendly social enterprise development environment, building social enterprise networks and platforms, strengthening social enterprise management, and building an ecological environment in Taiwan that is beneficial to social enterprise innovation, establishment, growth, and development.

Under the MOEA leadership, the action plan will invest a total of NT\$161.2 million (US\$5.38 million) from 2014-2016, and 200 social enterprise guidance cases will be completed. An estimated 100 newly created social enterprises will receive counseling, while 50 or more social enterprises will participate in international forums. Additionally, at least eight social enterprise laws and regulations will be amended in order to create an “ecosystem” for this industry.

5. Project to Strengthen Promotion of Investment in Taiwan by Overseas Taiwanese

The objective of the “Project for the Strengthened Promotion of Investment by Returning Taiwanese Enterprises” that the Executive Yuan (Cabinet) approved and implemented on Nov. 1, 2012 is to attract high-value-added and competitive overseas Taiwanese enterprises to return and invest in Taiwan. Target companies of this program are Taiwanese firms that have invested abroad for at least two years and meet one of the following conditions: have their own international brand marketing, hold a key position in an international supply chain, manufacture high-value-added products or key parts, or be a Taiwanese multinational enterprise with a R&D center or operations headquarters in Taiwan. The target Taiwanese firm must also meet two more requirements: (1) To invest at least NT\$ 500 million if it is in high-tech industry or at least NT\$ 100 million NT\$ 500 million if it is not in high-tech industry, within three years, and (2) to hire at least 100 Taiwanese within one year after the completion of the investment.

A trend of manufacturing repatriation has already appeared in U.S. and South Korea. Changes in China investment environment have caused overall production costs to rise closer and closer to the level of advanced countries. The Boston Consulting Group argued that China’s manufacturing cost advantage over the U.S., given total costs including shipping, has eroded to a mere 5 percent. This and additional factors such as the high employee turnover rate and the bad social climate have made more and more mainland China-invested Taiwanese businesses consider returning to invest in Taiwan.

In line with the Program, the National Development Fund (NDF) will offer NT\$10 billion in special loans to help overseas companies acquire the funds they need to return to Taiwan. The special loans will carry an interest rate of approximately 1.5%, set at not more than one percentage point above the floating annual rate on two-year time deposits in the postal savings system. The loans will have a term of up to 10 years (including a maximum grace period of three years), and they will be extended to cover up to 80% of the total investment in a project.

In regard to the project’s manpower assistance, in addition to increasing foreign worker quotas for jobs that domestic workers do not want to do, it also responds to the need for industrial skills and to the rapid change in technological development by providing for the strengthening of vocational training capacity and the cultivation of industrial technicians so as to fill the inadequacy of domestic manpower breed and the gap between education and jobs.

Expected main benefits are (1) inducing overseas Taiwanese businesses to invest a total of around NT\$100 billion annually back in Taiwan; (2) creating additional production output amounting

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to NT\$303.7billion, including exports worth NT\$227.8 billion; (3) increasing Taiwan's direct and indirect employment by a total of approximately 82,000.

By the end of 2014, there had been 65 cases of returning overseas Taiwanese investment with a total investment of about NT\$241.1 billion and over 39,000 jobs created.

6. Promote Regional Economic Integration

2015 will be crucial for Taiwan's regional economic integration. TPP (Trans-Pacific Partnership) negotiation could be finished by the end of 2015 as U.S. Congress finally passed the Trade Promotion Authority (TPA) Bill in June 2015. TPA is the authority of the President of the United States to negotiate international agreements that the Congress can approve or disapprove but cannot amend or filibuster. RCEP (Regional Comprehensive Economic Partnership) has a particularly ambitious timeframe and is expected to be completed by 2015. There is a marked global trend towards regional economic integration, with countries throughout the world rushing to negotiate free trade agreements (FTAs) with one another. The East Asia region is the one among the regions in the world that has signed the greatest number of ECAs.

(1) Goal

At such an important juncture for the nation's economic future, the government needs to accelerate the implementation of relevant laws and regulations in line with the needed adjustments to facilitate the FTA, ETA, taxation and customs agreements, and especially TPP and RCEP negotiations. In 2015, the government will accelerate Taiwan's entry into the TPP and the RCEP, enact a road map for signing free trade and economic cooperation agreements by working together with the private sector, promote cross-strait economic and trade cooperation, and request the Legislative Yuan to expedite the review of the Cross-Straits Agreement on Trade in Services and complete negotiation on cross-strait trade in goods as soon as possible.

(2) Policy priorities

- A. Actively negotiating FTA/ECA, TPP and RCEP in particular
- B. Participating in international organizations; expanding foreign trade and economic relations (such as WTO, OECD and APEC; on ITA expansion, Trade in Services Agreement, Environmental Goods Agreement, etc.)
- C. Ensuring advantages and sharing interests; accelerating and completing the follow-up negotiations of ECFA (Cross-Straits Economic Cooperation Framework Agreement)
- D. Strengthening international financial, tax and customs cooperation
- E. Promoting Free Economic Pilot Zones (through liberalization regulations concerning manpower, goods and cross-border capital movements, the policy aims to attract a large number of local and foreign companies to promote industrial development within the zones. In addition, the zones are intended to promote five potential sectors: intelligent logistics, international healthcare services, value-added agricultural processing, financial services and education innovation)

F. Assisting Taiwan enterprises' export transformation in global expansion.

(3) Results of implementation

A. ECFA: progress and benefit

- (i) By the end of March 2014, Taiwan and Mainland China has signed 21 agreements, reached two consensuses, including the completion of the signing of ECFA.
- (ii) The first milestone of ECFA was the "Early Harvest" program in 2011. It aims mainly to reduce trade tariffs on goods, with some market access allowance in banking and other service industries, between the two sides of the Strait. Early Harvest involves 539 Taiwanese goods, covering 16 percent of Taiwan's exports to mainland China and estimated to be close to US\$14 billion. Mainland China will, in turn, receive tariff cuts on 267 Chinese products, which make up 11 percent of mainland China's exports to Taiwan worth approximately US\$3 billion. As Taiwan already enjoys a large trade surplus with mainland China, the Early Harvest provisions appear to further enhance Taiwan's trading edge with mainland China, at least before additional liberalization agreements in services and merchandise are built into the program as part of a completed ECFA. According to the customs authority, the value of all goods imported from Taiwan into mainland China in the first five months of 2013 reached US\$69.02 billion (an increase of 43.23 percent over the same period in 2012). Included in this sum is US\$9.29 billion worth of early harvest goods (increase of 14.3 percent) that qualified for favorable tariff treatment, which saved businesses US\$258 million in tariff payments. From the program's inception in January 2011 to December 2014, Taiwanese companies saved a total of US\$2.2 billion. 50% of enterprises who benefited from tariff saving were SMEs.
- (iii) As mandated by ECFA, several items are to be negotiated following the Early Harvest program. These include investment protection, services trade, merchandise trade, and dispute settlement. This is an effort to provide a concrete legal framework to foster trade and investment activities between Taiwan and China. There have been more than 20 Cross-Strait agreements signed or already in effect since the Early Harvest period. In particular, the Cross-Strait Investment Protection Agreement (CSIPA) became effective in February 2013. CSIPA addresses the need to institutionalize an investment security mechanism and to build investors' confidence, rather than try to eliminate all risks for Taiwanese investment. CSIPA provides several types of resolution mechanism, both in official settlement and private arbitration, for investment-related disputes. CSIPA also has a notification mechanism to ensure personal safety, where mainland China's officials are committed to notify the investor's family or company within 24 hours in case of non-national security related detention. According to Taiwan's Ministry of Economic Affairs, there have been 131 CSIPA-related cases reported and subsequently resolved to date.

B. Taiwan-US Trade and Investment Framework Agreement (TIFA)

Numerous results were produced in the 7th Taiwan-US TIFA Council Meeting on March 10

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2013, including the Joint Statement on Principles for International Investment, the Joint Statement on Information and Communication Technology (ICT) Services, and the establishment of the working groups on investment and on technical barriers to trade (TBT). Both sides reaffirmed to engage each other in further cooperate on expanded negotiations on the Information Technology Agreement (ITA) and the International Services Agreement. Both sides held follow-up technical-level meetings to discuss issues such as intellectual property rights (IPR), food safety, agricultural products, investment, and the working groups on investment and on TBT, and drafted a plan for future works. In April 2014, Taiwan and the United States concluded their 8th round of TIFA talks during which both sides have made meaningful progress on several two-way trade issues, including clarifying investment criteria, lifting data localization requirements in the financial sector, and revising standards and multi-pack labeling requirements. The two sides also recognized the need for further engagement on IPR protection, including in the challenging but critical area of online piracy, as well as on pharmaceutical and medical device issues over the next year.

C. Launch of ECAs with important trading partners

- (i) Taiwan and Singapore opened formal negotiations in May 2011. The Agreement between Singapore and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu on Economic Partnership (ASTEP) was signed on Nov. 7, 2013 and was entered into force on Apr. 19, 2014.
- (ii) Taiwan and New Zealand stated in a joint statement issued in October 2011 that both sides agree to conduct feasibility studies on the launching of an ECA. The Agreement between New Zealand and the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu on Economic Cooperation (ANZTEC) was signed on Jul. 10, 2013 and was entered into force on Dec. 1, 2013.
- (iii) India and Indonesia: Taiwan has signed the Memorandum of Cooperation with India and Indonesia and research reports were expected be furnished by the private think tanks from both sides.
- (iv) Appropriate application of the “block-building” strategy

The “block-building” strategy refers to signing of bilateral agreements with a target country in respect of the content of some chapters in an ECA, such as: investment, technical barriers to trade, electronic commerce, competition policies, trade facilitation, thus laying a foundation for both sides to launch and sign a comprehensive ECA in the future. The strategy has the advantage of allowing both sides to realize early on some of the benefits of an ECA and to strengthen the bilateral relations with the target country. For instance, the United States, the European Union, and Japan are all primary trading partners of Taiwan, but given the difficulty of launching FTAs/ECAs with these countries, “block-building” can be regarded as a feasible means for promotion.

With active promotion, Taiwan has attained the following achievements from “block-building”: the Taiwan-Japan Investment Arrangement was entered into force on Jan. 20,

2012; the Taiwan-Japan E-commerce Cooperation Agreement was entered into force on Jan. 20, 2014.

II SMEs: Development Strategy in Navigating the Challenging Business Environment

Looking forward in 2015, Taiwan's economy is expected to grow modestly in near future amid uneven recovery in advanced economies led by strong US economy, slowed economic growth in China, and the potential normalization of monetary policy in US. Based on the changing dynamics and a brief review of 2014 performance of SMEs as followed, we will discuss how Taiwanese government and SMEs can adapt and thrive in navigating the challenging environment, in facing more intensified global competition and multiples new challenges from regional economic integration and the U.S. Reindustrialization.

1. SMEs Need to Deepen Their Connections to Global Value Chain and Enhance Value-Added Capabilities in Response to the Progress of TPP

2015 will be crucial for Taiwan's regional economic integration. The government will accelerate Taiwan's entry into the TPP. TPP negotiation could be finished by the end of 2015 as U.S. Congress finally passed the Trade Promotion Authority (TPA) Bill in June 2015.

Joining TPP, a high-quality free trade agreement, could pose significant challenges to Taiwan's SMEs given intensifies competition from abroad. However TPP also presents opportunities for Taiwan SMEs to open up overseas markets. Taiwan should facilitate export transformation of its matured SMEs and gives birth to more proactive new ventures to deepen their connections to advanced economies and global value chain in order to maintain the lead on emerging market countries in science, technology, and innovation. Taiwan SMEs have gained extensive experience in customized manufacturing through decades of export development in advanced economies. They should use the experience and know-how to actively participate in the supply chain of advanced manufacturing to enhance their own technology, innovation and quality for further linkage to developed markets.

2. SMEs' Opportunity in IoT: Customized Small Quantity Order, Fast Delivery, and Open Innovation

Amid popularity of the smart phones, falling price of chips and sensors, and fast growing cloud computing, and big data analysis, the age of IoT (Internet of the things) is well underway. The Internet of Things revolves around increased machine-to-machine communication; it's built on cloud computing and networks of data-gathering sensors; it's mobile, virtual, and instantaneous connection; and they say it's going to make everything in our lives from streetlights to coffee makers. The Internet of Things doesn't just offer greater efficiency - it also opens to door to many new business

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opportunities and revenue streams that entrepreneurs can seize upon. It has the potential to change the way businesses and consumers approach the world, and, in turn, they will need new devices and services that help them navigate this changing, ultra-connected landscape.

Based on extensive application levels and diverse market segmentation of IoT, demands of which often need fast delivery, open innovation and customized small quantity. This plays into the strength of Taiwan SMEs who have gained extensive experience in customized manufacturing through decades of export development in advanced economies. With the help of related policy measures on funding, marketing, and technology transfer, SMEs could partner with large companies in cross-industry alliance to leverage external resource and development their niche markets.

3. SMEs' Low Export-Orientedness and Small Share of Exports Calling for Transformation and Integrated Measures for Overseas Expansion

2014 once again saw record number of SMEs and their employed persons. SMEs' direct export, export contribution rate (of total exports), and export-orientedness (SME export sales' share of the SMEs' total sales) in 2014 also improved from 2013 but still near the low in the period of 2009-2014.

Within manufacturing sector, electronic components export has been ranked No. 1 for many years. In 2012 electronic components export contribution rate (of total exports from manufacturing sector) was 44.43 percent, amounting to NT\$575.6 billion, down to 29.52 percent (amounting to NT\$287.5 billion, a sharp 50% drop) in 2013, and further down to 28.44 percent (amounting to NT\$295.3 billion, a small pickup of 2.70 percent from very low base of 2013).

This structural change was mainly driven by the changing roles of SMEs in the global supply chain as main competitors emerged, especially when mainland Chinese aggressively promote import substitution policy and its "China's autonomic supply chain," which will pose significant challenge to Taiwan SMEs, especially those play an important role in the upstream value chain supporting large enterprises' production and exports. Chinese firms have become increasingly competitive in moving upward across the value chain through both traditional cost advantage and proprietary technologies and brands, forcing many companies including some of their former partners to move out setting up plants in Southeast Asia. Looking back, SMEs were going strong and making their greatest contributions to Taiwan's domestic economic growth through the mid-1980s. However, after that time, as the government relaxed its grip on the New Taiwan dollar, the rising value of the currency and increasing labor costs, along with growing environmental awareness, caused some SMEs to move their operations to mainland China and Southeast Asian countries in search of cheaper labor and new business opportunities. Those who stayed were forced to be marginal satellite vendors for large enterprises in the domestic supply chain (SMEs' direct export turned into indirect export), and/or to become more innovative, upgrade their operations and partner with other enterprises through strategic alliance or industrial clusters to cope with the increasingly adverse conditions. SMEs have to become more technology and service-oriented and focus more on technology, innovation and quality for overseas expansion.

The government has been actively assisting high quality SMEs through various counseling, subsidies and measures in promoting industrial clusters, international marketing, and networking. The government needs to further integrate trade associations, embassies, related government agencies as well as the existing incubation resources to form systematic servicing mechanism to accelerate SMEs' overseas expansion. In addition, Taiwan should work hard and proactively in regional economic integration (TPP and RCEP in particular) to forge partnerships with other countries to lower the barriers to trade, and maintain the competitiveness of exports.

4. Improved Profitability with Slightly Eroding Short-Term Debt Servicing Ability in 2013

In 2013, SMEs' net operating profit improved 0.17 percentage points to 2.53 percent with lower operating costs and expense. SMEs' share of current liabilities rose 2.28 percentage points, almost doubled the increased share (1.21 percentage points) of current assets, adding short-term pressure. In 2013, the current ratio (down 2.58 percentage points), quick ratio, and inventory ratio of SMEs all declined. These ratios showed that SMEs short-term repayment ability deteriorated. Although in 2013, SMEs' long-term liabilities ratio declined slightly by 0.51 percentage points to 6.81 percent, the fact that the SMEs' debt-to-net-worth ratio was elevated compared to the reference value meant higher credit risk, and potentially declining long-term financial stability. Examination of the net worth turnover and fixed asset turnover indicators shows that, for SMEs, fixed asset turnover declined from 3.09 in 2012 to 2.89 in 2013, while net worth turnover remained stable from 1.31 to 1.32. For large enterprises, fixed asset turnover rose from 2.84 in 2012 to 3.37 in 2013, while net worth turnover declined from 1.80 to 1.71. It is clear that SMEs performed relatively worse in fixed asset efficiency as they lacked the scale that large enterprises had. It is vital for SMEs to focus on liquidity, operating efficiency, and value added features to their products and services.

5. 2014 Saw Continuous Increased Demand of Foreign Laborers; Policy Measures Need to Focus on Long-Term Talent Development

2013 saw a continuous increase in both the number of applications to employ foreign laborers and the number of foreign laborers actually working in Taiwan. The number of foreign laborers actually in Taiwan and working for SMEs rose 14.5 percent in 2013. About 60 percent of all foreign labors working in Taiwan worked for SMEs. 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. According to the results from the 2015 Manpower Requirements Survey (conducted over the period January 12 to January 30 by the Ministry of Labor, targeting enterprises with 30 or more employees; a total of 3,030 SMEs answered the survey), enterprises showed improved expectation over increasing hiring amid improved domestic market, low oil price, and global recovery including robust US economy.

In terms of long-term talent development strategy, various government agencies such as Ministry of Labor and SMEA of MOEA 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

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one another to implement employee training on a joint basis (“joint training”). More programs was set up to cover areas such as digital learning, incubation, professional training for various industries, R&D and technology management training, international trade, service, and executive training.

6. Create Growth Momentum through New Micro Startups

OEM used to be viewed by large international enterprises as a method to enhance efficiency, reduce cost, absorb professional knowledge, and maintain stable operation. In recent years, combining the idea of OEM, micro enterprises come out a new idea of “outsourcing” by integrating external organizations and focusing on demand chain, not the supply chain. This new model enables micro enterprises to help the growth of other businesses or industries through outsourcing demand chain management. Through the deepening of external inter-organizational integration, new demand chains are formed and new micro enterprises are created. With born limitation, many micro enterprises take advantage of this model to enter the market. Although this business model helps micro enterprises launch products very fast, without accessing to financing and marketing, it is not easy to succeed. Fortunately, the emerging of crowdfunding and social network offers new financing and marketing channels, which encourage innovation and strengthen micro enterprises.

New micro enterprises utilize social network and crowdfunding, and could help the upgrade of other industries. These characteristics are fundamental to the development of micro enterprises. Integrated policy measures are needed to set up communication platform and help micro enterprises access to funding, use of internet and e-commerce, develop core specialty, and build sustainability to become sources of creativity. Further discussion could be found in Chapter 6: “Innovation Vitality: New Micro Enterprises.”

7. Succession and Transformation: Reactivating the Entrepreneurial Spirit

SMEs have been known for their creativity and entrepreneurial spirit as well as the key driving force of Taiwan's economic development and fast growth: recognized as export vanguard early on in the 1960s, key partners in supply chain and industry clusters later, and recently focal point of local economy, social value, and dreams for young generation.

However, based on the “White Paper on Small and Medium Enterprises in Taiwan,” in recent five years, Share of SMEs in existence over 20 years was in the range of 21% to 23%, far below the average 35% of large enterprises. This shows the business succession / transition remains a major challenge to SMEs as going concerns. Further, compared to large enterprises, SMEs in existence over 20 years suffered significant sales decline and the “the crisis of the elderly age” as their first-generation entrepreneurs got in to old age and lost their vitality and creativity. In the 21st century, many Taiwan SMEs in traditional industries, despite their deep technical foundation, have found their old business models unable to operate successfully in response to changing internal and external environment. It has become an important issue for sustainable development of SMEs to rediscover and activate the entrepreneurial spirit, combined with sound “second-generation succession” and business transformation strategy. Further discussion could be found in Chapter 7: “Succession and Transformation: Reactivating the Entrepreneurial Spirit.”

8. Assisting SMEs in Developing Own Brands or Core Technology, and Becoming Niche Markets Leaders

Firms own core technologies and/or brands can enjoy higher profitability through their pricing power than many OEMs who produce low margin products and specialize in only one type of arrangement in a supply chain. However, SMEs normally lack the capital, technology, information, and human resources of many large businesses to commit resources to technology upgrade, branding and R&D. To succeed in overseas markets, SMEs often need to leverage complementary external resources to develop own brand and core technology, and become niche markets leaders. Because SMEs can be more flexible in their operations, adaption and decision making, they can let their creativity run wild and develop branded specialty products rooted in culture. To encourage SMEs with potential to find right niche markets in line with their technology development, policy measures should reinforce the efforts in talent training, technology, and brand marketing, so as to develop these SMEs into niche market leaders quickly.



Part Two Special Topics on SMEs

Chapter 6 Innovation Vitality: New Microenterprises

Chapter 7 Succession and Transformation: Reactivating the Entrepreneurial Spirit

There had been a significant wedge between GDP growth rate of emerging world and that of developed world going back to the early 2000s. But now this growth rate differential is the most narrow it has been since the aftermath of the Asian financial crisis in the late 1990s. Taiwan should facilitate succession and transformation of its matured SMEs and gives birth to more proactive new ventures, particularly in emerging industries, to deepen their connections to leading industrial supply chains in advanced economies in order to maintain the lead on emerging market countries in science, technology, and innovation.

New microenterprises are the source of innovation and entrepreneurship; they often actively use and leverage social network and crowdfunding for funding and marketing, and at the same time help the upgrade of other industries. These characteristics are fundamental to the development trend of microenterprises. A microenterprise start-up should try to first identify - and then focus on - its core competency which is typically obtained through specialization, allowing it to establish a footprint while gaining a solid reputation and brand recognition. Further analyses are presented in Chapter 6.

As the first generation of entrepreneurs gradually retreated behind the scenes, the succession process of the new generation and the transition strategy will determine the future of these SMEs. Based on the life cycle of SMEs in different stages of Start-up, Growth, and Mature, government assistance measures must be tailor made to address the key issues at each stage, particularly in the vital process of succession and transformation. A thorough discussion is addressed in Chapter 7.



CHAPTER 6

Innovation Vitality: New Microenterprises

The employment opportunity and economic growth generated by large and medium enterprises have been reduced since the global financial crisis in 2008. This, however, raises the importance of microenterprises in the economy. There is no official definition of microenterprises in Taiwan. The only similar reference is the definition of “small-scale enterprise” in Article 3 of Standards for Identifying Small and Medium-sized Enterprises, published by Small and Medium Enterprise Administration (SMEA), Ministry of Economic Affairs (MOEA): a small-scale enterprise is an SME with less than 5 regular employees. According to the *2011 Industry, Commerce and Service Census Report*, 79% of all enterprises are microenterprises, representing the largest share of enterprises in Taiwan.

In the 21st century, many Taiwan SMEs in traditional industries, despite their deep technical foundation, have found their old business models, in most case the OEM model, unable to operate successfully in response to the challenge of industrial upgrade and transformation, and intensified competition from mainland China in particular. It is essential for SMEs to innovate themselves through upgrade and transformation for survival and sustainable growth. Since most enterprises start from small (or microenterprises), policies regarding innovation and entrepreneurship should mostly focus on microenterprises.

Policy supporting entrepreneurship or start-ups is one of the most important links among all the industrial policies. After the global financial crisis, most countries experienced high unemployment. Countries and regions including mainland China, the U.S., South Korea, and EU have been actively helping the creation of microenterprises. According to the *2015 IMD World Competitiveness Yearbook*, Taiwan ranks No. 3 in the entrepreneurship category among 61 countries. The indicator of the Global Entrepreneurship and Development Institute (GEDI) ranks Taiwan the 8th position among 130 countries, and the first position among Asian countries. All these indicate that Taiwan has high vitality in entrepreneurship. With appropriate government policy measures supporting innovation and entrepreneurship, SMEs and microenterprises will have opportunities to reverse the downward trend of the value added ratio, and create more better paying jobs.

This chapter is divided into four sections. Section I presents an overview of the difficulty and opportunity facing microenterprises; section II examines the trend and business model of microenterprises; section III offers case studies of selected new microenterprises in Taiwan; section IV discusses the integrated policy measures to support new microenterprises.

I Difficulty and Opportunity for Microenterprises

1. Difficulty

Microenterprises experienced many difficulties in recent years such as declining value added, lack of growth, and diminishing competitiveness in job market, as evidenced by the declining average salary in microenterprises.

(1) Microenterprises: large number with low output contribution

Low entry threshold leads to increase of microenterprises. In 2011, microenterprise accounted for 79.79% of all enterprises, 67.23% of enterprises in Service sector and 12.56% enterprises in Industry and Commerce sector, respectively. However, the contribution of nominal gross output is only 13.23% of all gross output, with 10.98% of the Service sector and 2.26% of the Industry and Commerce sector's gross output (Table 6-1-1).

Table 6-1-1 The Number of Enterprises and Output by Enterprise Size and Sector, 2011

Unit: Enterprises; million NT\$; %

Category \ Item	Number of enterprises	Ratio	Nominal total output	Ratio	Nominal gross output	Ratio
Industry, Commerce, and Service sectors	1,184,811	100.00	29,422,674	100.00	10,671,382	100.00
Large enterprises	4,680	0.39	16,950,307	57.61	5,856,931	54.88
SMEs	1,180,131	99.61	12,472,367	42.39	4,814,451	45.12
Microenterprises	945,338	79.79	2,591,032	8.81	1,412,341	13.23
Industry and Commerce sector	249,201	21.03	19,246,257	65.41	4,817,467	45.14
Large enterprises	1,693	0.14	11,967,015	40.67	3,025,967	28.36
SMEs	247,508	20.89	7,279,241	24.74	1,791,500	16.79
Microenterprises	148,807	12.56	710,415	2.41	240,712	2.26
Service sector	935,610	78.97	10,176,417	34.59	5,853,915	54.86
Large enterprises	2,987	0.25	4,983,292	16.94	2,830,963	26.53
SMEs	932,623	78.71	5,193,125	17.65	3,022,952	28.33
Microenterprises	796,531	67.23	1,880,617	6.39	1,171,628	10.98

Note: Data of SMEs include data of microenterprises.

Source: Directorate-General of Budget, Accounting and Statistics (DGBAS), 2011 Industry, Commerce and Service Census Report, 2013.

In addition, value-added ratios of microenterprises in both Industry and Commerce, and Service sectors declined, which indicated the need of innovation. However, the value added ratio of microenterprises is still higher than that of large and medium enterprises (Table 6-1-2).

(2) Declining size of SMEs (including microenterprises)

Data from Industry, Commerce and Service Census indicate that the average number of employees in SMEs as well as in microenterprises declined in 2011 from 1996, while the average number of employees in large enterprises increased during the same period. The decrease in size showed the deteriorated competitiveness of SMEs and microenterprises.

Table 6-1-2 Value Added Ratio in 1996, 2006 and 2011

Unit: Million NT\$, %

Category \ Item	1996			2006			2011		
	Total output	Gross output	Ratio	Total output	Gross output	Ratio	Total output	Gross output	Ratio
Industry, Commerce, and Service sectors	13,435,430	5,740,172	42.72	24,009,726	9,712,401	40.45	29,422,674	10,671,382	36.27
Large enterprises	6,897,807	2,847,628	41.28	13,764,619	5,444,436	39.55	16,950,307	5,856,931	34.55
SMEs	6,537,622	2,892,545	44.24	10,245,107	4,267,966	41.66	12,472,367	4,814,451	38.60
Microenterprises	1,146,715	731,736	63.81	2,024,957	1,194,888	59.01	2,591,032	1,412,341	54.51
Industry and Commerce sector	8,540,246	2,807,024	32.87	15,489,307	4,642,662	29.97	19,246,257	4,817,467	25.03
Large enterprises	4,431,044	1,513,149	34.15	9,437,871	2,947,412	31.23	11,967,015	3,025,967	25.29
SMEs	4,109,202	1,293,876	31.49	6,051,436	1,695,249	28.01	7,279,241	1,791,500	24.61
Microenterprises	326,547	148,211	45.39	541,930	227,078	41.90	710,415	240,712	33.88
Service sector	4,895,184	2,933,148	59.92	8,520,419	5,069,740	59.50	10,176,417	5,853,915	57.52
Large enterprises	2,466,764	1,334,479	54.10	4,326,748	2,497,024	57.71	4,983,292	2,830,963	56.81
SMEs	2,428,420	1,598,669	65.83	4,193,671	2,572,716	61.35	5,193,125	3,022,952	58.21
Microenterprises	820,168	583,525	71.15	1,483,027	967,810	65.26	1,880,617	1,171,628	62.30

Note: 1. Data of SMEs include data of micro-enterprises; 2. value added = 100% × GDP/GNP.

Source: See Table 6-1-1.

(3) Decline of the average annual compensation

Microenterprises were less competitive in job market as the average annual compensation of their employees declined in 2011 from 2006, while that of large enterprises and SMEs increased (Table 6-1-3). With slim chance of wage raise, employees of microenterprises tend to have high turnover rate, which reduces competitiveness of microenterprise further.

Table 6-1-3 Average Annual Compensation in Various Sectors

Unit: NT\$

Category \ Item	1996	2001	2006	2011
Average	436,357	503,203	541,054	579,265
Large enterprises	627,601	723,295	748,028	830,407
SMEs	359,307	398,741	436,313	446,164
Microenterprises	325,782	347,641	380,278	374,781
Industry and Commerce sector	431,029	488,863	552,587	611,576
Large enterprises	591,107	675,326	747,119	874,905
SMEs	359,369	391,158	444,336	451,439
Microenterprises	334,272	344,144	391,351	370,813
Service industry	441,196	514,580	532,383	555,905
Large enterprises	665,968	766,271	748,792	792,793
SMEs	359,253	404,416	430,614	442,658
Microenterprises	323,572	348,420	377,505	375,747

Note and source: See Table 6-1-1.

2. Opportunity

Wide coverage of internet reduces limitation of production and marketing. Through the deepening of external linkage and integration, new demand chains are formed and new microenterprises are created. Many microenterprises can use this model to enter the market and overcome their resource limitation. Although this business model helps microenterprises launch products very fast, they still need necessary financing and marketing channel to succeed. Fortunately, the rise of crowdfunding and social network offers new financing and marketing channels, inspires innovation, and strengthens microenterprises. To enhance competitiveness, microenterprises should focus on external linkage and integration to:

- (1) Switch to demand oriented style by focusing on trends of market demand and external linkage.
- (2) Finance through crowdfunding platforms.
- (3) Create social networks and integrate traditional and virtual distribution channels to develop markets.

The above three strategies differentiate new microenterprises from traditional ones. Products of new microenterprises tend to be more demand driven with quick response, and have better pricing than those from traditional models. This enhances value added of outputs. In addition, a new microenterprise could grow by integrating external organizations and enter into the growth phase of enterprise lifecycle, transforming from a microenterprise into a medium-sized enterprise, or eventually a large one.

II Business Model of New Microenterprises

Entrepreneurs bear high risks in traditional operation model from costly fixed asset (property, plant and equipment) investment and capital. It is essential to reduce cost and enhance efficiency to remain competitive.

OEM used to be viewed by large international enterprises as a method to enhance efficiency, reduce cost, absorb professional knowledge, and maintain stable operation. In recent years, microenterprises came out a new idea of “outsourcing” by integrating external organizations and focusing on demand chain, not the supply chain. This new model enables microenterprises to help the growth of other business or industries through outsourcing demand chain management.

1. Emerging New Microenterprises

With speedy change of industrial environment, companies compete over the management of the demand chain, rather than the supply chain only, indicating the shift of focus to stay familiar with the pulse of market demand. The idea of demand chain management is first proposed by Carothers and Adams (1991). Vollmann et al (1998) examined the role of an individual company as part of the demand chain management from consumption, to the whole product lines, and finally to the upstream supply chain of raw material. That is, market segmentation is the core for a company to satisfy

its customer needs. In the meantime, the company should also focus on optimizing internal production process.

With the reduced limitation of production, as long as the entrepreneur could find the demand, he/she could outsource production to other firms and make profit. Through outsourcing, integration, and quick response to the market, a company could create a new demand chain and at the same time, focus on the value added part of operation at which it excels. A company of this type can be nimble, profitable and small, and at the same time helps promote the development and upgrade of other industries, and preserve the declining traditional industries and their expertise.

This model has gained appreciation from microenterprises that lack skills and talents. With the help from crowdfunding platforms and social networks, by unifying traditional and virtual distribution channels, microenterprises have the chance to realize their innovative ideas. There is no clear definition for the model of outsourcing demand chain management by microenterprises. Here we temporarily call it the new microenterprise business model.

The traditional way of starting a new business requires inputs of equipment, factory building, and human resources, so the risk of failure is significant. For new microenterprises, the cost of failure is not that high, and failure could be viewed as a way of learning. Table 6-2-1 compares the start-up model of new microenterprises to the traditional one in manufacturing sector.

Table 6-2-1 Start-Up Model: Microenterprise vs. Traditional Manufacturer

Advantage and disadvantage Entrepreneurship models	Advantage	Disadvantage
New microenterprises	<ul style="list-style-type: none"> ◆ Low risk of failure; easy for start-up entry ◆ Able to complement lack of technology ◆ Low capital requirement on starting a business; light in asset ◆ High flexibility in operation ◆ Able to shift gear quickly and start a new project 	<ul style="list-style-type: none"> ◆ Not easy to obtain core technology ◆ Outsourcing process could be very complicated, thus reducing operation efficiency
Traditional manufacturer	Economies of scale	Asset heavy / capital input; high investment risk

Source: Zheng and Zhuo, *Innovation Vitality: New Microenterprises*, 2015.

2. Crowdfunding Platform

Microenterprises generally find it very difficult to obtain funding either from the capital market or venture capital due to unproven business models and/or lack of track records, or from banks due to lack of tangible assets that could be used as collateral. This situation has a direct negative impact on microenterprises' ability to survive and grow. Traditionally most microenterprises rely on angel fund, Youth Entrepreneurship Aid, and Taiwan SMEG (Small and Medium Enterprise Credit Guarantee Fund of Taiwan). With the development of internet, crowdfunding has emerged as an important alternative channel of financing and marketing for microenterprises.

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Crowdfunding is originated with the idea of social interaction and feedbacks. By presenting innovative ideas on social networks, microenterprises get instant consumer feedback. Consumers become part of the process of new product development, which makes the whole production process more open. Even though a microenterprise fails to raise funds through the platform, it could still use consumer feedback to improve itself. In other words, the product created through the crowdfunding platform is a product created by consumer demand and feedback.

Because of the effectiveness of crowdfunding, many organizations, such as World Bank, are actively supporting crowdfunding to help promote economic developments. According to Massolution, the crowdfunding platforms grew very fast in 2014, raising funds of US\$16.2 billion, or a growth rate of 167% from 2013. In 2014, there were over 1,250 crowdfunding platforms, 10 times the number five years ago. The number is expected to be doubled in 2015.

In 2014, the Asian crowdfunding market grew even faster. Although the largest crowdfunding market is in North America, which raised US\$9.46 billion in 2014, or 58.4% share of funds raised globally, the Asian crowdfunding market raised US\$3.40 billion, or a 320% growth rate, exceeding the European market, which raised US\$3.26 billion, or a 141% growth rate. In other regions such as South America, Oceania, and Africa, though the scale was not as large, the growth rates were about doubled in 2014, indicating a great potential for crowdfunding.

There are three types of crowdfunding as presented in Table 6-2-2. Donation and reward based crowdfunding is operated as “all or nothing,” that is, the founder sets a fundraising goal and keeps nothing unless the goal is achieved in limited time. If the founder fails, then he/she could not get the money and all the raised money will be returned to backers.

The advantage of the donation and reward based crowdfunding is that it could directly reflect the consumers’ reaction to the proposal, which in turn, forms the feedback mechanism that helps the adjustment of the production strategy and the construction of the demand chain. In addition, with the help of the crowdfunding platform, microenterprise could directly face the consumers, thus increasing products and/or brands’ exposure and reducing the difficulty of marketing. Moreover, crowdfunding does not require collateral and interest. A microenterprise founder pays 5% to 10% of the raised funds as fees to the platform if he/she succeeds. This is much easier compared to securing loans from banks. The main drawback with this type of crowdfunding is lack of guarantee mechanism to protect backers because there is no effective way to monitor the whole process. Another drawback with the crowdfunding platform is the lack of protection of intellectual property; the innovative idea could be easily plagiarized.

Lending-based crowdfunding is the most popular one now, accounting for 68.4% of all platforms. In 2014, lending-based crowdfunding platform raised US\$11.08 billion worldwide with a growth rate of 223%, followed by equity-based platform, which raised US\$1.1 billion with a growth rate of 182%, donation and reward based platform, which was matured and raised US\$3.26 billion (20.12% of all raised funds), and hybrid-based and royalty-based platforms, which were emerging ones and raised a combined share of 4.7% of total raised funds with growth rates of 290% and 336%, respectively.

Table 6-2-2 Types of Crowdfunding

Type		Definition	Overseas platform	Taiwanese platform
Financial compensation	Lending-based	Backers bid for claims and sign loan agreement with the founder. The founder pays interest according to the agreement.	Lending Club, SoMoLend	-
	Equity-based	Founder demonstrates its viability on the platform. Backers receive shares of the company, usually in its early stage, in exchange for the money pledged. Backers sell shares after the company is sold or goes public.	Funders Club, Circle up	Go Incubation Board for Startup and Acceleration Firms (GISA)
	Royalty-based	Founder holds trust fund. Backers obtain royalty through the company's intellectual rights.	Quirky, TubeStart, AppsFunder	-
Non financial compensation	Donation and reward-based	The product is usually special project related and the money mostly is small amount coming from the society. The individual backer does not require financial return but the final product will be given to the backer or the backer will be able to preorder the product.	Kickstarter, Peerbacker	FlyingV, Zeczec, WeBackers, WeReport, Fuudai, Dit Funding, HereO
Hybrid	Hybrid-based	This new platform combines the advantages of above mentioned styles.	Fundable	-

Note: “-” denotes no data available.

Source: Zheng and Zhuo, *Innovation Vitality: New Microenterprises*, 2015.

In terms of the proposals, commercial activities, exceeding social services in 2012, grew sharply in 2014, raising funds of US\$6.7 billion, or 41.3% of total funds. The next was social services, which raised 18.9% of total funds, followed by film and performing arts which raised 12.13% share of total, real estate 6.25%, and art of music 4.54%.

In terms of the time needed to secure funding, according to Massolution for the year 2012, it took an average of 9.1 weeks to pass the threshold. The donation-based and reward-based platforms took longer time, 10.2 and 10 weeks, respectively. The lending-based platform took the shortest time, 4.8 weeks, due to the transparent loan agreement and clearly defined risk to backers.

In terms of the distribution of funds, there are clear differences among the types of platforms. In 2012, among all the successful proposals from equity-based platforms, 42% of all equity-based proposals raised over US\$100,000, followed by 26% in the range of US\$50,000 to US\$100,000; among all the successful proposals from donation-based platforms, 35% of all donation-based proposals raised below US\$2,500, followed by 28% in the range of US\$2,500 to US\$5,000. This reflects the different goals of these two types of platform: founders in equity-based platform tend to set a higher goal than in donation-based one.

Till 2015, all the crowdfunding platforms in Taiwan were reward-based, in the forms of donation, pre-order, and pre-sell. Taiwan's reward-based platforms face similar problem such as lack of protection for backers. For instance, there is no official regulation in the crowdfunding market.

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The operators of the platforms only examine founders' backgrounds, proposals, and products, but do not take the responsibility of or guarantee the performance. There is no supervision on the execution of raised funds, either. In addition, it is uncertain whether the Consumer Protection and Fair Trade Act can be applied to the products (funded from the platforms), or whether there is any problem related to Charity Donations Destined for Social Welfare Funds Implementation Regulations or gift tax.

The most popular platforms in Taiwan are FlyingV, Zeczec, WeBackers, WeReport, Fuudai, Dit Funding, and HereO. FlyingV is the largest platform, with cumulative successful proposal over 1,000 and NT\$ 198 million raised. Proposals through FlyingV had a 44.94% successful rate. The social service and culture category, had the most proposals: 26.22% of all proposals (or 280 proposals), of which, 58.21% (or 163) are successful, followed by designed products accounting for 15.17% of all proposals with 45.68% successful rate, film and music accounting for 11.70% of all proposals with 49.60% successful rate, and technology application accounting for 9.83% of all proposals with 27.76% successful rate.

Due to the convenience and financing benefit the crowdfunding platforms providing to microenterprises, Financial Supervisory Commission of Taiwan set up rules recently that permit platforms meeting certain conditions to conduct equity-based crowdfunding. GISA (Go Incubation Board for Startup and Acceleration Firms) is similar to the equity-based platform, helping enterprises with "innovation, growth potential and sustainable operation" and paid-in capital below NT\$50 million. The equity-based crowdfunding platform could be viewed as an important alternative or extension to GISA for microenterprises to access funding.

3. Integrate Traditional and Virtual Distribution Channels

The development of cloud technology allows everybody to be able to use cross platform digital services without the restriction of space. The deepening connection among people and internet causes social networks to become part of everyday life, which in turn, changes the way business conducting marketing. The internet / network entrepreneurship has become the mainstream of starting a business; entrepreneurs focus more on traditional and virtual integration, which is particularly vital for microenterprises with limited resources.

The advantages of operating a social network include low threshold and low cost. Because of this, social network becomes the first choice for new micro entrepreneurship. The importance of social network to microenterprise is summarized as follows:

- (1) Fast response to consumer demand: the characteristic of immediate response of social network helps microenterprises effectively observe market changes. Through collecting and analyzing consumers' reactions, and discussing with consumers, microenterprises could improve products according to consumer demand, which in turn, helps microenterprises effectively manage demand, conduct innovation, and establish brand loyalty.
- (2) Service differentiation: with the understanding of consumer demand, microenterprises could utilize the virtual channel provided by social network to offer differentiating and fast services.

- (3) Low cost: integrating traditional and virtual distribution channels helps reduce operation costs, including expenses on advertising and marketing. As long as a microenterprise entrepreneur has innovative ideas and social network skills, he / she could combine business plan, social network, and e-commerce to successfully start a new business with low capital input, which also helps shorten the existence and / or survival period of business life cycle.
- (4) Growing market share: compared with traditional physical channel, virtual channel yields more flexibility in sales strategy, which helps find more potential customers and grow market share.
- (5) Combining small markets to form niche market: since microenterprises could not utilize mass production as their competition tool, they usually choose a niche market when starting business. The advantage of virtual channel is that it could more easily combine many small markets to form a microenterprise's niche market. In this way, the microenterprise could build its competitiveness through more effective target marketing and better knowledge of the target customers.

III Case Studies of New Microenterprises

In this section, we present case study of new microenterprises, which are chosen based on three criteria: outsourcing demand chain management, operating social network, and conducting crowdfunding (Table 6-3-1).

Table 6-3-1 List of Microenterprises for Case Studies

Industry	Name of enterprise	Crowdfunding?	Social networking?
City Bike	Lichy Enterprise Ltd.	Yes	Yes
Watch	22 Design Studio Co., Ltd.	Yes	Yes
Redesigned Wallet	Zenlet	Yes	Yes
Cultural and Creative products	Bright Ideas Design Co., Ltd.	Maybe	Yes
Cosmetics	The One International Co., Ltd.	Angel Fund	Yes

Source: Zheng and Zhuo, *Innovation Vitality: New Microenterprises*, 2015.

1. Lichy Enterprise Ltd.

Lichy Enterprise Ltd. was founded in April 2014, selling self-designed private brand bicycles. At the time the business started, the company already had the prototype of current product. The founder spent two years to get familiar with the traditional production process of bicycles. After that, the founder started Lichy selling bicycles designed to fit the needs of people living in urban areas.

(1) Operation model

Lichy focuses on urban people, because 60% of bicycle sales occur in urban area. The company finds that some urban people use bicycles as a means of transportation, but most view bicycles as part of living style. Therefore, professional bikes such as road bikes or mountain bikes are not very popular in urban areas.

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Traditional bicycle industry focuses on supply chain management. Nowadays traditional bicycle market is very competitive; many bicycle companies use almost the same parts to make very similar bicycles. Learning from them, Lichy fits consumer needs through observing target customers and use this information to design. In addition, Lichy uses Facebook and Apps to communicate with customers and bicycle lovers to learn more about their needs.

Lichy outsources its production. Traditionally, a bicycle company needs to buy parts from about 25 to 30 component factories to produce a bicycle. Since Lichy is still small, the cost can be very high to build its own component or assembly factory. Since Taiwan's bicycle OEM market is very competitive, without enough demand, Lichy could face high cost of idle capacity if it chooses to operate on its own factory. Therefore, Lichy invests its money mostly on more value added areas such as design, marketing, and packaging.

Outsourcing production has many advantages to Lichy. First, by not investing on production equipments, spaces, and personnel, the company reduces cost and risk. Second, the company only needs to focus on managing the brand and shipping, rather than involving highly complicated quality control. Third, because there is no cost on personnel, space, and quality control, the company could easily control total cost. Forth, since all the complication process is outsourced, the company could focus on developing its strength in design, branding, package, and marketing.

(2) Challenge and key to success

Like many other microenterprises, Lichy faced many challenges at the start of business. The first challenge is financing. Without enough working capital, the company could not place order. Second, traditional OEM companies rely on long-term and large orders. For microenterprise like Lichy, it is very difficult to find a cooperative factory.

Although there are many advantages of outsourcing production, there are some challenges as well. First, the speed of developing and producing a new product is slowed down, because it is not easy to find a factory that is willing to fully cooperate. Second, it is challenging to conduct quality control. If Lichy had its own factory, the company could repeatedly test parts until satisfied. However, it is impossible to ask outsourcing factory to do the same thing. Third, although outsourcing avoids production cost, the company still needs to rent a warehouse and manage inventory. Forth, it is not easy to communicate and negotiate with factories, or to monitor the progress of production process. Fifth, Lichy has only 5 employees, so it is challenging for the company to handle large sales and quality control.

Lichy's key to success is the understanding of the industry, rich knowledge of the niche market change, and the ability to create demand. The key to successful outsourcing is that Lichy fully understand the detail of production, such as cost structure, margin, and process, so it could better cooperate with factories. Finally, the use of social network as a database to generate ideas to design new products leads to a market oriented business model.

(3) Financing and crowdfunding

Lichy applied for the Youth Entrepreneurship Aid from Taipei City at the start of business. Now Lichy uses Zeczec for crowdfunding. In addition to financing, crowdfunding platform also plays the

role of marketing. Through the platform, the company could get first-hand instant feedback of its product and service, and plan in advance before placing.

(4) Future plan and suggestion to new micro entrepreneurship policy

Lichy will continue to launch new products every or every half a year. It will focus on different groups of people with small amount of production to test the market. The company also tries to develop overseas markets. If the company could succeed, then it will build its own factory that produces bicycle frame and has assembly line. In the meantime, the company will more actively manage the demand side by introducing more services through electronic platform or social network and offering more after-sales service.

In the future, Lichy will create a blog or App to share and communicate with customers and to offer online customer service and bicycle maintenance information. In addition, Lichy will copy the model of automobile industry to establish service package including sales, after-sale service, maintenance, bicycle club, bicycle tuning, and related event to enhance brand loyalty. Since one big challenge for microenterprise is limited access to marketing channels, the company will more actively utilize social networks for marketing purpose.

There are two policy suggestions Lichy would like to offer. First, the government could establish a communication platform or a business matching center to help microenterprises communicate and find the right outsourcing partners. Second, the government could offer related courses and counseling to help micro start-ups in product development, business operation, and connect to industrial value chain.

2. Bright Ideas Design Co., Ltd.

Bright Ideas Design is one of the finest digital content development companies in Taiwan. It was established in 1999. Starting from 2D design and museum service projects, the company successfully introduced multimedia into the digitalization of National Palace Museum of Taiwan and continued to be the only company in charge of National Palace Museum's digitalization for the following 3 years. In 2003, the company was invited by the project manager of Special Exhibition of Egypt of Musée du Louvre to participate in integrated design service for museums.

Over the course from 2004 to 2007, Bright Ideas Design entered into the transition period. The company and National Palace Museum developed a dual brand selling cultural figures that not only started the design trend of Taiwan, but also won the National Design Award of Taiwan. Bright Ideas CD-ROM Series have won many important awards for digital content both in Taiwan and abroad, earning global acclaim. For example, Whisked Tea of Sung Dynasty has won the Japan Digital Content Grand Prix 2002. The Magician of Color - Matisse not only won 2003 Digital Content Prototype Design Award, Industrial Development Bureau and the Golden Award for The Best Digital Innovation 2004, Government Information Office, Executive Yuan in Taiwan, but also won Japan Digital Content Grand Prix 2003. The World Ancient Civilization Exploration Series - Terra Cotta Warriors and Horses of Qin Shi Huang had won the Grand Prix AVICOM of France. Last but not least, its production was shortlist for the Best Digital Film in VIDFEST 2005 of Canada. All these

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awards show that Bright Ideas has become Taiwan's leading brand name for creative cultural products worldwide.

2007 to 2013 is the flying period of the company. With the main concept of "Taiwanese telling their own stories," the company developed original Taiwanese animation and invested in the production of Katz Fun 3D high definition animation. With the help of the Leading Project Plan of Industrial Development Bureau, Ministry of Economic Affairs, the animation was broadcasted on Cartoon Network of U.S., and won the Best Animation Programme of the 47th Golden Bell Award. In 2010, the company entered the Chinese market and started the preparation for the special exhibition of Yuan Ming Yuan - Qing Emperor's Splendid Gardens in both China and Taiwan for three years. This project was listed as the five most classical projects in the category of "Interpretation and Reconstruction" by United Nations Educational, Scientific and Cultural Organization, which is a successful cooperation model between Taiwan and China in the industry of culture and creativity.

Bright Ideas Design not only is capable of interpreting cultural content, but also has the skill to integrate internet, digitalization, platform, and different industries. With these successful experiences and substantial ability, the company will continue to develop the extraordinary content of Chinese culture and create new topics and business opportunities.

(1) Operation model

For ordinary exhibition, the service includes exhibition content, guided route, exhibition construction, visual integration, and accessory products such as cultural figures and DVDs. The company gains more revenue from exhibition services than the sales of accessory products. The company outsources construction and decoration of exhibition areas, and the production of accessory products. The advantage of outsourcing is to enhance efficiency through specialization. In addition, by building mutual understanding with cooperative factories, Bright Ideas Design could effectively reduce the time needed to finish a project; in this way, the company could manage multiple projects at the same time. The second advantage of outsourcing is to reduce cost. Although taking over the whole project could raise revenues, it also increases personnel and training costs substantially. Outsourcing enables the company to focus on its core value, maintain competitiveness, and gain more profits.

(2) Challenge and key to success

The disadvantage of outsourcing is that it is not easy to find a right factory and build mutual understanding. The decoration of a cultural exhibition area has multiple meanings. However, technicians from most decoration factories often do not understand the subtleties or meanings of its design. Due to the narrow skill set of one factory, the company may need to outsource to several factories, causing complications in coordination and high cost. Fortunately, after several years of cooperation, the company now has two to five trusted outsourcing factories that could cooperate with each other and understand the company's ideas and core value.

Bright Ideas Design believes that a successful outsourcing relationship is formed by mutual trust and partnership, through which the outsourcing partner could fully fit the company's need and be more willing to spend time on discussion and communication, therefore eliminating delay or quality problems in advance.

(3) Financing and crowdfunding

The company now mostly relies on Taiwan SMEG to finance with banks. Although GISA offers convenient financing channels, it has a cap on raised capital.

As for the non-equity based crowdfunding, Bright Ideas Design thinks that it can offer opportunities of marketing and serve as sales channels. Since the company has used its own website as the only sales channel, it will think about whether to utilize crowdfunding platform later.

(4) Future plan and suggestion to new micro entrepreneurship policy

The company used to offer exhibition service as major business. Now it plans to launch its private brand and offer more comprehensive services. The company also plans to develop overseas markets and offer services to international museums, such as digitalization for European, U.S., and Chinese museums. In addition, the company will actively participate in large scientific projects or academic-industrial projects to enhance its capability and accumulate experiences.

3. 22 Design Studio Co., Ltd.

The founder of 22 Design Studio started from selling self-designed rings and accessories in craft fairs. After participating in several overseas expos, the founder found business opportunity in this area and started the company specializing in operating on its own bold and unique brand in domestic and overseas markets. In addition to original products such as rings and writing instrument, the company recently launched the 4th dimension watch, a successful case on crowdfunding platform Zeczec.

(1) Operation model

The major problem with Taiwan's cultural and creative industry is not lack of creativity but lack of execution. Therefore, the company realizes that it should closely match consumer demand to its design, production, and pricing. With this market oriented attitude, the company adds new element to the market and finds its own place and value.

When the company started, it was very small and the primary products were rings and writing instrument made of concrete. The founder understood these kinds of products could only be accepted in small market. However, through international trade, worldwide small markets could be linked together to form the niche market for the company. Therefore, the company actively participated in overseas expos and developed markets in the U.S., Australia, Hong Kong, and China. Right now the company has agents in Japan and is building mutual understanding with each other.

The current primary project is the 4th dimension watch. The idea of this product is a bold shift as most watches on the market are very homogeneous with only graphic design. The design of the 4th dimension watch focuses on the practical and third dimensional elements. The target consumer is urbanite who enjoys design, art, and contemporary architecture.

There are several reasons to outsource the production of the watch. First, watch production is not the strength of the company. Second, it is very costly to build factories for every production process. Therefore, outsourcing is the way for cost control. Third, outsourcing synchronizes production, design, and sales, so the inventory cost could be minimized. The company has only a small factory for R&D.

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(2) Challenge and key to success

It took the company 2 to 3 years to develop and produce the 4th dimensional watch. Because of the uniqueness of this product and the unusual production process, the company faced many challenges in the outsourcing process and the scheduled product launch was delayed.

First, quality control was hard to be implemented. After mass production, the company found many details on the watch were not as originally designed. With the high defective rate and the difficulty of standardization of hand craft process, it was impossible to outsource to a large factory. Therefore, the company outsourced to several smaller factories. However, since every production process was separated, once there was a problem, it was very difficult to track the source of it.

Second, it was difficult to find a cooperative factory and to build mutual understanding. The watch industry used to have a whole production chain and cluster in Taiwan. Nowadays, most factories have moved to mainland China, causing industrial gap and making it difficult to find a cooperative factory. Once the company found a factory, without a large order, it was often not willing to cooperate. As to the watch parts, since most factories have already moved, the company could only depend on some experienced senior craftsmen to make parts, a process that makes mass production impossible. Moreover, there are also some design parts that are new to the watch industry, which make the outsourcing even more difficult.

The company believes that there are two keys to a successful outsourcing of demand chain management. The first is the core value of the business. To 22 Design Studio, it is its unique design and brand. The second is laser focused on the demand side. From design to production, the whole process has to be highly oriented toward the consumers so that the product could remain desirable and competitive.

(3) Financing and crowdfunding

When 22 Design Studio started, it got funding from Creative Taiwan - Cultural and Creative Industry Development Project of Ministry of Culture. Later on, the company applied for subsidy from Ministry of Culture. Recently, the company raises funds through crowdfunding platform.

On a reward-based platform, a successful fundraising depends on whether the product is attractive to the crowd. Taiwan's product market is relatively small, so lots of products are not available in the market. The reward-based platforms offer a chance to directly face consumers; as long as the product is of good quality and well received, the profit can be high. Moreover, consumer feedback is a test of the product's popularity. Firms can proceed to produce after accumulating enough orders, and reduce inventory risk. In the case of the 4th dimension watch, the company presents the story behind the watch on Zeczec and clearly specifies the price in line with popular brands. This approach attracts lots of attentions from consumers.

For the equity-based crowdfunding platform, 22 Design Studio thinks this type of platform is just another form of crowdfunding. Whether a product could be successfully sold on the platform depends on the product itself, not the type of platform. Equity-based platform allows backers to be shareholders. For 22 Design Studio, what the company needs are talents and technology, not just money. In addition, equity-based crowdfunding may disturb the company's operation model, because

shareholders, unlike reward-based crowdfunding backers who are more like consumers, could intervene with business operation and goals. Another benefit of the reward-based platform is that consumer feedbacks are valuable information of market reactions.

Since 22 Design Studio is still in the early stage of a business life, the company does not seek fast growth, so it will secure funding from banks rather than GISA.

(4) Future plan and suggestion to new micro entrepreneurship policy

The company will develop more products under its brand, expand production lines of current products, and focus on marketing by reinforcing the brand image. It will keep the small R&D factory and outsource production to expand producing capacity.

As to the policy suggestion, the company suggested the government to build a start-up park, an environment for entrepreneurs in the cultural and creative industry to communicate and exchange ideas and inspire each other.

4. The One International Co., Ltd.

The movie Cape No. 7 brought on the trend of MIT (made in Taiwan) in 2009. The founder of The One International Co. Ltd. found an opportunity for MIT products and started the company in August, 2009. The products are cosmetics using natural and local ingredients and everything is made in Taiwan. The company is now 5 years old. The founder was elected as one of the model entrepreneurs of microenterprises by the Ministry of Labor in 2012. In the same year, the company won the second place of start-up award by Ministry of Economic Affairs. It actively develops electronic sales channels and overseas markets in recent years.

(1) Operation model

Primary products of The One are cosmetics made from Taiwan's local ingredients. The company focuses on brand management, including product planning, market positioning, marketing, and sales channel distribution. The target customers are urban females aged 20 to 35 living a LOHAS (Lifestyle of Health and Sustainability) life style. The company cares about the demands of these customers and thinks the way they think about cosmetics, so it could identify the true needs of these customers and respond to markets quickly.

The company outsources website maintenance and the production of ingredients, bottles, paper boxes, packaging, etc. The major reason for outsourcing is to control cost, including personnel and time costs. Another benefit of outsourcing is that the company does not need to take the risk of managing unfamiliar business so that it could focus on the business it is good at, and be able to speed up the development of new projects. When the company started, there were only 10 employees. The company could not take on both R&D and production. Therefore, outsourcing is a must.

(2) Challenge and key to success

Due to lack of industrial experience, the company found it very difficult to find an outsourcing factory and to communicate and build mutual understanding with each other.

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Although one of the benefits of outsource is to have a single window to control product quality and price, the company does not have enough employees to monitor the whole production process. It is very difficult to conduct quality control after products have been produced. Right now the company uses two methods to control quality: examining product appearances and sending products to a third party to conduct inspection.

The company believes the key to successful outsourcing is to identify its core value and to choose a suitable operation model. For The One, marketing could also be separated into several processes and each one of them could be outsourced. But whether and which one to be outsourced should depend on the company's core value from the point of operation.

(3) Financing and crowdfunding

When the company started, it got financial help from the U-Star Project of Ministry of Education, and applied for the Youth Entrepreneurship Aid and the Phoenix Micro Start-up Loan. Now the major funding comes from its own capital, outside shareholder, and bank loans. The company does not intend to use the reward-based crowdfunding, because the function of the platform is very similar to a pre-order website, not different from the company's own website. In addition, The company thinks that crowdfunding platform is more suitable for innovative products, and its cosmetics products do not belong to this category. However, it believes that crowdfunding is a good way for microenterprise to raise fund and reduce founder's capital risk.

The company has reservation about GISA. Although GISA can raise more capital, it also brings outside shareholders who may have different opinion about the company's operation and short-term profitability. Right now outside shareholder of the company is an Angel Fund whose main goal is not short-term profit. The priority right now is to reinvest profit in R&D to produce better products.

(4) Future plan and suggestion to new micro entrepreneurship policy

The company believes that once the sales channel is determined, the brand can be used strategically to attract target customers and then the pricing and marketing will be specifically followed. Since the competitive status of physical channels varies, it is not easy to enter a new overseas market. In the next 3 to 5 years, the company will continue to develop the brand and strengthen internet channel so that the company could copy successful experience to overseas markets. Right now, 70% of the sales comes from internet channels. The priority of the company is not the variety of products but the product standardization and sales channels. As to policy suggestions, the company hopes that the government could integrate information of industrial supply chain, including OEMs' core competencies, so that microenterprises could reduce searching costs.

5. Zenlet

Inspired by the book "*Makers, The New Industrial Revolution*," the team of Zenlet believes that where there is an idea, there is a maker. The key driver from the born of the idea to the production is capital, so crowdfunding is very important to the team. Observing successful cases on Kickstarter, the team proposed the idea of an intuitive wallet and successfully raised fund the first time appearing on Kickstarter. After obtaining the fund in 2014, the company was launched and later expanded market in Taiwan through FlyingV.

(1) Operation model

After observing the increasing popularity of Kickstarter, the team studied characteristics of backers of the platform to see if there is business opportunity. The company found that although there were lots of new wallets on Kickstarter, most of them were not user friendly but still very popular. This gave the team an idea to design a wallet, the Zenlet, that had a simple appearance and was easy to use. Zenlet has an additional RFID blocking feature to attract virtual community who likes innovative and personalized products.

The company realizes that a successful crowdfunding has several key elements: product, brand value, packaging, and marketing. Therefore, the company pays more attention to marketing strategy. It outsources production to focus on design and brand marketing.

(2) Challenge and key to success

The company faced several challenges during the beginning of outsourcing. Among them, the biggest challenge was the difficulty to find a cooperative factory willing to take a small order because small orders came with higher unit cost. Zenlet had to have several small factories produce parts and then assembly the product itself. This causes the problem of integration, management, and complication in production. To avoid shipping delay, Zenlet now separates the production process into smaller segments and outsources these segments to several small cooperative factories. In the meantime, the company is still looking for a larger factory to work with. Right now the company has more than ten small cooperative factories that help produce parts, including CNC factories, injection molding factories, coil spring molding factories, stamping factories, paint factories, and parts factories. The company also needs to rent a space and hire assembly personnel.

The company thinks a successful outsourcing is determined by the factories' attitude. Many manufacturing factories moved to mainland China, so did many large orders. If Taiwan's local factories are still not willing to take small orders, their business will shrink further. Right now Zenlet's cooperative factories are very open-minded toward microenterprises. These factories take both large and small orders. Large orders help these factories get profits, and small ones are like investment to help Zenlet grow. Once Zenlet becomes a large company, the original small orders will become large ones, leading to win-win for both sides.

One of the disadvantages of outsourcing production is the uncertainty of shipping time: small orders are easy to be delayed due to large orders taking out the capacity of small factories. Another disadvantage is that small factories lack experiences of quality control, so Zenlet has to spend more time on communication.

(3) Financing and crowdfunding

Zenlet's fund all came from crowdfunding. It first raised US\$250,000 from crowdfunding on Kickstarter and then NT\$2 million from FlyingV. Zenlet thinks crowdfunding is an important financing channel for microenterprises because it is fast and efficient. As for the equity-based platforms, Zenlet has reservations. It thinks that the reward-based platforms are very useful to microenterprises. Equity-based platforms often raise more capital but also bring in more shareholders

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whose priority could be more short-term oriented. To the company, venture capital is more attractive than the equity-based crowdfunding.

The company mentioned that the biggest difference between the platforms in North America and Taiwan is backers' thinking. Backers in Western countries are more open-minded about crowdfunding so they are more willing to help innovation. On the contrary, Backers in Asian countries care more about the usefulness of a product so they are more conservative about investing in innovation. In addition, production with crowdfunding is more uncertain and takes more time and the Taiwanese prefers fast and on time delivery, so most are unwilling to invest through crowdfunding platforms.

(4) Future plan and suggestion to new micro entrepreneurship policy

In the future, the company will continue to develop new products and sell on crowdfunding platforms. The company will put priority on hiring core technicians and seek overseas agents to develop overseas markets, especially European and the U.S. markets where credit cards are primary payment methods.

There are three policy suggestions the company would like to offer. First, the company hopes that the government could speed up promoting different types of crowdfunding so that microenterprises could choose a suitable one based on their scales and needs. Second, the government could help create and promote a positive crowdfunding environment to protect investors so that people are more willing to invest. Third, government could offer tax relief to microenterprises to help them grow faster.

6. Summary

These new microenterprises use the feedback feature to customize products based on customer needs and actively seek specialization and internal optimization. Outsourcing production does help upgrade traditional industries working with these new microenterprises.

As for financing channels, these new microenterprises use both traditional channels such as bank loans and SMEG as well as crowdfunding.

As for the outsourcing of demand chain management, all companies think that focusing on what they are good at is the top priority. Other benefits include leveraging outside resource, low capital requirement, efficiency, low risk of failure, cost control, and specialization. Most companies think the biggest challenge is to find a cooperative factory, and then the difficulty to conduct quality control.

Table 6-3-1 and table 6-3-2 show the summary of case studies above on policy suggestion, outsourcing, and crowdfunding.

Table 6-3-1 Summary of Policy Suggestions

Company	Government aid	Policy suggestions
Lichy Enterprise Ltd.	Youth Entrepreneurship Aid from Taipei City	<ul style="list-style-type: none"> Establish a communication platform or a business matching center to help companies communicate with each other Offer related courses and counseling in entrepreneurship, product development, and business operation
Bright Ideas Design Co., Ltd.	Taiwan SMEG, subsidy projects by MOEA, and other government's programs	No comment
22 Design Studio Co., Ltd.	Creative Taiwan - Cultural and Creative Industry Development Project of Ministry of Culture, Subsidy from Ministry of Culture	Build startup park for entrepreneurs in the cultural and creative industry able to communicate and exchange ideas
The One International Co., Ltd.	U-star Project of Ministry of Education, Youth Entrepreneurship Aid and the Micro-startup Phoenix Loan	Integrate information of industrial supply chain, including OEMs' core competencies, so that microenterprises could reduce searching costs.
ZENLET	No government funding	<ul style="list-style-type: none"> Speed up promoting crowdfunding so that enterprises could choose a suitable one based on their scales and needs Help create and promote a positive crowdfunding environment so that people are more willing to invest Offer tax relief to microenterprises to help them grow faster

Source: Zheng and Zhuo, *Innovation Vitality: New Microenterprises*, 2015.

Table 6-3-2 Case Study Summary

Company	Outsourcing business	Social network and crowdfunding platform
Lichy Enterprise Ltd.	Production of bicycle parts	Zeczec, company's official website and Facebook page
Bright Ideas Design Co., Ltd.	Construction and decoration of exhibition areas, and production of accessory products	Company's official website and Facebook page
22 Design Studio Co., Ltd.	Production of watches	Zeczec, company's official Facebook page
The One International Co., Ltd.	Production, R&D, and packaging	Company's official website and Facebook page
ZENLET	Production of Zenlet	Kickstarter, FlyingV, company's official Facebook page

Source: Zheng and Zhuo, *Innovation Vitality: New Microenterprises*, 2015.

IV Integrated Policy Measures to Support New Microenterprises

New microenterprises use social network and crowdfunding, and could help the upgrade of other industries. These characteristics are fundamental to the development trend of microenterprises. In this section, six suggestions are presented based on above case studies.

1. Boost Creativity

(1) Help new microenterprises develop core competency

Core competency is a harmonized combination of multiple resources and skills that distinguish a firm in the marketplace such as technical expertise, management, and specialization, which is particularly true to microenterprises. Core competencies are developed through the process of continuous improvements over the period of time rather than a single large change. A microenterprise start-up should try to first identify - and then focus on - its core competency, allowing it to establish a footprint while gaining a solid reputation and brand recognition. Using, and later leveraging, core competency usually provides the best chance for a company's continued growth and survival, as this is what differentiates the company from competitors. Business functions not enhanced by core competency should be outsourced if economically feasible. The development of new microenterprises depends on the outsourcing of demand-oriented management and focuses on enterprise's core value. This helps reduce risk and cost, and enhance efficiency, which in turn, creates higher value added, accumulates experiences, and helps upgrade of related industries. Therefore, the government should encourage the development of new microenterprise by offering business friendly environment and counseling.

(2) Establish communication platform to speed up development of microenterprises

One of the keys to successfully operate is whether a new microenterprise could find fit cooperative factories to build trust and stable partnership. The government could help generate useful information of a list of companies from up-, mid- to low-stream of each industrial supply chain, and their core competencies. This information could reduce search cost and time for new microenterprises. Moreover, the government could build start-up parks for new microenterprises to move in and share ideas with each other.

(3) Help microenterprises leverage online network

Internet and various online network tools enable small business to participate in global market without costly investment on fixed asset and physical distribution channels. Right now, the Ministry of Economic Affairs (MOEA) is actively integrating resources from both public and private sectors to provide ICT tools (e-commerce, network, social media, etc.) and counseling to microenterprises.

(4) Help microenterprises build sustainable business and become source of creativity

Even though a new microenterprise has a good start, it still has to face the significant challenge to expand several years later. Whether it still has the vigor of creativity and access to enough resources to expand are the two unknown variables to the enterprise.

Keys for a microenterprise to successfully expand are its vision, execution, and core competency, as well as help and subsidy from policy measures. With the development of big data and open data, the government actively integrates human resources, funding, information, and online network to help strengthen operation flexibility and specialization of new microenterprises. The development of new microenterprise could offer more employment and become source of creativity.

2. Help Access to Funding

Right now the government is actively helping microenterprises become more creative by offering funding, guidance, and counseling on integrating traditional and virtual distribution channels. On funding, the government has established various policy measures such as industrial preferential policy, Taiwan SMEG, and Youth Entrepreneurship Aid to help microenterprises and SMEs. In addition, the government works hard to develop and regulate crowdfunding platforms as another funding channel for microenterprises.

(1) Strengthen investor protection and promote sustainability of crowdfunding platforms

Till 2015, all the crowdfunding platforms in Taiwan were reward-based, in the forms of donation, pre-order, and pre-sell. Reward-based platforms lack of protection for backers. It is essential to have transparent regulations to eliminate uncertainties on whether the Consumer Protection and Fair Trade Act can be applied to the products funded from crowdfunding platforms, backers' right in cases of business closing or liquidation, or whether there is any problem related to Charity Donations Destined for Social Welfare Funds Implementation Regulations or gift tax.

(2) Speed up equity-based crowdfunding and promote multiple funding channels

In the internet era, crowdfunding becomes a crucial funding channel for SMEs. Generally speaking, reward-based crowdfunding is more suitable for a new business. As a company grows, its demand for funds increases as well, and it is the time for the equity-based crowdfunding to play a more significant role. The government could help the development of microenterprises through policy initiatives as well as transparent laws and regulations on crowdfunding.

CHAPTER 7

Succession and Transformation: Reactivating the Entrepreneurial Spirit

SMEs have been the source of creativity and the key driving force of Taiwan's economic growth - recognized as export vanguard early on in the 1960s, key partners in supply chain and industry clusters later, and recently focal point of local economy, social value, and dreams for young generation.

According to statistics of the “*2014 White Paper on Small and Medium Enterprises in Taiwan*,” SMEs accounted for over 97.6 percent of the total number of business enterprises in Taiwan from 2007 to 2013. SMEs provide more than 75 percent of the nation's total employment in the private sector and help establish job security in communities and spur more spending and investment, resulting in a thriving local economy.

Based on the census published by Executive Yuan in December 2013, the overall profit margin was 6.37% in 2011, down 0.86 percentage points from 2006. Profit margin of SMEs was 8.28% in 2011, higher than large-scale enterprises at 5.25%. SSEs (small-scale enterprise: less than 5 regular paid employees, or micro enterprise) performed the best with profit margin at 11.84%. During the five-year period, Taiwan SMEs proved more flexible and resilient to the changing market demand and were capable to adjust at all levels from production to marketing. According to the “*IMD World Competitiveness Yearbook*” from Institute for Management Development (IMD), Taiwan SMEs ranked No. 6 in 2014 (5, 14, 5, 3, and 9 from 2008 to 2013 respectively) in “Business Efficiency-Productivity & Efficiency- Small and Medium-size Enterprises” far above the ranking of Taiwan large enterprises.

However, based on the “*White Paper on Small and Medium Enterprises in Taiwan*,” in recent five years, share of SMEs in existence over 20 years was in the range of 21% to 23%, far below the average 35% of large enterprises. This shows the business succession / transition remains a major challenge to SMEs as going concerns. Further, compared to large enterprises, SMEs in existence over 20 years suffered significant sales decline and “the crisis of the elderly age” as their first-generation entrepreneurs got into old age and lost their vitality and creativity. It has become an important issue for sustainable development of SMEs to reactivate the entrepreneurial spirit, combined with sound “second-generation succession” and business transformation strategy.

This chapter is divided into four sections. Section I presents an overview of the SME lifecycle and “the crisis of the elderly age”; section II examines the importance of business succession and transformation for SMEs; section III offers case studies of selected SMEs' succession and transformation; section IV discusses succession and transformation strategy for SMEs.

I SME Lifecycle and “the Crisis of the Elderly Age”

1. Corporate Lifecycle

Dr. Ichak Kalderon Adizes, widely acknowledged as one of the world’s leading management experts, explains in his books how and why corporations grow and die and what to do about it. At the foundation of effective management for any organization is the fundamental truth that all organizations, like all living organisms, have a lifecycle and undergo very predictable and repetitive patterns of behavior as they grow and develop. He has identified a series of ten specific stages in lifecycle: Courtship, Infancy, Go-Go, Adolescence, Prime, The Fall, Aristocracy, Recrimination, Bureaucracy, and Death.

According to Dr. Adizes’ research, corporate lifecycle could last dozens or hundreds of years. However, many corporations cease to exist in less than 20 years without going through the ten stages of a complete lifecycle because at each new stage of development an organization is faced with a unique set of challenges. How well or poorly management addresses these challenges, and leads a healthy transition from one stage to the next, has a significant impact on the success or failure of their organization. For example, infant organizations are necessarily action-oriented and opportunity-driving without sufficient capital and operation talent; a Go-Go organization typically has a successful product or service, rapidly growing sales and strong cash flow. With this success, founder(s) or family members could quickly forget about the trials and tribulations of Infancy. Continued success quickly transforms this confidence into arrogance and traps of unprofessional decisions; during the Adolescent stage of the organizational lifecycle, the company is reborn. This second birth is an emotional time where the company must find a life apart from that provided by its Founder. This critical transition is much like the rebirth a teenager goes through to establish independence from their parents. The Adolescent Company teeters on the brink of both success and disaster as facing conflict between founder(s) and professional managers. Delegating effectively is very difficult, and few founders excel at it; after the stage of Prime, it often begins a journey of the steady decline in flexibility, more bureaucracy and less of a long-term view. It is unable to reverse its downward spiral and the artificial repairs finally stop working. Often time, a company was born the first time in Infancy, it was reborn in Adolescence, and its third “birth” is in Bureaucracy when it gets an artificial continuance on its life. Death occurs when no one remains committed to keeping the organization alive.

Indeed, Prime is the optimal position on the lifecycle, where the organization finally achieves a balance between control and flexibility. Prime is actually not a single point on the lifecycle curve. Instead, it is best represented by a segment of the curve that includes both growing and aging conditions. This is because flexibility and self-control are incompatible and there is no stable equilibrium. Sometimes the Prime organization is more flexible than controllable, and sometimes it’s not flexible enough. The biggest challenge is to avoid the traps of the rebirth and the third “birth” so as not to fall into Bureaucracy and Death. A Prime organization knows what it is doing, where it is going, and how it will get there. It also enjoys both high growth and high profitability. Once an

organization reaches Prime, leadership must work to sustain that position with sound strategy for transformation and renewed growth.

Kanai a Lai (2002) discussed the corporate organizational development based on a lifecycle of three stages: Start-up, Growth, and Mature (Table 7-1-1).

Table 7-1-1 Organizational Development at All Stages and the Key to Success

Stage	Development: to do list	Key to success
Start-up	<ul style="list-style-type: none"> • Manufacture or create products or services to meet the demand of potential customers • Build new business model to execute the above-mentioned value chain activities 	<ul style="list-style-type: none"> • Pick your battle field • Core value proposition and business planning • Obtain resource
Growth	<ul style="list-style-type: none"> • Establish competitive advantage over potential competitors and new entrants • Effectively manage the growing size of the organization • Rapid expansion through executing the above mentioned new business model 	<ul style="list-style-type: none"> • Effectively utilize and leverage external resources through strategic alliance • Right strategy to address the resource gap in rapid growing period • Strike a balance between building internal core competency and utilization of external resources • Branding and innovation to achieve product differentiation and nurture customer loyalty
Mature	<ul style="list-style-type: none"> • Fight bureaucracy; avoid aging of the existing mature business and its downward spiral • Continuous innovation in new business models in order not to be eliminated by changing external business environment 	<ul style="list-style-type: none"> • Redefine your battle field and target markets • Build core competency for rebirth – “second venture” (succession / transition) and accumulate resources • Effectively leverage external new venture to incentivize innovation and create new businesses internally • Establish organizational structure that fits new business operations

Source: Kanai a Lai, 2002.

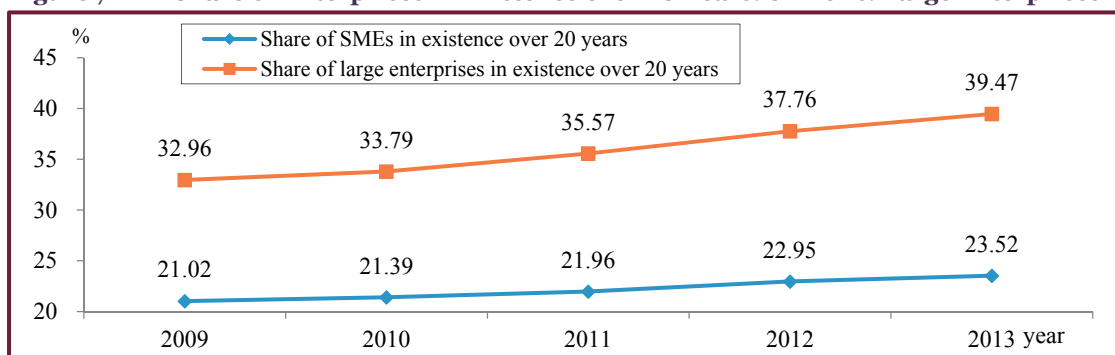
Figure 7-1-1 below showed that during the five-year period from 2009 to 2013, share of SMEs in existence over 20 years grew consistently from 21.02%, 21.39%, 21.96%, 22.95%, to 23.52%, respectively, indicating SMEs' improved stability and resilience in response to highly challenging external environment including worldwide financial crisis. However, these improvements had lagged the large enterprises by a large margin as the share of SMEs in existence over 20 years was far below the average 35% of large enterprises in the same period (32.96%, 33.79%, 35.57%, 37.76%, and 39.47% respectively). Much can be done to strengthen SMEs as sustainable going concerns.

Large enterprises typically are established firms in several specialized and diversified areas with advanced technology and ample (financial and human) resources that most SMEs lack. SMEs need to effectively use and leverage their limited resources and laser focus on business transformation, new niche markets, product differentiation and customer loyalty. SMEs must remain flexible and keep the entrepreneurial spirit throughout the corporate lifecycle to drive innovation, expansion, and

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successful second (and even third) transformation and upgrade. Based on life cycle of SMEs in different stages of Start-up, Growth, and Mature, government assistance measures must be tailor-made to address the key issues at each stage (Table 7-1-2).

Figure 7-1-1 Share of Enterprises in Existence over 20 Years: SMEs vs. Large Enterprises



Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2009-2013.

Table 7-1-2 Government Measures for Main Stages of SME Lifecycle

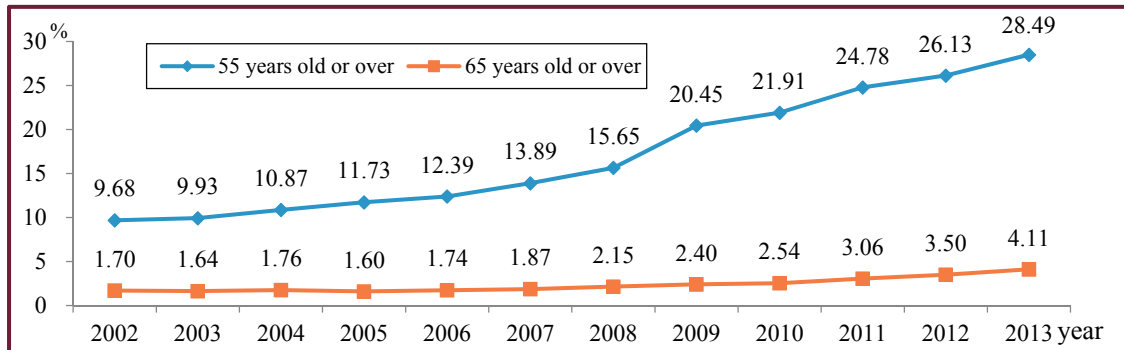
Stage	Government measures to assist SMEs
Start-up	<ul style="list-style-type: none"> • Incubation and counseling measures (workshops, incubation centers, etc.) • Providing financing conduit (Angel Fund, Credit Guarantee, crowdfunding, etc.)
Growth	<ul style="list-style-type: none"> • Favorite tax and leasing treatment (tax credit for R&D, equipment investment, etc.) • R&D and innovation subsidy (SBIR, crowdfunding, etc.) • Assist in market information (knowledge platform and network) • Strengthen funding conduit (favorite loan terms for SMEs)
Mature	<ul style="list-style-type: none"> • Encourage cross-industry cooperation to achieve transformation goals (match corporation between external new teams and internal ones) • Assist in transition / succession planning (training course for next-generation successors, business transformation subsidies, etc.) • Counseling for establishment of sound systems for SMEs (introduce experts / consultants to assist in the establishment of new business management systems, etc.)

Source: Wei, Qiu and Lan, *Succession and Transformation: Reactivating the Entrepreneurial Spirit*, 2015.

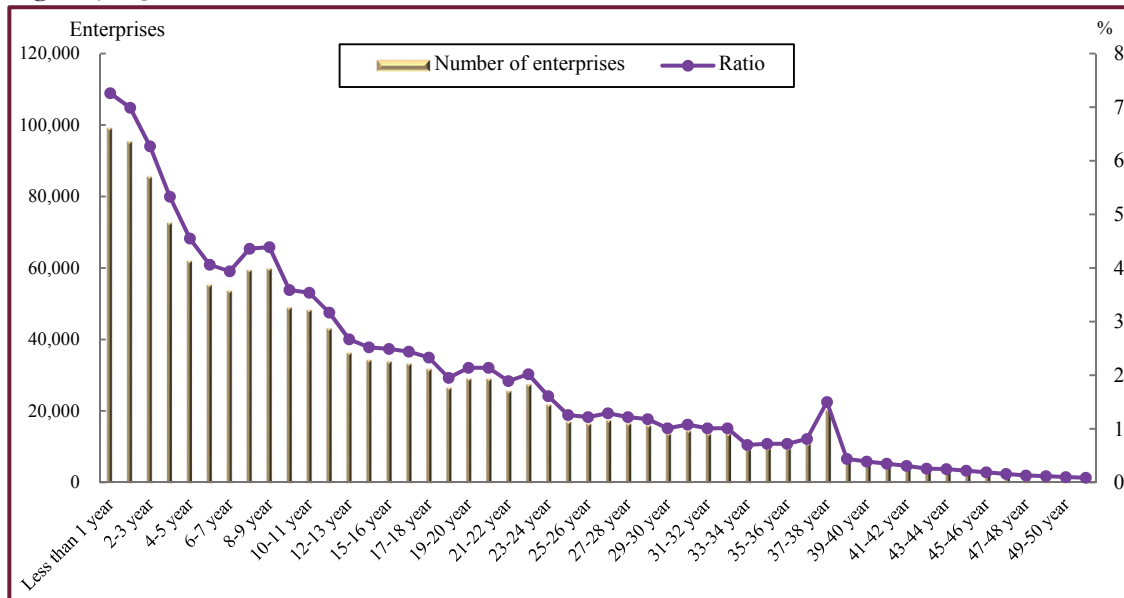
2. Taiwan SMEs in “the Crisis of the Elderly Age”

Figure 7-1-2 below showed that during the period from 2002 to 2013, share of SME owners who were above 55 years old grew substantially from 9.69% in 2002 to 28.49% in 2013; at the same time, share of SME owners who were above 65 years old in also grew fast from 1.70% in 2002 to 4.11% in 2013. This shows the continuous and fast aging trend of SMEs owners for many years.

Figure 7-1-3 below showed the number and share of SMEs in existence over number of years. It shows in general, except a few years (year 7-9; 35-38), the longer the SMEs survive, the less the number and share of SMEs.

Figure 7-1-2 Aging Trend of Taiwan SMEs' Owners

Source: Directorate-General of Budget, Accounting and Statistics (DGBAS), Manpower Survey data, 2002-2013.

Figure 7-1-3 The Number and Share of SMEs in Existence over Number of Years

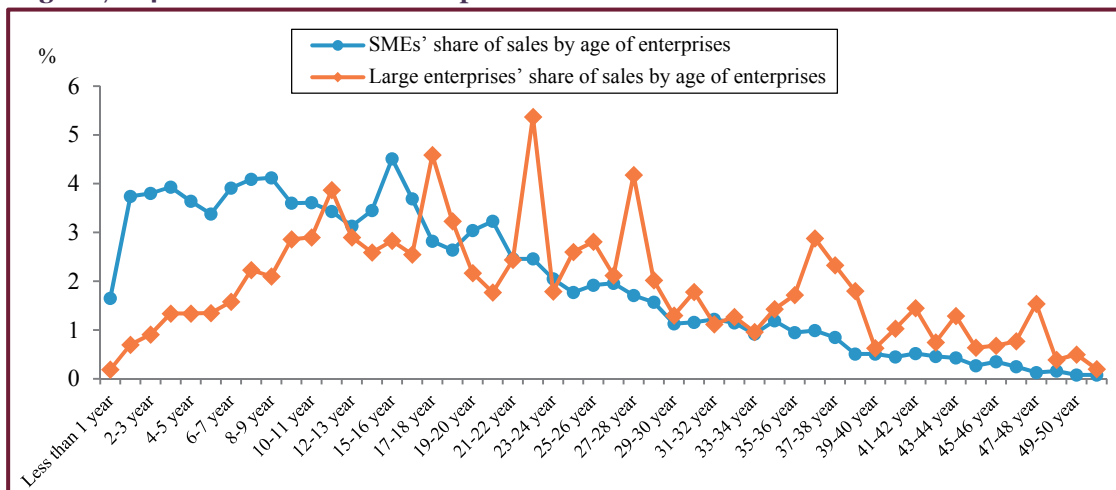
Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2013.

Figure 7-1-4 below showed the share of sales of enterprises in existence over number of years. It shows that while sales share of larger enterprises varied within each decade (with exception of first decade from start-up to growth stage), SMEs' share of sales peaked in year 16, varied between year 17-20, and then generally went down after year 20. SMEs seem unable to reverse their downward spiral once entering mature stage.

It can be seen that SMEs founded during the period of Taiwan's economic take-off have entered the mature stage. They began to face significant challenges: old business models unfit for high value-added creation, lack flexibility and innovation drive, and aging founders losing entrepreneurial spirit and thinking about quit. It seems that many SMEs have entered "the crisis of the elderly age." Therefore it is vital for these SMEs to craft strategies toward sustainable going concern.

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Figure 7-1-4 Share of Sales of Enterprises in Existence over Number of Years



Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2013.

In general, SMEs enter “the crisis of the elderly age” due to both internal and external factors. Internal factors include bureaucratic rigidity leading to low spirit and inflexibility, short term oriented and less innovation, and over reliance on founder's past experience. External factors comprise of rapid changing technologies, new business models, ever changing consumer demands and preferences, and intensified competition, leading to diminished competitive advantage.

II Importance of Business Succession and Transformation for SMEs

In the 21st century, many Taiwan SMEs in traditional industries, despite their deep technical foundation, have found their old business models unable to operate successfully in response to changing internal and external environment. The new generation succession has become an important topic for sustainable development of SMEs to rediscover and activate the entrepreneurial spirit, and enhance their vitality through business transformation as well as creative destruction.

1. Importance of Business Succession and Transformation

At present, almost 50% of Taiwan SMEs have been in existence over 10 years; 23.52% of these SMEs have been in existence over 20 years. As the first generation of entrepreneurs gradually retreated behind the scenes, the succession process of the new generation and the transition strategy will determine the future of these SMEs.

Miller and Friesen (1982) viewed corporate succession and transition as transforming entrepreneurial spirit from individual level into organizational innovation, especially when organizational change and strategic direction shift are necessary for enterprises in mature stage (typically over 10 years old with strong owner, stable management team and market share while

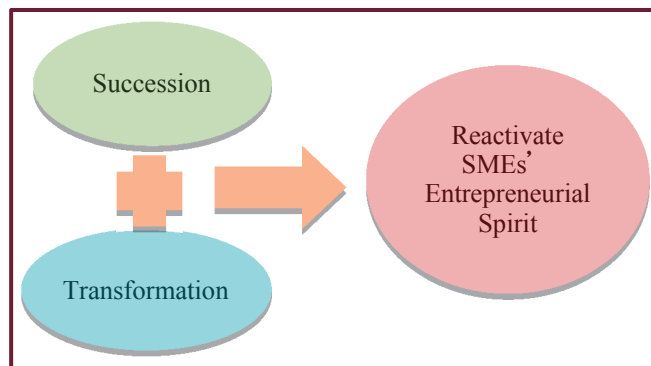
facing intensified competition) to break the bottleneck and establish new business models in response to changes in the external business environment.

When SMEs face the business transformation problem, often the chief operation executives are not the founders (first generation entrepreneurs), but the next-generation successor who could be young family members or hired outside professional managers. The new professional team often possesses relatively new innovation management to transform the business operation toward new growth areas.

If an SME fails in succession and transformation, it could either closed (a mediocre SME in downward spiral) or be acquired by a large enterprise (an SME with unique resource of technology is easily a target of large overseas enterprises). For example: founded in 1985 in Taiwan, Magic Amah was acquired by the Nice Group (a mainland China firm in Zhejiang Province), because the second generation of the family did not want to take over.

Therefore, transformation has become an increasingly integrated part of business succession strategy to “Reactivate the SME Entrepreneurial Spirit” - a move in full swing by new generation successors in recent years (Figure 7-2-1).

Figure 7-2-1 Concept of SME Succession and Transformation



Source: Wei, Qiu and Lan, *Succession and Transformation: Reactivating the Entrepreneurial Spirit*, 2015.

2. Facilitate SME Business Succession and Transformation

While SMEs in mature stage have accumulated rich experience and operational resources, they tend to rely on past formula, and are reluctant to make bold and disruptive changes. Most SMEs are family businesses and often a few key family members or close relatives have dominant control over the operation, hence making succession and transformation far more difficult in terms of decision making process and enterprise governance.

(1) Facilitate SME business succession

Family businesses account for about 75% of all listed (or Over the Counter Market) companies in Taiwan. These family businesses pick successors mostly from family members: sons (over 70%), daughters (about 20%), or other family members. Major benefits of passing the torch to family members are trust, low succession cost, close teamwork, and effective transfer of network (contacts and relations).

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Professional managers are unlikely to be picked as successors (less than 1%). However, in recent years, many of SMEs' next generation are reluctant to take over the family business, therefore picking the right professional managers as successors becomes an important topic.

The world facing second generation entrepreneurs is more complicated than the one in which first parents had success. Technology, competition, and workforces are ever changing in today's business environment and make up some of the most difficult challenges for "new" entrepreneurs. Couple these issues with the fact that the founder may still be actively involved and the job of running a family business by the second generation becomes monumental.

American second generation successor Marcy Syms offered the following six important ways to achieve success as a second generation entrepreneur (Marcy joined the family business Syms Corp, an off-price retail clothing store chain founded in 1958, in 1978 as Director of Marketing and Real Estate. In 1998, she was named CEO):

- A. Create your own fate: you must take risks when appropriate and follow through with diligent work. I took the risk to promote, plan and implement my idea. Not only did I win, I achieved my goal and gained new respect among the company's top brass.
- B. Never stop learning: be it in the marketplace, industry, or technological advances, if you stop learning, you will lose your competitive advantage and inevitably fail in your business. You must learn and adapt accordingly to keep up with the competition and customer demands.
- C. Motivate yourself: "nothing just happens." You have to work hard, keep your goals in mind and endure seemingly thankless tasks by motivating yourself through a variety of sources including inspirational tapes, newspaper clippings or supportive friends. The ultimate benefit to keeping yourself properly motivated is that you can motivate others to aim higher.
- D. Trust yourself: many people will sit in a meeting and keep their ideas to themselves, dismissing them as silly, only to hear someone else generate a lively discussion by voicing the same ideas. You have to trust your instincts. Everyone should pay attention to their gut.
- E. Live your values: you have to conduct yourself in the same way you present yourself. Company mottoes and mission statements must be reinforced through actions. If not, associates, employees and customers will be skeptical of the overall organization and rely exclusively on self-protection rather than developing a mutually beneficial relationship.
- F. Give something back: this will help a business too. By being involved in non-profit organizations, you can be nominated to corporate advisory boards. That kind of "giving back" creates a personal reputation that is indisputable.

(2) Facilitate SME business transformation

Bibeault (1979) pointed out that an enterprise, after smooth succession by new generation, will face many internal and external challenges in transforming the existing business model. It is vital to adjust and find the right strategic direction for transformation to minimize the external shocks (political,

economic, etc.) that the enterprise has no control. Three major areas to focus on in dealing with the internal challenges are: talent, business execution and management decision-making.

Taiwan CPA Association (2011) indicated that SMEs' lack of funding source was a major problem in transformation and expansion. SMEs need to have credible professional accountants, financial and accounting system, and sound internal control to overcome the difficulty in getting bank loans. Other obstacles toward successful business transformation are: lack of rules, complicated business, disagreement among senior top brass, over transformation and diversification by new generation successors, unable to effectively use professional managers, family relationship burden (for new generation successors), conflict between family members and professional managers (professional managers as successors; delegating effectively is very difficult), etc. Table 7-2-1 is a summary of challenges and solutions for SME business succession and transformation.

Table 7-2-1 SME Business Succession and Transformation: Challenge and Solution

	Challenge	Solution
Succession	Trust of successor	<ul style="list-style-type: none"> Evaluate not only potential successor's character and suitability, but his willingness to take over as well
	Succession planning	<ul style="list-style-type: none"> Besides succession planning, the current owner must conduct business planning, coaching and cultivation
	Mission and goals: mix of two generations	<ul style="list-style-type: none"> Pay attention to potential successor's values and attitudes; timely communicate and coordinate in making business decisions and crafting strategic direction
	Adapt to business and culture	<ul style="list-style-type: none"> Training and learning in accordance with the successor's position, capabilities, and job requirements
	Mix with old and new employees	<ul style="list-style-type: none"> Learn to get along with old employees, and gradually establish a new succession team
Transformation	Over reliance on past success formula	<ul style="list-style-type: none"> Introduce external innovative thinking and inspire a sense of urgency within the organization
	Over investment and over diversification	<ul style="list-style-type: none"> Seeking help from professionals or managers of other areas in business transformation
	Constant change of culture	<ul style="list-style-type: none"> Avoid bureaucratic organizational culture
	Lack of internal control	<ul style="list-style-type: none"> Establish management and audit system, accounting system, production standard, and operating procedures
	Professional manager: difficult to promote long term transformation	<ul style="list-style-type: none"> Establish cooperation mechanism between entrepreneurial family members and professional managers

Source: Wei, Qiu and Lan, *Succession and Transformation: Reactivating the Entrepreneurial Spirit*, 2015.

III Case Studies of Selected SMEs' Succession and Transformation

In order to reactivate innovation and entrepreneurial spirit recognized in full swing during Taiwan's economic take-off period, and make SMEs in mature stage once again the key driving force of Taiwan's economic development, it is vital for SMEs to avoid the trap of "the crisis of the elderly age" through business succession and transformation with sound strategy to sustain renewed growth. New generation Successors are actively promoting a variety of innovative business models and planning tools to achieve organizational transformation and upgrading. This section presents case studies of SMEs with real life experience in business succession and transformation.

1. Chuan Li Rice Cookie Food Ltd.

Chuan Li Rice Cookie Food, formerly "Chuan Li Food" was founded by Mr. Jian Hsu-Chuan in 1971. It started as a humble traditional bakery for local residents with rice cookie as a sideline souvenir offering specifically for traditional birth, wedding, and Chinese New Year ceremony. The business was successful and won trust from the local community for its quality and taste. However, bread - its main product - was a highly homogeneous one that quickly drew price competition. Chien Chih-yuan, Mr. Jian's elder son worked as a real estate investment specialist in Taipei before returning to Keelung in 2001. Mr. Jian occasionally talked about closing it for about five years after Chien returned. Chien was initially hesitant to become involved in Chuan Li, but committed to taking over management in 2007, when the company began focusing on rice cookies, and since then he has been determined to expand the business. In 2001 Mr. Jian passed the operation to Chien and his young brother who changed the existing business model and transformed its traditional bakery into a professional souvenir business: Rice Cookie Food Ltd.

Since the transformation, Chuan Li Rice Cookie Food has won multiple awards such as "Taiwan OTOP (One Town One Product) Design Award" in 2010, "Taiwan Visual Design Award" in 2010; prestigious "iF Product Design Award" from iF International Forum Design GmbH of Hannover, Germany in 2011, and "Keelung Top Ten Special Souvenir." Chuan Li Rice Cookie Food offers us one of the best examples in new business model execution: "Old Brand, New Face."

(1) Succession - feature and problem

A. Succession feature

The new generation successors had a fundamental different business approach from the first generation entrepreneur. The new leaders figured that specialization with branding was a far better business model with pricing power and flexibility. They actively participate in various marketing and food science courses and never stop learning and obtaining more industry expertise, which was an important foundation for the transformation from traditional bakery to a specialty souvenir store. They began to enhance the marketing capability, which was understaffed and often the weakest link in traditional businesses, and started crafting short, medium and long-term marketing strategy.

B. Succession problem

The first one is adaptation to new business and culture: because the new generation successors have had firsthand experience in helping sell bread in the store as well as production side since childhood. They had a chance to interact with employees, suppliers, and customers to gain their confidence and respect. It greatly shortened the adaption period in winning trust from the founder and senior employees.

The second one is inter-generational conflict: the conflict in different business strategy and management style between two generations. As the successors admit: kinship such as father and son in succession is a two edged sword. On one hand, the son can win trust and support of the founder and other family member relatively easily; on the other hand, father the founder could still have dominant influence - delegating effectively is very difficult, and few founders (especially fathers) excel at it. And this created obstacle to business transformation. Fortunately, the new leader communicated well with employees, and he made it clear that if his father had strong different opinions regarding business, his staff should follow based on filial piety, human relations and respect for the first generation founder, while he - the next-generation successor - is responsible for further discussion and coordination to solve the difference.

The third one is the run-in period: talent retention and low employee turnover is essential, particularly in succession period, for continuity and credibility in dealing with outside sources such as banks and suppliers. When new generation successor led business transformation and disrupt the status quo, some old employees inevitably disliked the change. The new successor' attitude was that it was not a problem they didn't foresee and planned for. He stressed the importance of listening, and believed a true understanding of the feelings and motivations of the founder and senior staff would enable the successor to deal rationally and effectively with them.

(2) Transformation - strategic direction

The first one is to renovate traditional food brand: it was a surprise that the side line rice cookie and rice cake were so well received by love of unexpected customers. Mr. Jian and his sons believe the rice products had potential to be a big hit as a main product line. Rice cookie has been an integrated part of traditional celebrations of birth, wedding, and Lunar Calendar New Year in Taiwan. A unique selling point is that the puffed rice cookie are round shaped which symbolizes completion, perfection, and happiness. A milestone in the company's development came in 2011, based on the concept "bread only sells three blocks, souvenir sells all over the country," the owners made bold decision to let go bread and focused on rice products, and officially changed its name to Chuan Li Rice Cookie Food Ltd.

The second one is to create new ways of eating and new flavors: from the first seaweed rice cookie, to numerous new flavors and tastes. Always driving for perfecting these traditional Taiwanese treats, in 2007 Mr. Jian and his sons began experimenting with ingredients that guarantee the cookie both healthy and tasty, using only canola oil with no artificial colorings, additives or preservatives. Because traditional rice cookie is easy to damp and lose its flavor, the new generation successors introduced the industry's first deoxy packaging that can retain the freshness and taste for three months. The successors also promote a new way of consumption: eating frozen rice cookie, and always focus on quality control and seek "high quality and classic taste."

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The third one is institutionalized management: institutionalization has always been the goal for traditional SMEs. The new successors also believe that “shift from rule of a single man to institutionalized management” is the key to be a going concern with sustainable growth. Although the first generation owner remains as the company’s “top salesman,” successors looked forward to reshaping organizational structure so that in the near future, the enterprise can run smoothly without the boss being around. They are well aware of the tendency of micro-management without clear responsibility and enough delegation in most SMEs. In the future, the company will establish internal quality management system and introduce customer relationship management system toward the institutionalized management.

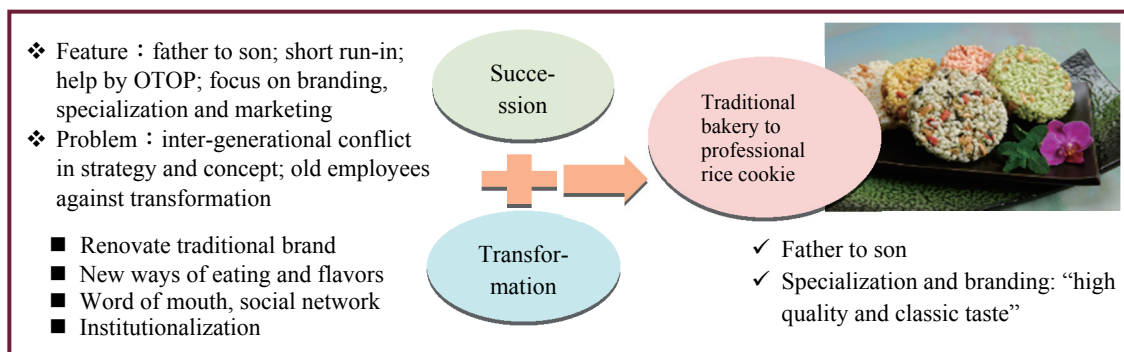
The fourth one is word of mouth marketing leveraging social networks. It was expected that transformation to rice souvenir products would lead to loss of some old customers. However favorable market response to the new rice cookie attracted more media coverage as well as new customers. Recognizing rapidly changing consumer environment, the successors committed to word of mouth marketing and community opinion blog on the web that could significantly affect consumer behavior. They set up their own “Chuan Li Blogs” and “Chuan Li Rice Cookie Fans” Facebook pages and expand business through “B2C” and “B2B2C,” which drive many tourists to the store, as well as group purchase and “one deal a day” from white-collar network.

(3) Government’s role

Chuan Li Rice Cookie Food benefited significantly from government assistance that same year of business transformation, when Chien learned about branding and marketing strategies through his company’s involvement in the One Town One Product program implemented by the SMEA, MOEA (Small and Medium Business Administration, Ministry of Economic Affairs). The company was helped by a clearer branding and marketing strategy. “Government programs have played a big role in the growth of my business,” Chien says.

With government financial assistance backing their ambition to stand out in the corporate world, other measures and subsidies such as targeting young generation employment in rural areas, and assistance in institutionalization of SMEs (accounting and management systems) would be very helpful. Succession and transformation strategy for Chuan Li Rice Cookie Food is illustrated as follows (Figure 7-3-1).

Figure 7-3-1 Succession and Transformation Strategy for Chuan Li Rice Cookie Food Ltd.



Source: Wei, Qiu and Lan, *Succession and Transformation: Reactivating the Entrepreneurial Spirit*, 2015.

2. Shuter Enterprise Co., Ltd.

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 Wu Jinglin initiated the brand creation in 1979, and formally transformed itself into a consumer brand storage enterprise. Shuter currently owns four brands: “樹德 Shuter”; “Shuter”; “Livinbox”, and “原品 Orin.” So far, Shuter has reached the markets in Asia, America, Canada, Europe, Africa, Australia, and New Zealand.

(1) Succession - feature and problem

A. Succession feature

Shuter was a small domestic player with about 100 employees until 2000, when Wu Yirui, the incumbent general manager, joined Shuter after finished study overseas and began to take over the company operation. Selected as the successor by default as the only born in the family, Wu was well groomed by the founder and sent to University of the Arts London, UK for further study.

However, in 2002 a fire ruined the plant built by the first generation of entrepreneur. The 30 year old company was on the verge of out of business. The crisis seemed to be the turning point. Wu overcame the crisis and began to explore transforming Shuter by focusing on creative design, green, and multi-brand strategy. He hired people based on capability and special skills for key roles with no family members involved (except accountant). He established the R&D team of 15 consisting of precision tool engineers and graphic designers, and started creating the four brands and exporting to overseas. Shuter's product qualities meet or exceed the highest standards of national testing, especially in safety, pressure / impact resistant, durability, and non-toxic plastic material. Shuter has won multiple awards such as “21st National Award of SMEs” by SMEA, MOEA for its recognized quality and successful overseas expansion, “15th Rising Star Award,” and “2014 Outstanding Entrepreneur Award.”

B. Succession problem

The first one is inter-generational conflict: the conflict in different business strategy and management style between two generations. The first generation think that creativity is “to create tomorrow's business,” while the new generation successor considered it a process of “continuous innovation.” Wu has been interested in creative design since childhood and even more persistent in inserting creative design concepts into products and continuous innovation in business operation after he finished study in University of the Arts London. In contrast, the founder had great experience in OEM model and focused on solid basic skills and manufacturing quality, which he feared could be disrupted or negatively impacted by his son's emphasis on fancy creative design.

The second one is adaptation to new business and culture: after returning from overseas, Wu served for one year in the company from bottom to understand the business and corporate culture. There was an identity problem between his low level position and the coming successor perceived

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by coworkers. This made it difficult for Wu to mix and communicate with workers naturally and effectively.

(2) Transformation - strategic direction

The first one is to insert design aesthetics into the product development strategy: Wu has a degree in artistic aesthetics and is well aware of the influence of aesthetics in product design. He established the R&D team of 15 consisting of precision tool engineers and graphic designers, exclusively and independently responsible for all industrial design, product development, and visual aesthetic design to enhance the appearance and texture. The R&D department cooperates with the marketing team to generate product conception and 3D design, followed by prototype molding in manufacturing department.

The second one is manufacturing with green concept: Shuter's storage product qualities meet or exceed the highest standards of national testing, especially in safety, pressure / impact resistant, durability, and non-toxic plastic material. Use of non-toxic plastic material that can be 100% recycled without causing secondary pollution is essential to meet European REACH, ROHS, PAHS standards and USA FDA standards.

The third one is talent development strategy focused on capability and character. It not only keeps the legacy from first generation virtue of positive thinking, diligence and frugality, but also introduces the concept of return on investment, aggressively seeking resources for growth and stresses the "three high" policy, namely high-quality personnel, high investment and high value added business strategy. In order to enhance the brand image, Shuter adopts "6S field management method," which is the traditional Japanese 5S management system (i.e. sort, straighten, shine, standardize, and sustain) plus "soul" to create effective workplace organization and standardized procedures to improve safety, quality, productivity, and employee attitudes.

The fourth one is overseas expansion and multi-brand marketing. Founder Wu Jinglin initiated the brand creation in 1979, and formally transformed itself into a consumer brand storage enterprise. The new generation successor further promoted overseas expansion and multi-brand marketing. Shuter currently owns four brands: (A) "樹德 Shuter" – Taiwan's No.1 brand in storage, targeting Taiwan domestic and India markets of office locked storage; (B) "Shuter" focused on steel and plastic storage cabinets and work tables serving domestic factories but mainly exporting to sixty overseas countries targeting foreign industrial and OA offices; (C) "Livinbox" - a high-end storage brand, specifically targeting furniture markets in U.S. and Australia, offering organizers, cabinets, tables, keyless lockers, chic multi-functional storage, etc.; (D) "原品 Orin" - focused on overseas ODM model. 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. "樹德 Shuter" brand is well recognized in India as high value-added products of safety and quality, features typically sought after in the market.

The fifth one is to use flexible and multi-channel marketing. Shuter used to be a domestic enterprise, however, the next-generation successor adopted strategy of overseas expansion and multi-brand marketing leveraging on flexible and multi-channel marketing. Shuter actively participates in overseas exhibitions to enhance the brand visibility and exposure in the international market. Besides

past B2B based marketing, Shuter extends to online B2C business model. In 2007, Shuter signed an agent as its exclusive distributor in India. Shuter is planning to replicate the successful India model of alliance in other overseas markets. Shuter set up My Shuter shopping website in 2012 and began to offer customized bulk service. Shuter also conducts “manufacturer’s auction” to sell off-season products.

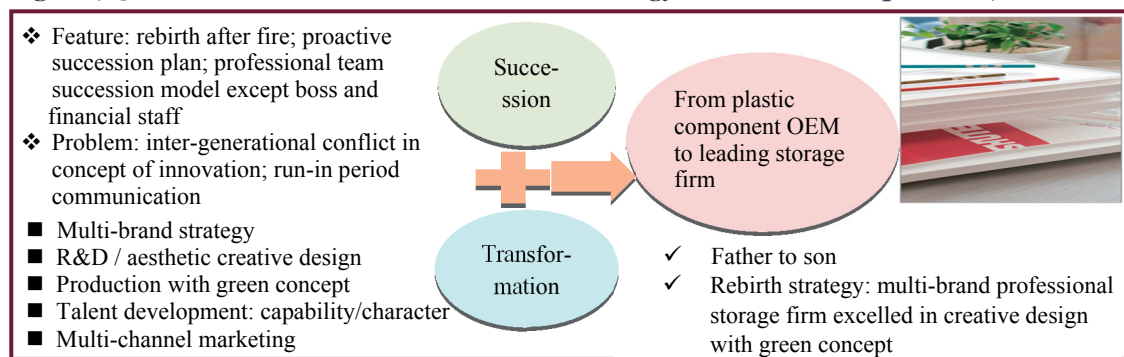
(3) Government’s role

The new generation successor, in the process of business transformation, strived to open up overseas markets. Shuter received special project subsidy form the “International Market Development Program” sponsored by Bureau of Foreign Trade, for its innovative model to target new overseas niche markets, develop environment friendly products, and enhance brand awareness and consumer exposure.

The new generation successor pointed out that in SME succession and transformation, one of the biggest challenges to the new successor is the clear understanding of his role in the company, the resource he commands as well as his own mission, ambition and willingness to make the company successful. This will greatly help the successor win trust from the first generation founder and senior employees during the transition period. Government can help set up a platform for new generation successors with similar background to share experience and learn from each other.

Succession and transformation strategy for Shuter Enterprise is illustrated as follows (Figure 7-3-2).

Figure 7-3-2 Succession and Transformation Strategy for Shuter Enterprise Co., Ltd.



Source: Wei, Qiu and Lan, *Succession and Transformation: Reactivating the Entrepreneurial Spirit*, 2015.

3. Trans Electric Co., Ltd.

Founded in 1968, Trans Electric is now an IPC and ISO9001, 2000-certified company engaged in the R&D, manufacture and sales of CATVs, multimedia accessories and consumer electronics products. The company’s growth path symbolizes the history of television development. It started manufacturing TV antenna and strong filter with B2B business model. Products are mainly sold to TV stations and residential buildings. In 1982, it became the world’s top supplier of such products. During the coming cable television era, the company began producing CATV cable system equipment and entered the US market. Since 2002, it has transformed into a renowned manufacturer of branded consumer electronics specialized in product design and providing professional solution

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to audio and video integration for smart phone. Trans Electric portfolio includes Wireless AV, Wireless Audio series, HDMI, Digital Antenna, and CATV. In 2013, Trans Electric won the “21st National Award of SMEs.”

The new generation successor started from bottom and later took charge of cable television equipment. He has been committed to innovation and transformation, leading the company toward B2B2C business model and brand marketing that didn't exist in the first generation business model which only emphasized production quality and efficiency. Employees have been taught to think as an innovator after the new successor (CEO) took over.

(1) Succession - feature and problem

A. Succession feature

After entering the cable era, the new generation successor at the time was given a considerable power to lead the CATV department because his management strength was proven. He started restructuring within the department and testing a new direction and strategy. Under his leadership, CATV Business Unit operated as an independent small business, where he thoroughly demonstrated his potential and won trust from his family members as a successor in the growth and achievement of CATV business.

The new generation successor worked more than 25 years for the company as production line operator, courier, field worker (antenna / cable), department manager, and all the way to CEO. The succession process was smooth as his capability and proven leadership track record has been recognized throughout the company.

B. Succession problem

The main problem is inter-generational conflict: the conflict in different business strategies and values between two generations. After the succession, the first generation entrepreneur didn't fully transfer his power and still involved in business decision making. The ongoing conflict complicated the communication and transformation process. The first generation entrepreneur emphasized stable investment return and production efficiency while the new generation successor believed the old business model focused on production efficiency was no longer a viable one as a going concern in the new era.

The successor took considerable time to resolve conflicts through continuous communication and coordination, so that the first generation entrepreneur came to understand modern business model and the need to change.

(2) Transformation - strategic direction

The first one is the establishment of quality management system with emphasis on consumer satisfaction. Introducing new equipment and instruments is just basic approach to enhance product quality. Innovative testing procedure is far more important. Trans Electric's product testing program is mainly divided into three tests: test by R&D, test by the quality control unit, and final verification by the customer service unit with emphasis on consumer perspective. Additional modifications and fine-tuning before mass production and marketing of an officially listed product are based on feedback from internal users and market test at small scale through a few distribution channels. The

quality management process has now extended from the consumer electronics products to all types of products before mass production.

The second one is to enhance brand image and focus on long-term operating performance.

The new generation successor believes that a viable business model must have pricing power and earn relatively high return on investment. Therefore, the company meets the consumer appetite for quality, fashion and experience - often seen in branded products, and add value across the price spectrum beyond cheap-basic categories.

The third is to strengthen R&D, dynamic integration of hardware and software technology, and value-added services. The new generation successor noted that Trans Electric has kept up with the advancement of television and smart phone era, from analog, digital, to the current smart audio and video systems. It is essential to constantly strengthen the R&D capability not only in hardware technology, but also to expand into smart cloud networking technology. In the future, the company will add a variety of value-added services in dynamic integration of hardware and software technology.

The fourth one is to actively manage customer service / user experience, and build long term trust relationship with distributors. In B2B marketing, distributors need to have trust and considerable confidence in product quality before committing significant resource in marketing and sales. Trans Electric also actively manage customer service / user experience. For example: when there are problems of products, consumers typically go first to 3C discount stores or other distributors for help. Trans Electric encourages distributors to allow customers to directly contact its customer service department for swift solution, which enhances the trust from distributors as well as users.

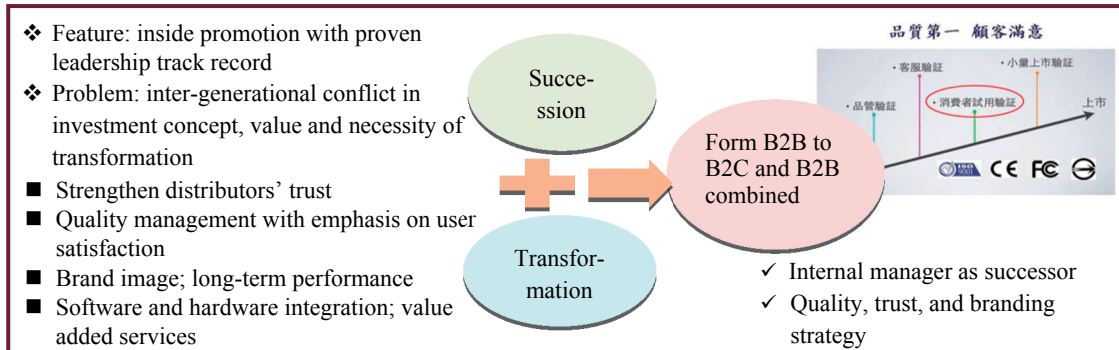
(3) Government's role

The new generation successor, in the process of business transformation, strived to upgrade company's R&D capability. Trans Electric received subsidy form the local SBIR (Small Business Innovation Research, the central government-backed SBIR program branched out in 2007 when it began to work with local governments to develop specific local economic sectors) sponsored by Department of Industrial Technology (DOIT), for investment, costs and expenses include material, research equipment use and maintenance, talent hiring and technology introduction. Trans Electric has since made significant breakthroughs in electronic product development, innovation and brand marketing strategy.

The new generation successor pointed out that in SME succession and transformation, it is essential to have effective inter-generational communication to solve potential conflict between two generations. Government can help set up a platform for new generation successors with similar background to share experience and significantly shorten the learning curve.

Succession and transformation strategy for Trans Electric is illustrated as follows (Figure 7-3-3).

Figure 7-3-3 Succession and Transformation Strategy for Trans Electric Co., Ltd.



Source: Wei, Qiu and Lan, *Succession and Transformation: Reactivating the Entrepreneurial Spirit*, 2015.

4. Tomax Enterprise Co., Ltd.

Founded in 1964, Tomax Enterprise Co., Ltd. has been engaging in the processing, manufacturing and trade of spice for 40 years. It has introduced exclusive frozen grinding technology and facility to preserve the freshness and original flavor of spice in order to ensure the natural taste of spice. Committed to being the “best companion of consumers” and pursuing quality excellence, Tomax makes continual improvements and innovations and becomes the only domestic spice manufacturer that passed ISO9002 certification. Furthermore, it has established the hydrolysis and thermal reaction GMP production line for natural food ingredients under the guidance of the Food Industry Research and Development Institute. Tomax is also the only Taiwan’s spice manufacturer that implements the ERPS, displaying the enterprise’s intention toward sustainable development, perseverance in quality and performance.

In 1964, Mr. Dong Min-hsiang founded the Fu Kuo Industrial Company in Hsinchuang, New Taipei City to manufacture glass-bottled spice. In 1973 the company changed the name to Pao Kuo Food Company. In 1976, Tomax Enterprises Co., Ltd. was founded in Hsinchuang, New Taipei City, with 5 employees engaged in trade of spice (mainly pepper products).

The new generation successor registered trademark in 1986 and then inherited both companies in 1989 from his father and elder brother. In 2000, he merged these two companies to found Tomax Enterprise Co., Ltd., and transformed it as a professional full seasoning spice company adopting differentiation and diversification strategy. Tomax Enterprise has won multiple awards such as “21st National Award of SMEs” in 2012, Health Magazine’s Best Brand in Healthy Seasonings in four consecutive years from 2011 to 2014, and in 2009 new generation successor and his wife won “Outstanding Entrepreneur Award” and “Outstanding Entrepreneurial Couple Award.”

(1) Succession - feature and problem

A. Succession feature

The new generation successor had worked in marketing in a food company. He had to quit the job and took over the family in 1989 after his father passed away and his elder brother was in poor physical condition. He quickly figured out the existing grinding and packaging of pepper and chili powder had no advantage over or differentiation from the ones by established manufacturers. In 1994,

he repositioned the company as a “spice interpreter” and changed the original brand “Diamond” to “Tomax” to add imagination in the new brand name. To seek product differentiation, in 2000 after the merge, he started with western spices and repositioned the company to the “pursuit of the impossibility in gastronomy.” The succession and transformation process showed that the next generation successor is not only a successor, but a new generation entrepreneur as well.

B. Succession problem

Run-in period is rather smooth as the new successor had no problem communicate to old employees because the business was low technology and easy to understand. The real challenge was to make the family business viable and survive the competition. Two generations differed in strategy and mission. While the first generation entrepreneur focused on survival and stable profit to support the family, the new generation entrepreneur believed that short-term business profit is not a means to an end, a better business with great brand is far more valuable both in a sense of accomplishment in life and in long term performance as a going concern.

(2) Transformation - strategic direction

The first one is to drive R&D of natural spices for the new brand: “Tomax,” which literally means “little mill” to add human touch and emotion and stands for caring consumers’ lives. The new generation successor insisted on preserving the freshness and original flavor of spice in order to ensure the natural taste from consumer perspective and consideration. Tomax Enterprise is the only domestic manufacturer using the frozen grinding facility imported from Germany to preserve the aroma and natural flavor of spice by grinding in a low-temperature environment chilled with liquid nitrogen. All shops, including the drying, grinding, mixing and packaging shops, are independent to prevent to prevent mutual interference of spice.

The second one is to differentiate by introducing western spices into domestic market. Tomax Enterprise entered the spice industry relative late and found itself difficult to differentiate in the market and break the habit of the consumer with fixed taste of domestic spices. The new generation successor, right after taking over the business, committed considerable time and resource to build and test extensive collection of the western spice material, and boldly introduced new products of western spice taste to the domestic market. As domestic consumer acceptance of the western spices improved in recent years, Tomax Enterprise was able to stay away from homogeneous market competition and began to gain pricing power from its new premium products of unique western spice categories.

The third one is to use the “Communication Troop” to establish marketing channels. After re-branding, re-positioning the market, and several plant expansions, the company did not have enough resource for traditional advertising and media coverage. Mr. Tung, the new successor, came up with the idea of “word of mouth marketing” and “product placement” to promote the brand. He built and led the “Communication Troop” to offer cooking classes (with chefs and/or community colleges), spice knowledge and product demos to schools, associations, benefits committees, community colleges, etc.

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The “Communication Troop” not only promotes the brand and sells products, but also spreads the knowledge of spice and provides valuable customer feedback to R&D for new ideas and constant innovation and improvement.

The fourth one is institutionalized management. Institutionalization was essential for Tomax Enterprise as most employees were family members in the period of the first generation entrepreneur. The new successor believed that “shift from rule of a single man to institutionalized management” is the key to establish good incentive system with clear organizational structure and responsibility, improve the communication, and promote from within based on measurable performance.

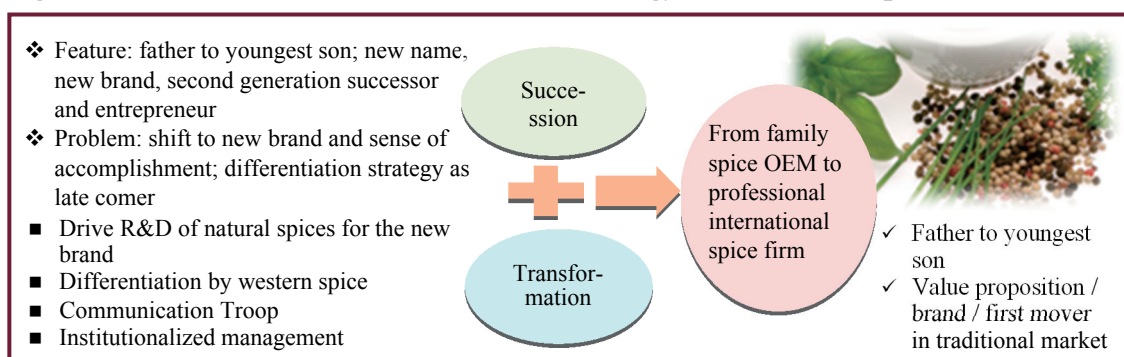
(3) Government's role

The new generation successor, in the process of business transformation, received valuable counseling and assistance from the Instant Technical Assistance Program of SME sponsored by Industrial Development Bureau (IDB), MOEA for quality control (professional training for quality controllers and establishment of the microbiology laboratory to conduct strict quality control over incoming materials, lots and products, and processes) and product planning (product line expansion and brand awareness). The government program, through professional advice, helped Tomax Enterprise reduce the risk in targeting the right niche market and its ensuing cost in the process of transformation.

The new generation successor pointed out that in SME succession and transformation, it is very helpful that the potential successors can obtain real life experience and prepare for their careers as early as possible. Government can also help design college level curriculum with more real life business cases in management, entrepreneurship, and family business succession.

Succession and transformation strategy for Tomax Enterprise is illustrated as follows (Figure 7-3-4).

Figure 7-3-4 Succession and Transformation Strategy for Tomax Enterprise Co., Ltd.



Source: Wei, Qiu and Lan, *Succession and Transformation: Reactivating the Entrepreneurial Spirit*, 2015.

5. Yinsh Precision Industrial Co., Ltd.

Founded in 1989 by Mr. Guo-hua Lin, Yinsh Precision Industrial Co., Ltd. was originally a family-based processing plant (OEM) that manufactured precision component parts such as ball screw locknut and thrust bearing. The company upheld the “Small Parts over the World” concept and

worked very hard to follow the model of Japanese professional development focused on core technologies in precision locknut and spindle grinding. Precision locknut requires high degree of precision and is the heart of the key components of machine tools.

With changes in time, trends and needs of the machinery industry in Taiwan, General Manager You-chong Wu joined the operational decision making team. Yinsh Precision has developed product strategies to deliver “Sustainability, Growth, Excellence, and Sincerity”. Its R&D team is constantly thinking on customers’ behalf while striving for innovation and perfection. This winning combination has succeeded with sales in over twenty nations, such as Germany, USA, Italy, Spain, Japan, Mainland China, and many countries in Southeast Asia. Yinsh Precision has won multiple national awards, such as the 11th Rising Start Award in 2008, the 21st National Award of Outstanding SMEs in 2012, the 3rd National Industrial Innovation Award in 2013, and the 10th National Brand YuShan Award in 2013.

(1) Succession - feature and problem

A. Succession feature

Under the leadership of the first generation entrepreneur, Yinsh Precision was a small OEM of precision component parts such as locknut and thrust bearing with solid production technology. However, the business was typically fixed asset heavy and financially risky when business was not growing. The business condition was in crisis as debt mounted to tens of millions and the founding partner left with company’s customers.

The first generation entrepreneur made a bold move to pick a promising young director, who was not a family member and promoted from bottom, as his successor and decided to let the young man fully take over the business after one to two years of on the job succession cultivation on negotiating skills, customer relation, business management (taking courses), and leadership. After the new generation successor had proven leadership and management skills both inside and outside the company, the first generation entrepreneur stepped back and passed on the baton to the new successor, who started focusing to the production of precision locknuts for overseas markets. Yinsh Precision, under the leadership of the new generation of successor, was completely reborn

B. Succession problem

The new generation successor started from bottom in the company through VTC program (Vocational Training Council: half work and half study program) After years of hard work, he was promoted as a director with solid industrial and technical background as well as first-hand working experience. In addition, given couple of years of adjustment period before taking over the business, the new successor had a relatively smooth transition period. The first generation entrepreneur suggested that in addition to the main product (precision locknuts), the company should take on orders of other side products to increase revenue. However, the new successor strongly opposed the idea, as it could risk the quality of the main product by spreading too thin of its limited resource and lose the trust of customers. The first generation entrepreneur trusted the professional judgment of the new successor and agreed with his strategy: focus and specialization of producing precision locknuts for overseas market expansion. Later, with proven track record and the blessing of the first generation

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entrepreneur, the new generation successor married the only daughter of the first generation entrepreneur and deepened his relationship with the family members of Yinsh Precision.

(2) Transformation - strategic direction

The first one is the establishment of profit centers: each profit center is a subunit of the company that is fully responsible for its own budget, revenues and costs. This is a decentralized management system to drives the right incentive (promotion and bonus tied to performance) and sound planning with clear and measurable goals and performance. The profit center system also helps simplify the organizational structure, and reduce the time and cost of poor internal communication and coordination due to overlap and confusing performance measurement.

The second one is the talent training and cultivation system. The new generation successor himself benefited from the VTC program when he joined the company. He found VTC students typically have good attitude with basic technical understanding and professional training. The company actively coordinates with government units and VTC program as well as industry-university cooperation. At present, about two-thirds of employees joined the company through industry-university cooperation or VTC program.

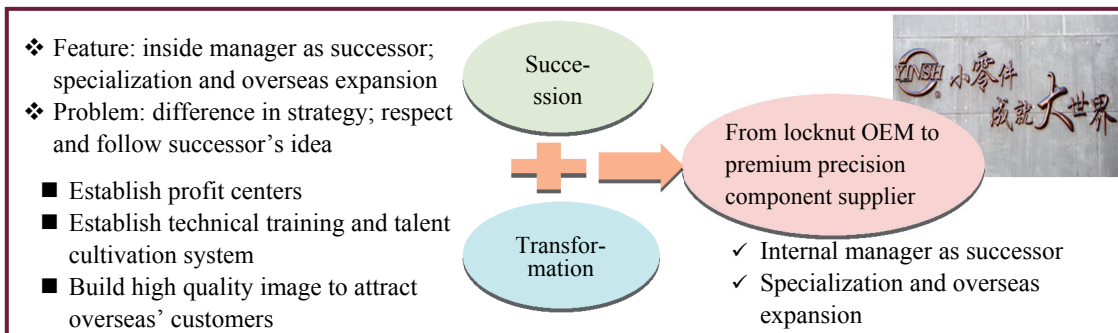
The third one is to create high quality image to attract overseas customers. The company is focused on continuous quality and service improvement to compete with global competitors and remain the number one supplier of high precision locknuts in Taiwan. It is the first in Taiwan to establish a Precision Locknuts R&D and Testing Lab with TAF certification. The Lab helps significantly improve product reliability and reduce the cost of defection.

(3) Government's role

The new generation of successor obtained the original technical and vocational training through VTC (under the Ministry of Labor), while working as an intern in Yinsh Precision. This helped him gain working experience and also reduce the financial burden of his family. The coordination among government, VTC, industries and universities are vital for young generation for career preparation as well as for SMEs to access young talent pool.

The new generation successor pointed out that the “industry-university cooperation and training” and VTC that were actively promoted by the Ministry of Labor were very useful in closing the gap between classroom learning and working skill, reducing shortage of technical workers in industries, and helping young generation gain job, technical skill and degree at the same time. Currently, Yinsh Precision has nearly 200 employees, of whom about 70% are under 30 years old. The average age is only 24 and two-thirds of all employees have studied in VTC and/or programs of “industry-university cooperation and training.”

Succession and transformation strategy for Yinsh Precision Industrial is illustrated as follows (Figure 7-3-5).

Figure 7-3-5 Succession and Transformation Strategy for Yinsh Precision Industrial Co., Ltd.

Source: Wei, Qiu and Lan, *Succession and Transformation: Reactivating the Entrepreneurial Spirit*, 2015.

6. Shiang Ye Industrial Co., Ltd.

Shiang Ye Industrial Co., Ltd, founded in 1978, has manufactured and designed more than 100 chair products. Following its philosophy, “Innovation, Quality, Service, and Environmental Protection,” Shiang Ye has dedicated itself to high quality, customer service, and using recycling materials for environmental protection. Shiang Ye is ISO9001 and CNS mark certified and owns many domestic and foreign patents. Two famous chair series – “NOVITE” and “SLIM” have won international product design awards: NOVITE won German Reddot Design Award, XUEXUE Green Fashion Award Most Influential Product, and Green Procurement Mark from Environmental Protection Administration; SLIM won iF Gold Award of Product Design.

In 1991 Shiang Ye began to introduce automated production equipment. With the success of industry-university cooperation, the company developed new features for chairs and then expanded into overseas markets. At present, the company has strong R&D and manufactures 95% of all products it designed. Therefore it has far greater control of quality than most OEM.

30 years after founding the company, the first generation entrepreneur passed the baton to his daughter who graduated from an Italian university with major in design. The new generation successor established a design department to add modern design and aesthetic elements in structures, materials, and products. The new generation of successor has been building upon the traditional way of quality, technique, and entrepreneurs thinking and transformed the company into a professional chair manufacturer and designer with strong brands.

(1) Succession - feature and problem

A. Succession feature

In 2008, the new generation of successor returned to Taiwan from Italy so his father could take early retirement. She specialized in industrial design, not for succession but purely out of his personal interest. Interestingly, her love of industrial design turned out to be a main reason to take over and transform the family business. In 2011, the new generation successor established a new design and planning department and started transforming Shiang Ye into a professional branded chair manufacturer with its own design capability. At the same time, she improved production processes, so that the new products fully reflect the original design concept.

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After the establishment of the design planning department, the company designed the two new series of folding chair: “NOVITE” and “SLIM” that won multiple awards. “NOVITE” series show the screw-less design concept of elegance and simplicity and claim to have even higher stability than screw-locking type chair back; “SLIM” series’ appeal is simple, light, and easy to fold at affordable price, which can meet the demand of majority of consumers in the mid-price range.

B. Succession problem

The succession transition was rather smooth as the first generation entrepreneur and the new successor shared the same concept of transformation into professional manufacturer and designer of branded products. A typical interesting and effective communication type between two generations is that every time the new generation successor presents a new product design concept, the first generation entrepreneur would play the role of devil’s advocate questioning the feasibility on the real business side. This often leads to continuous improvement of the new design all the way to a successful product well received by customers.

(2) Transformation - strategic direction

The first one is the establishment of the design and planning department to internalize the design and business planning processes. The first generation entrepreneur shared the same concept but didn’t have talent or its own design department partially due to limited resources during his tenure. So he outsourced the design to universities’ design departments or design centers. In 2011, the new generation successor established a new design planning department. She hoped that through close communication between company’s full-time designers and field production engineers to quickly improve design quality, reduce unnecessary production process, enhance workflow efficiency and reduce manufacturing costs.

The second one is to introduce design quality into manufacturing process. The new generation successor committed to synchronized cooperation mechanism between design and production. Any design problem in field production should get instant response from design department. Defect rate decreased by quick modification and improved processes through this immediate reaction mechanism. The synchronized cooperation mechanism helps address the source of the problem and the fundamental process structure in production to achieve quality improvement rather than passively solve specific problems.

The third one is to use international award competition to confirm the strategic direction for design: the new generation successor introduced the design concept and skill she learned and promoted collaboration between designers and production engineers. Shiang Ye actively participate international design competitions to confirm its strategic direction for design or figure out problems through feedback from judges. The two famous chair series – “NOVITE” and “SLIM” have won international product design awards as mentioned above.

The fourth one is to lock young working generation as target customers and develop mid-level brands: In the past, Shiang Ye commanded large orders from international companies but had limited customer awareness due to its OEM model. The new generation successor created new brand “SITPLS” to meet the demand of young working generation as “affordable fashion design products.”

She drives consumers' emotion through "100 Chair Stories" for the new brand: "actually, you have known us for a long time, but you never realize."

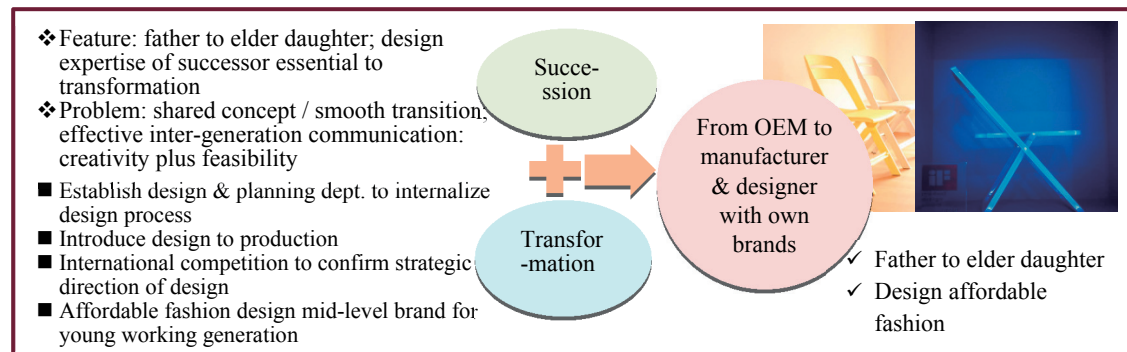
(3) Government's role

The new generation successor, in the process of business transformation, received valuable counseling and assistance from the Forward Looking Technology: Industry-University Cooperation Program sponsored by MOEA for creating new brands and winning international design awards.

The new generation successor pointed out that recruiting new professional managers who can think and test new ideas is essential not only to the first generation entrepreneur with no child for succession, but to the new generation successors as well. The inter-generation conflict often exists in the period of SME succession and transformation. Therefore an external professional manager could play a vital role as the assistant to the new generation successor, and offer objective professional analysis, allowing the first generation entrepreneur to confidently move along with the second generation successor toward business transformation strategy.

Succession and transformation strategy for Shiang Ye Industrial Co., Ltd. is illustrated as follows (Figure 7-3-6).

Figure 7-3-6 Succession and Transformation Strategy for Shiang Ye Industrial Co., Ltd.



Source: Wei, Qiu and Lan, *Succession and Transformation: Reactivating the Entrepreneurial Spirit*, 2015.

IV Strategic Directions for SME Succession and Transformation

According to SMEs' growth targets, we would like to summarize below the strategic directions for SME succession and transformation based on the background review and case studies above.

1. Strategic Directions for SME Succession

- (1) Promote market-oriented business management courses in colleges and universities; cultivate curiosity and creative thinking of potential new generation of successors.
- (2) Form professional succession team in response to new business opportunities; match professional management talent to the need of business succession and transformation.

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- (3) Integrate existing knowledge exchange platforms for succession; provide customized mechanisms of knowledge sharing and exchange services required for different types of succession.
- (4) Conduct a deep dive of current situation of SME succession; provide succession planning advice or match professional managers to succession needs for SMEs' sustainable development as going concerns.

2. Strategic Directions for SME Transformation

- (1) Encourage new generation successors of SMEs to obtain innovation awards; reactivate the entrepreneurial spirit of mature SMEs.
- (2) Grasp the opportunity of succession and transformation to guide SMEs towards institutionalized management.
- (3) Establish SME succession and transformation follow-up service mechanism linking research institutions, universities and private sector professional consulting companies to meet long term counseling needs for SME succession and transformation.
- (4) Establish innovative government procurement policy tools and encourage transforming SMEs to secure business opportunities through government procurement (help SMEs participate in government procurement, provide information on government purchasing legislation, overcome the problems that they experience through the service center, set up procurement website for SMEs, and publish Questions and Answers on SME Participation in Government Procurement); help SMEs enhance their financial credit and obtain funding to meet the increased capital needs during transformation period.
- (5) Strengthen cross-industry cooperation mechanism for SMEs' sustainable development; guide the SME succession and transformation toward the direction of “professionalism,” “branding,” and “internationalization.”



Part Three

Government SME Policies and Prospects

- Chapter 8 Improving Financial and Funding Services and Strengthening Investment in SMEs**
- Chapter 9 Promoting R&D, Upgrade, and Transformation, Led by SMEs with High Growth Potential**
- Chapter 10 Strengthening Startups and Incubation - Accelerating Forward-Looking SMEs' Global Connection**
- Chapter 11 Revitalizing Local Industries by Outreach Development and Regional Branding**
- Chapter 12 Other Government Resources to Optimize Business Environment for 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. The Taiwanese government has for many years been implementing policies designed to resolve the hurdles facing SMEs and provide proactive support and assistance to them.

The government's development strategy for SMEs in 2014-2015 has focused on (1) improving financial and funding services and strengthening investment in SMEs; (2) promoting R&D, upgrade, and transformation, led by SMEs with high growth potential; (3) strengthening start-ups and incubation: accelerating forward-looking SMEs' global connection; (4) revitalizing local industries by outreach development and regional branding; and (5) other government resources to optimize business environment for SMEs, such as government procurement and policy loans for special projects. Further details will be addressed in Chapter 8-Chapter12.

*A large number of projects and ancillary measures have been implemented in order to help achieve five goals listed above. Each year, the government revises its SME development strategy to reflect changes in the economic environment in Taiwan and the global economy as a whole and carries out planning and implementation of related ancillary measures to boost the competitiveness of Taiwan's SMEs and contribute to their stable and continued development. New guidance and measures recently instituted by the government include the new regulation on equity-based crowdfunding, Bridging Industry Digital Divide Project, Industrial Upgrade and Transformation Action Plan, *ide@ Taiwan 2020*, and Project for Social Enterprises Action Plan.*



CHAPTER 8

Improving Financial and Funding Services and Strengthening Investment in SMEs

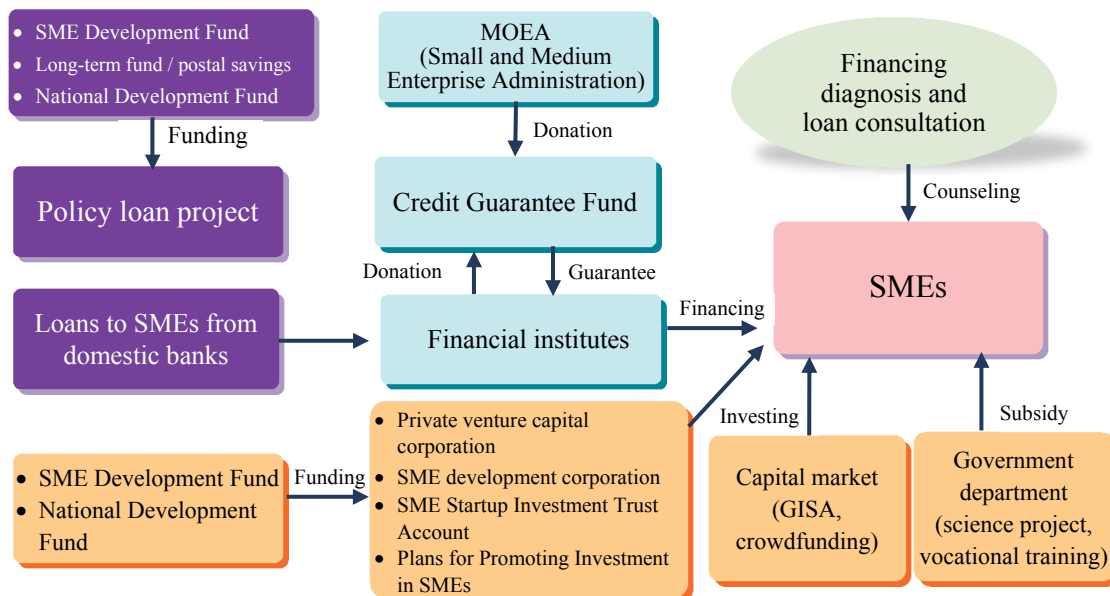
Many SMEs in Taiwan possess unique technology and innovative products, but lack the scale, capital, technology, and talents because of their small size, operational weaknesses, volatile cash flow and lack of financial transparency, SMEs generally find it very difficult to obtain funding either from the capital market or venture capital due to unproven business models and/or lack of track records, or from banks due to unstable financial performance/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 survive and grow, and there is thus a clear need for the government to provide 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 been working actively to provide financial and funding services such as credit guarantees, short-term financing, and funding guidance. These measures are aimed at helping SMEs obtain financing; arrange the provision of direct credit guarantees by the SME Credit Guarantee Fund; provide assistance to business startup; launch the Phoenix Loan scheme for micro-enterprises; use the Firefly Mutual Guarantee scheme to help SMEs in the upstream, midstream and downstream segments of particular industries to obtain loans at preferential interest rates; and organize SME investment plans, thereby giving SMEs a wider range of financing channels to choose from. Further in 2014 to 2015, as part of government efforts to help small innovative startups, the GreTai Securities Market (GTSM) launched the Go Incubation Board for Startup and Acceleration Firms (GISA) in January 2014, and approval of private online equity crowdfunding platform by Executive Yuan in April 2015. Figure 8-0-1 shows the framework of financial and funding sources and policy measures for SMEs.

This chapter is divided into three sections. Section I discusses measures to improve financial and funding services. Section II focuses on SME credit guarantees. Section III covers government's measures to strengthen investment in SMEs. Figure 8-0-1 shows the Framework of Financial and Funding Measures for SMEs

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Figure 8-0-1 Framework of Financial and Funding Measures for SMEs



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2015.

I Improving Financial and Funding Services

1. Providing SME Financing Counseling and Value Added Service

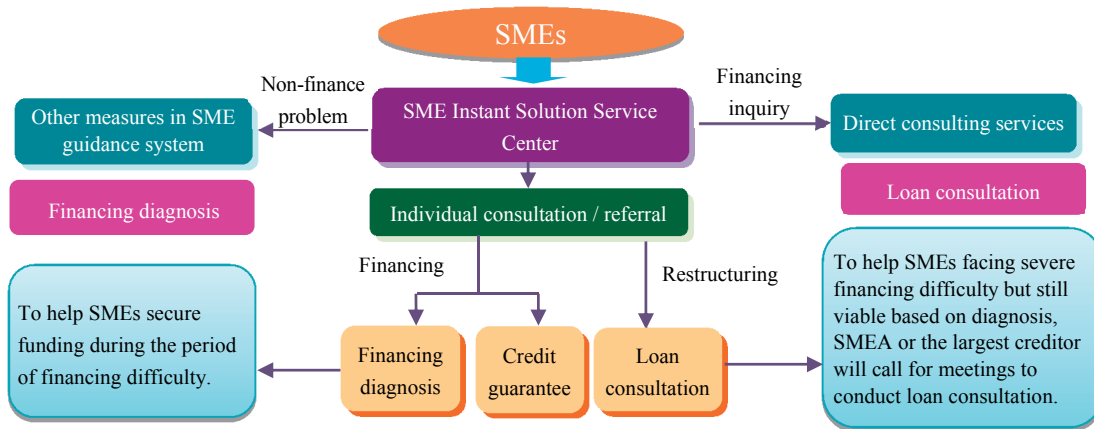
The government has been working actively to establish effective financing guidance mechanisms. Besides encouraging SMEs to make use of the various types of policy loans that are available from the government, establishing “SME Financing Service Windows” at major banks to give SMEs better access to financing information, and encouraging SMEs to make full use of the various low-interest loan schemes that the government provides, the government also uses the SME financing guidance system and the SME Troubleshooting Center to provide various types of guidance and information to help SMEs with requests for emergency assistance, and to provide financing help for SMEs that are experiencing financial difficulties, help SMEs establish sound financial and accounting systems and enhance their financial management capabilities, and use the SME Credit Guarantee Fund to provide credit guarantees, thereby increasing banks’ willingness to extend loans to SMEs.

(1) SME Financing Service Windows: SME Instant Solution Service Center

The SMEA (Small and Medium Enterprise Administration) has established the SME Instant Solution Service Center to provide SMEs with consulting services in line with their individual needs. It provide quick and effective assistance in a wide range of areas, including financing diagnosis 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. 2014 accomplishments include: 25,600 calls for phone counseling (through toll free number 0800-056-476), 354 cases of referral counseling, 170 cases of counseling conducted in “Professional Counseling

Day,” 250 cases of on-site counseling, and so on. The consultation mechanisms are outlined in Figure 8-1-1.

Figure 8-1-1 Financial and Funding Consultation Mechanism



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2015.

(2) SME Financing Diagnostic Service Plan

SME Financing Diagnostic Service was set up through the SME Financing Services Platform to improve SMEs' condition, provide financing, and offer financial diagnosis and counseling service. The Plan's two main work items are: (A) professional consulting service: consulting service for real-time business issues, and (B) in-depth diagnosis and counseling that include general financing, corporate field visits, debt restructuring and/or refinance, and accounting and business management counseling. To help provide SME owners and managers with the financing information they need, and to expand the range of financing service channels available to SMEs, the SMEA has arranged for the establishment of SME Financing Service Contact Windows in the branches of major financial institutions since 1998. 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 to solve SMEs' financing problems. On the other hand, SMEs can provide feedback through the Window to the government for policy formulation.

2014 accomplishments are: 453 cases of on-site counseling, including 324 cases of corporate financing diagnosis and counseling and 55 SMEs securing bank financing amounting to NT\$ 289.2 million; 129 cases of debt restructuring coordination between SMEs and banks, including 76 SMEs obtaining refinance of NT\$931,306 million (plan site: <http://smefinance.moeasmea.gov.tw/>).

(3) Innovative SMEs' Accounting Information Development Plan

Innovative SMEs' Accounting Information Development Plan was set up to strengthen innovative SMEs in financial and accounting management, cash flow, R&D, upgrade and transformation, and sustainable growth.

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2014 accomplishments are: 19,308 trainings on simple financial management tools, accounting and financial counseling for 198 SMEs, and professional training activities for 1,176 people (plan site: <http://smefinance.moeasmea.gov.tw/>).

(4) Enhance SMEs' Financial Autonomy Plan

Enhance SMEs' Financial Autonomy Plan was set up to help SMEs cultivate good financial habit and establish sound accounting management system. The Plan's two main work items are: (A) Joint counseling: simple money management and bookkeeping, and on-site visits / individual counseling; (B) CPA advisory services.

2014 accomplishments are: 3,189 cases of CPA counseling, establishing accounting system for 351 SMEs, and CPA on-site counseling for 45 SMEs.
(plan site: <http://www.careernet.org.tw/accounting/index.php>)

2. SME Financing Services Platform

SME Development Fund Managing Committee initiated the SME Financing Services Platform in April 2008, funded by SME Development Fund along with five banks (Taiwan Cooperative Bank, First Commercial Bank, Taiwan Business Bank, E. Sun Bank and Chinatrust Commercial Bank) to make it easier for SMEs to secure bank loans by providing financial diagnosis and clear, transparent details about SME operations that banks can use as a basis for decision-making when determining whether or not 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 2014, a total of 26 banks have joined the Platform, which offers 24 hour service (<https://loansp.moeasmea.gov.tw>).

3. The Taiwan Small Business Integrated Assistance Center (SBIAC) - Providing 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 at 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 (<http://www.sbiac.org.tw/index.jsp>).

4. 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 the tenth stage. In 2014, domestic banks made loans to SMEs amounting to NT\$402.9 billion, NT\$162.9 above the plan target of NT\$240 billion. As of March 2015, domestic banks' total outstanding loan balance to SMEs reached NT\$5.2 trillion.

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, "Special Award for Contributions to Balanced Regional Development" and a new (2014) "Special Award for Financing E-commerce Industry" has been instituted (<http://www.banking.gov.tw/>).

5. Special Award for Financing Innovative Industries by Domestic Banks

To encourage the development of a long-term partnership relationship between innovative industries and banks, the Financial Supervisory Commission (FSC) decided to launch the Award Plan for Increasing Loans to Innovative Industries by Domestic Banks starting from 2014. As of March 2015, domestic banks' total outstanding loan balance to innovative industries reached NT\$275.8 billion, NT\$94.1 billion above the balance by the end of 2013 (<http://www.banking.gov.tw/>).

6. Policy Loans for Special Projects to Help SMEs

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: 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. For example, SME Innovation Development Special Project Loans was effective from Jan. 27, 2014 to Dec. 31, 2016 with a total of NT\$30 billion available for SMEs, especially young entrepreneurs, who can also take advantage of the Young Entrepreneur Start-Up Financing Loans as mentioned above before applying this special loan.

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

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guarantees.

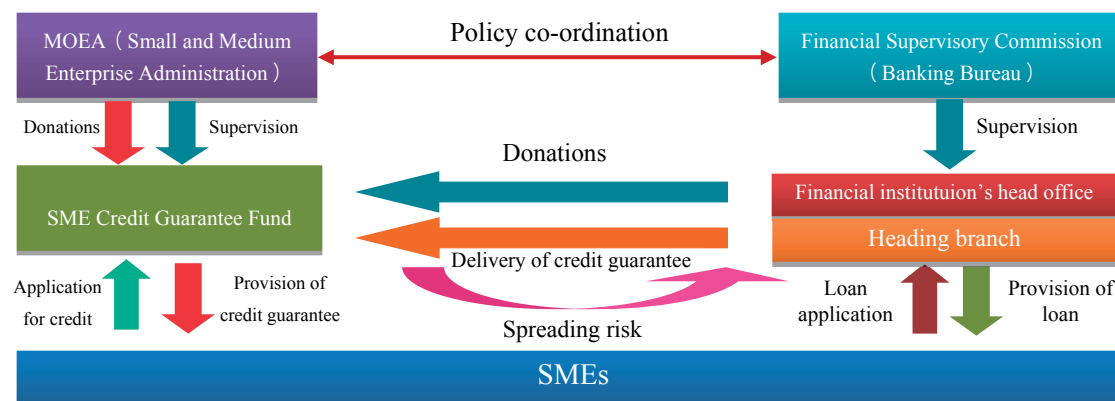
1. SME Credit Guarantee Fund: Principles, Operation, and Functions

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.

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.

Figure 8-2-1 Establishment and Operation of the SME Credit Guarantee Fund



Source: SME Credit Guarantee Fund, 2015.

As of the end of June 2014, cumulative government subsidy amounted to NT\$92.470 billion, or 78.41% of the total subsidy; signed financial institutions' cumulative subsidy amounted to NT\$24.964 billion, or 21.17% of the total subsidy.

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.

2. The Benefits Achieved through Credit Guarantee Fund

After 41 years of hard work, the 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 2015, the SME Credit Guarantee Fund had helped a total of 368,867 enterprises. The total number of credit guarantees provided through financial institutions was over 5.87 million with a cumulative credit guarantee volume of NT\$9,865.7 billion for loans of NT\$13,417.7 billion; the total number of credit guarantees provided through financial institutions for SMEs was over 5.80 million with a cumulative credit guarantee volume of NT\$9,728.4 billion for loans of NT\$13,230 billion (Table 8-2-1 and Table 8-2-2).

Table 8-2-1 The Performance of the Credit Guarantee Fund in Credit Guarantee Provision, 2009 - June 2015

Unit: Recipients; items; million NT\$

Year \ Item	No. of credit guarantee recipients	No. of credit guarantee applications accepted	Combined value of credit guarantees	Total amount of financing secured	Outstanding credit guarantees at year-end	Outstanding financing at year-end
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

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Year \ Item	No. of credit guarantee recipients	No. of credit guarantee applications accepted	Combined value of credit guarantees	Total amount of financing secured	Outstanding credit guarantees at year-end	Outstanding financing at year-end
2013	145,648	394,645	1,056,065	1,312,363	681,357	851,181
2014	115,879	405,113	1,140,854	1,425,826	698,933	885,961
2015(Jan.-June)	110,460	187,352	506,079	654,933	666,534	863,630

Note:

1. The number of credit guarantee recipients listed above is the total for that fiscal year;
2. 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 and Kaohsiung City Government since January 2003; credit guarantees for overseas study loans, which the Fund has been handling since August 1, 2004; credit guarantees for young people's overseas working holidays, which the Fund has been handling since July 1, 2005; credit guarantees for Taipei City Young People's Overseas Study Loans, which the Fund has been handling since June 1, 2011.
3. Since 2014, only credit guarantee recipients with active outstanding credit guarantees are counted.

Source: Credit Guarantee Fund, 2015.

Table 8-2-2 Provision of Credit Guarantees to SMEs by the Credit Guarantee Fund, 2009 - June 2015

Unit: Recipients; items; million NT\$

Year \ Item	No. of credit guarantee recipients	No. of credit guarantee applications accepted	Combined value of credit guarantees	Total amount of financing secured	Outstanding credit guarantees at year-end	Outstanding financing at year-end
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
2013	133,002	388,219	1,048,059	1,302,095	665,192	832,162
2014	103,382	398,008	1,131,300	1,413,368	683,510	867,908
2015(Jan.-June)	98,060	184,190	501,874	649,474	652,168	846,749

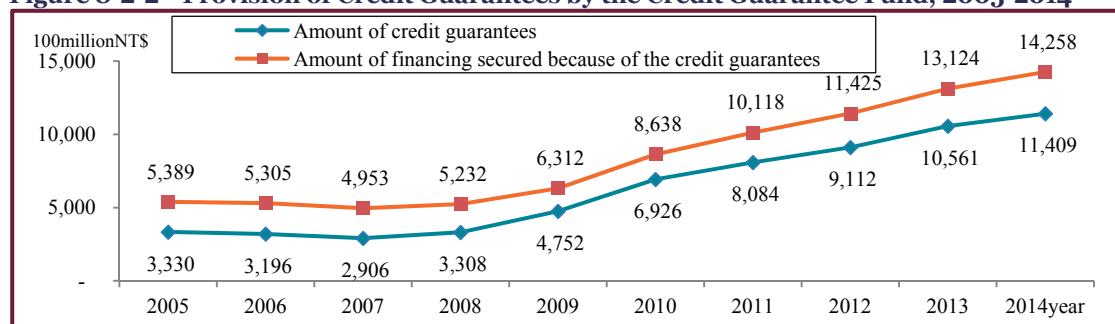
Note: Since 2014, only credit guarantee recipients with active outstanding credit guarantees are counted.

Source: Credit Guarantee Fund, 2015.

(2) Reducing the negative impact of the external 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 Credit Guarantee Fund, 2005-2014



Source: SME Credit Guarantee Fund, 2015.

(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 find 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 2015, 2,601 of the SMEs that have been granted credit guarantees in the past have since grown sufficiently large to be classed as “large enterprises,” and 866 have secured a stock market, OTC, or GISA listing.

As of June 2013, 73% winners of the Employment Contribution Award, National Award of Excellent SMEs, Rising Star Award, SME R&D Innovation Award, and National Quality Award had previously been recipients of credit guarantees from the SME Credit Guarantee Fund.

3. Government Policy Measures Implemented and Supported by Credit Guarantee Fund

Complying with the government policy of promoting enterprises' innovation and R&D, the Taiwan Small and Medium Enterprise Credit Guarantee Fund (SMEG) launches the Counterpart Guarantee Project, which aims to help raise the enterprises' production value and competitiveness. Under this mechanism, the Taiwan SMEG joins the leading companies of various industry sectors in appropriating counterpart funds for providing credit guarantees for their production/supply SMEs. The Project of the Counterpart Guarantee was approved by the Taiwan SMEG's supervising agency, the Ministry of Economic Affairs, on March 16, 2006

The Taiwan Credit Guarantee Fund has expanded its coverage significantly. Examples of SME credit guarantee programs are: Loans to Enhance SME Export, Policy-Oriented Loans, Loans for Knowledge-based Enterprises, Natural Disaster Reconstruction Loans for SMEs, Loans to Assist SMEs Affected by Trade Liberalization, Micro Entrepreneur Loans, and Loans for Young Entrepreneurs and Startups.

For “Credit Guarantee Programs Supported by Separate Funds,” the Taiwan SME Credit Guarantee Fund’s credit guarantee is provided on a risk-sharing basis. The credit risk beyond the Fund’s guarantee coverage percentage shall be assumed by related financial institutions. Examples of “Credit Guarantee Programs Supported by Separate Funds” are: Firefly Counterpart Fund (Eligible Client: SMEs recommended by the donating enterprises), Micro/Women Startup Loans, Micro Loans and Strategic Industry Loans Sponsored by Kaohsiung City Government, Strategic Industry Loans Sponsored by Taipei City Government, and Youth Business Startup Loans Sponsored by Taipei City Government (Eligible Client: Individuals aged 20-45 approved by Taipei City Government; Maximum Guarantee Coverage of 95% with Annual Guarantee Fee of 0.5%).

(1) Young Entrepreneur Start-Up Financing Loans

The MOEA launched the Young Entrepreneur Dream Building Financing Loans in August 2012 and later merged with the Young Entrepreneur Financing Loans in 2014 into Young Entrepreneur Start-Up Financing Loans. Young entrepreneurs aged between 26 and 45 who are eligible for the Young Entrepreneur Start-Up Financing Loans can apply 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 to the 80%-95% range by the SME Credit Guarantee Fund with the maximum loan

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amount at NT\$18 million. As of June 2015 (starting from January 2014), the SME Credit Guarantee Fund had helped a total of 4,207 loans, amounted to a total of NT\$416.4 million.

(2) Special Project Loan for innovation and development of SMEs

As of June 2015 (starting from January 2014; target total loan amount up to NT\$30 billion; provision of direct credit guarantees to the 80%-95% range), the Credit Guarantee Fund had helped a total of 178 loans, amounted to a total of NT\$929 million.

(3) Micro Business Loans

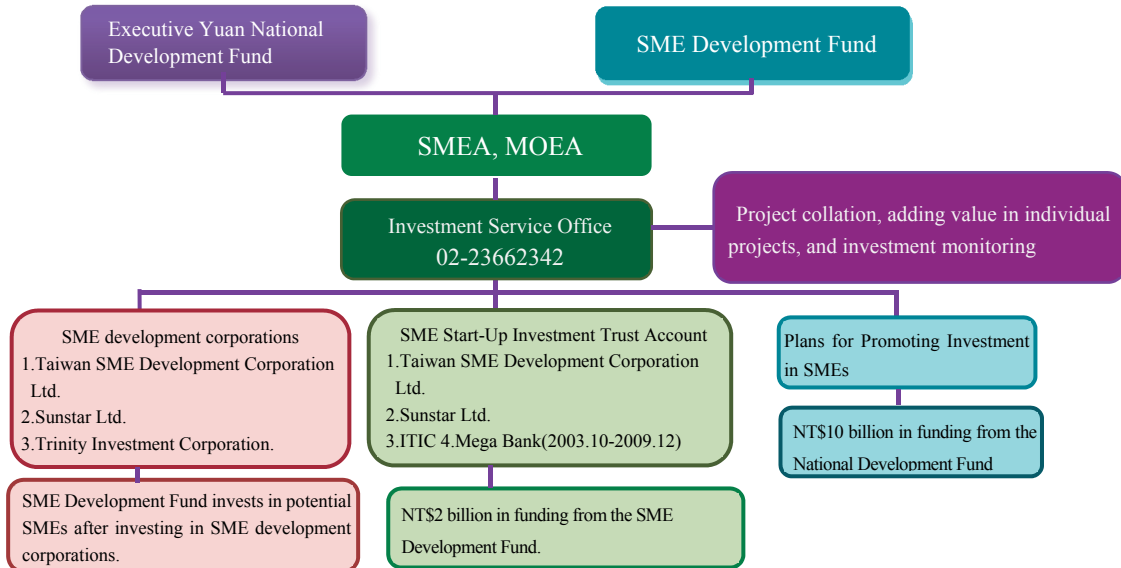
As of June 2014 (starting from October 2012), the SME Credit Guarantee Fund had helped a total of 6,667 loans, amounted to a total of NT\$9.139 billion.

(4) Counterpart Guarantee

Sources of Counterpart Funds are from donation by the leading companies of various industry sectors. The Taiwan SMEG then provides counterpart funds to help the production/supply chains of the donating companies obtain financing especially for R&D. The donation for each enterprise is NT\$50 million in principle, which can be adjusted by the industrial traits, and the minimum is NT\$20 million. As of June 2015, the SME Credit Guarantee Fund had (1) collaborated with central government, a total of 13,178 loans, amounted to a total of NT\$9,835 million; (2) collaborated with local government, a total of 4,994 loans, amounted to a total of NT\$3,382 million; and (3) collaborated with companies, a total of 26,503 loans, amounted to a total of NT\$22,166 million.

III Strengthening Investment in SMEs

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 at investing in the SME sector and providing SMEs with managerial and consulting guidance through the establishment of SME Development Corporations. In October 2003, to help SMEs overcome the difficulties that they often experience in securing equity investment, the SMEA established the SME Start-up Investment Trust Account system; in August 2007, the National Development Fund, Executive Yuan allocated NT\$10 billion for use in this project, with the SMEA being commissioned to implement the Plan for Promoting Investment in SMEs. Further in 2014 to 2015, as part of government efforts to help small innovative startups, the GreTai Securities Market (GTSM) launched the Go Incubation Board for Startup and Acceleration Firms (GISA) in January 2014, and approval of private online equity crowdfunding platform by Executive Yuan in April 2015. 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 SMEs

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2015.

1. Establishment of the SME Start-Up Incubation Investment Trust Account

In 2013, SME Start-up Incubation Investment Trust Account was established to support innovative SMEs, SMEs' upgrade and transformation, and SMEs through incubation centers., Investment from the SME Start-Up Incubation Investment Trust Account began in October 2003 with the funds in question (NT\$900 million) to be entrusted to the custody of designated banks (<http://www.moeasmea.gov.tw/ct.asp?xItem=1284&ctNode=609&mp=1>).

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 eight years, and the remaining two years being devoted to the disposal of remaining investments. The formal launch of the Plan for Promoting Investment in SMEs took place on August 30, 2007.

Originally, under the Plan for Promoting Investment in SMEs, venture capital firms were invited to invest in SMEs with significant growth potential at a 1:1 ratio with the Executive Yuan National Development Fund. In September 2010, the implementation measures for the Plan for Promoting Investment in SMEs were revised, with adjustments made to the capital provision ratio, with the aim at promoting SME development, making it easier for early-stage SME start-ups to secure funding, and supporting the Executive Yuan's strategy of promoting service sector development to create more job opportunities in Taiwan:

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- (1) For enterprises at the seed-capital / start-up 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 April 2015, investment had been secured for a total of 207 enterprises, with the National Development Fund providing a total of NT\$6.6 billion in investment and venture capital and investment firms providing matching fund over NT\$6.0 billion, for a combined total of NT\$12.6 billion. Total induced investment from private sector reached NT\$27.2 billion; 57 enterprises helped by the Plan have secured a stock market or OTC listing (<http://www.moeasmea.gov.tw/ct.asp?xItem=1283&ctNode=609&mp=1>).

3. 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 key elements of the Plan are: 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 Service.

This Plan is expected to be implemented over a period of 13 years, with the actual investment 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 from the National Development Fund for every NT\$1 matching investment. As of the end of May 2015, investment had been secured for a total of 39 enterprises, with a total of NT\$4.5 billion (<http://www.issip.org.tw/ctrl?PRO=Index>).

4. Go Incubation Board for Startup and Acceleration Firms (GISA)

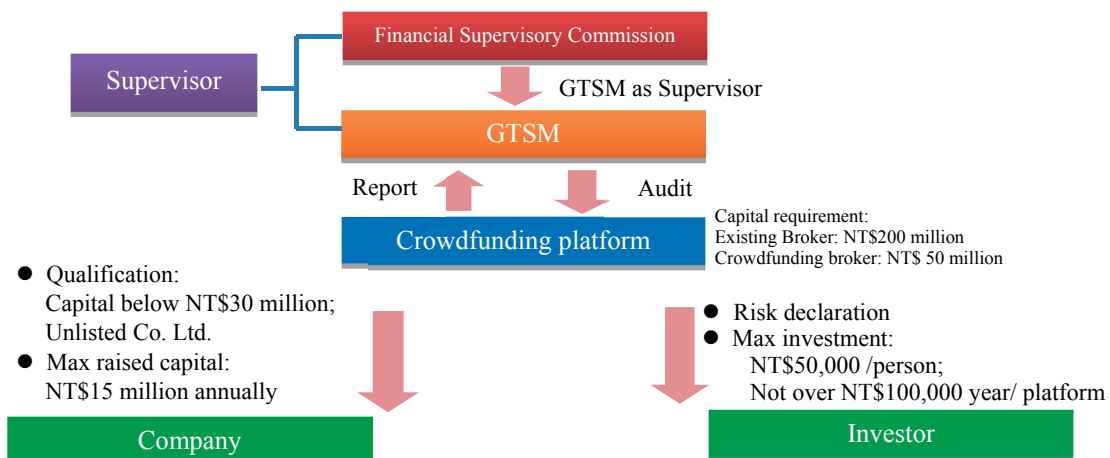
As part of government efforts to help small innovative startups, the GreTai Securities Market (GTSM) launched the Go Incubation Board for Startup and Acceleration Firms (GISA) in January 2014. It has been designed as the platform to provide small-sized non-public companies that have innovative and creative ideas. GISA focuses on actively helping local small-sized non-public innovative companies to smoothly finance required funds. They also work in conjunction with SMEA, MOEA (including guarantee funds, counseling center, etc.), accounting firms, Securities & Futures Institute and other related associations to provide comprehensive counseling in finance, accounting, internal control, marking, legality and company management, etc. The aim is to help companies establish internal control, plan and construct accounting and financial systems, and carry out effective company management. Target audiences that are permitted to register on GISA are corporation limited companies with creative ideas and great potential, and hold a capital amount under NT\$30 million.

After being registered on GISA, small-sized innovative companies will be able to acquire needed capital, which in turn will make it easier to broaden the business. Advantages of registering on GISA: raising capital at lower cost, no public offering procedures, improving visibility, and expanding operations. As of the end of May 2015, NT\$199 million capital has been raised through GISA for a total of 62 enterprises.

5. Crowdfunding

Executive Yuan approved the private online equity crowdfunding platform in April 2015. The platform will help young entrepreneurs raise money, as well as be a type of personal venture capital. Contrasting with GISA, crowdfunding websites may give small businesses and entrepreneurs a quicker leg up. Target audiences that are permitted to raise fund (max NT\$15 million annually) through crowdfunding platform are corporation limited companies (not listed) with creative ideas and great potential, and hold a capital amount under NT\$30 million (Figure 8-3-2).

Figure 8-3-2 Framework for Crowdfunding Plan



Source: Financial Supervisory Commission, 2015.

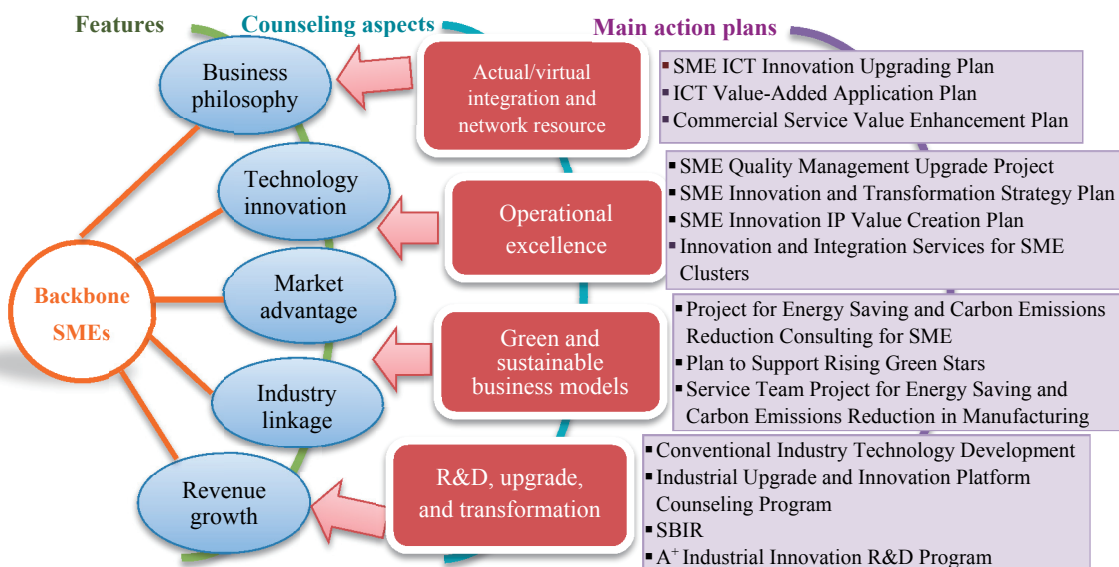
CHAPTER 9

Promoting R&D, Upgrade, and Transformation, Led by SMEs with High Growth Potential

Small and Medium-sized Enterprises Administration, Ministry of Economic Affairs (SMEA, MOEA) has launched various measures to promote SMEs' R&D, upgrade, and transformation, and, in particular, to cultivate SMEs with high growth potential (potential winners) to become the "Backbone Enterprises." Four main strategic focuses are: (1) actual/virtual integration and network resource application, (2) operational excellence, (3) green and sustainable business models, and (4) R&D, upgrade, and transformation.

This chapter is divided into four sections. Section I covers actual/virtual integration, network, and marketing channels for SMEs; section II examines measures to enhance SME operation, quality and innovation; section III reviews guidance on energy conservation, green opportunities, and sustainable growth models; section IV discusses measures to promote up-, mid-, and down-stream cooperation and innovation, in pursuit of high-value transformation and upgrade for SMEs with high growth potential into "Backbone SMEs." The counseling strategy for turning SMEs with high growth potential into backbone SMEs is summarized in Figure 9-0-1.

Figure 9-0-1 Counseling Strategy: Turning SMEs with High Potential into Backbone SMEs



Source: Compiled by editors of this book.

I Measures Related to Network Resource Application for SMEs

1. Digital Inclusion and Applications

In 2005 MOEA 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. 2014 results included (1) establishing 27 e-clusters and (2) counseling 11 SMEs with high growth potential. The main areas of emphasis in the project in 2015 are outlined below (plan site: <http://e98.sme.gov.tw/Plan>):

- (1) Enhance digital application: tailored training to help SMEs build and use web pages, blogs, and 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 for selected SMEs: 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.
- (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. International E-commerce Program

“The Promotion of SME International E-commerce Program” implemented by the SMEA, MOEA aims at helping SMEs enhance their international e-commerce capability, such as 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. The 2014 main result was successfully counseling 109 SMEs to develop export markets amounting to NT\$670 million. In 2015, the program will focus on (plan site: <http://info.moeasmea.gov.tw>):

- (1) Providing multi-level international internet marketing services model to help export-oriented SMEs use various e-commerce models, expand overseas channels, and develop new markets.

- (2) Cultivating SMEs with significant e-enablement potential for export and inviting them to participate in international e-commerce case study and experience sharing.
- (3) Establishing e-clusters.
- (4) Cultivate e-commerce talent through training, case study and share of experience.

3. SME ICT Innovation Upgrading Plan

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. 2014 results included (1) helping 77 SMEs introduce and use ICT tools and (2) generating incremental revenue over NT\$94 million (plan site: <http://ict.sme.gov.tw>).

4. Taiwan E-learning and Digital Archives Program (TELDAP) - SME Online University

Taiwan's 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 about half a million SME employers and employees since its launch in 2003. Traffic to the site has climbed steadily with tens of millions visitors. 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 reviews for current business book titles for members to download. There are also 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. The 2014 results included (1) helping 101 SMEs use TELDAP, and (2) serving 275,386 SME people in e-learning, and adding 35,774 new members. In 2015, the program will focus on: (1) offering over a thousand online courses, (2) establishing special learning areas, counseling, personalized learning recommendations, customer service line, learning community services, and (3) providing electronic passport for lifelong learning for qualified SME employees (plan site: <http://www.smelearning.org.tw>).

5. 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 Industrial Development Bureau (IDB), MOEA, focuses on helping manufacturing industries move upward along the value chain from OEM model toward ODM and OBM through ICT applications, 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 brands and the marketing and distribution capability. However, OBM is a difficult business model, and the tenet of success 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. The 2014 results included (1) helping 16 manufacturers with servicing and innovation features lead value chain integration of 355 enterprises, and (2) inducing incremental revenue and cost saving of NT\$817 million and new private investment of NT\$100 million as well as additional business opportunities in information service valued at NT\$100 million (<http://www.ecos.org.tw>).

6. Smart Services Counseling Plan

The Department of Commerce, MOEA launched “Smart Services Counseling Plan” to help business service providers make more effective use of cloud computing-based services and/or integrated network of identification technology with emphasis on driving the development of new service models and service expansion; it promote the convenient consumer spending environment, featuring customization, smart service, intelligence and differentiation. In 2014, the above mentioned plan helped (1) 13 enterprises establish smart shopping services connecting to about 9,372 point-of-sale terminals enabling 1.86 million annual transactions, (2) facilitate related deals and investment amounting to NT\$1,520 million, and (3) induce overseas business opportunities valued at NT\$310 million (<http://www.iservice.org.tw/>).

7. Commercial Service Value Enhancement Plan

To facilitate commercial service providers to use ICT, integrate service value chain, and jointly develop high quality service models (such as O2O - Online to Offline - e-commerce mode) to create unique consumer experience, thereby strengthening the market expansion and end users' service

value, Department of Commerce, MOEA launched “Commercial Service Value Enhancement Plan,” including “Commercial Service Value Enhance Counseling” and “Commercial Service Application Expansion Model.”

The 2014 results included: (1) completing counseling of 13 high quality commercial service network application cases, adopted by 2,019 enterprises, (2) promoting industrial investment of NT\$1,940 million, and incremental annual revenue of NT\$690 million, (3) helping enterprises and their partners subsidized by the Plan reduce annual costs up to NT\$110 million, and (4) creating 329 jobs (plan site: <http://gcis.nat.gov.tw/ecpp>).

II Promote Operational Excellence and Innovation

To 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 and intellectual property, and using integration services for innovation and industrial clusters, improving warehousing and logistics, as well as strengthening marketing and distribution.

1. SME Quality Management Upgrade Project

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.

2015 action items are: (1) 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, etc.), general enterprise guidance (focused on six emerging industries and ten servicing industries) and value chain guidance (such as industry cluster, ODM, and OBM); (2) the personnel training includes: organizing quality management awareness and application promotion seminars; international certification series, business management quality series, key industry management practices, tourism and leisure services series and other online courses; tailor-made corporate internal training programs to meet the manpower development needs of SMEs; and (3) the promotion part covers advertising, commercials, and promotion of quality awareness.

2014 results were: (1) completing counseling of 153 enterprises including 4 value chains, system innovation, and training of 1,411 people in quality control area; (2) helping 9 SMEs establish quality management systems meeting domestic and/or international customers’ requirement of standards and tests, and counseling 5 SMEs to win national award of quality; and (3) helping enterprises generate incremental revenue of NT\$682 million, reduce annual costs of NT\$237 million, and create 98 jobs (plan site: <http://smeq.moeasmea.gov.tw>).

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2. SME Innovation and Transformation Strategy: Focus on Quality

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, 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 action items in 2015 are (1) SME counseling and diagnosis on business analysis, competitiveness enhancement, and use of resources from government measures; (2) strengthening quality-related basic capabilities, 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) counseling on coordinated quality tests; (5) counseling on global quality management and conforming to international certification requirements; and (6) quality control talent.

2014 results were: (1) completing case counseling of 29 enterprises and diagnosis of 21 SMEs; and (2) helping enterprises generate incremental revenue of NT\$125 million, innovation value at NT\$ 34 million, and reduce annual costs of NT\$25 million (plan site: <http://smeq.moeasmea.gov.tw>).

3. SME Innovation IP Value Creation Plan

The SMEA, MOEA has been implementing the SME Innovation IP Value Creation Plan, to help SMEs that have been undertaking technology innovation gain economic value from their intellectual property (IP), and 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 in 2015 include (1) counseling on IP evaluation, acquisition, commercialization, and management; and (2) operation of the SME IP Value-Added Service Center, to help optimize SMEs’ IP-related capabilities.

2014 results were: (1) helped enterprises enhance their economic value of intellectual property and reduce annual R&D costs of NT\$6.5 million; and (2) helped enterprises generate incremental investment and revenue of NT\$31 million, induced by counseling of IP enhancement (<http://ipcc.moeasmea.gov.tw/>).

4. Innovation and Integration Services for SME Clusters

SME clusters and export consortia development are a noteworthy form to enable the SMEs to link

and integrate to regional and global value chains. They critically function as a means to improve the competitiveness of SMEs productivity and competitiveness within the regional and global economy. 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. Main work items in 2015 include (1) strengthen cluster development mechanism, (2) promote counseling on integration of cluster and innovation, (3) cross-border and cross-industry cooperation and innovation, and (4) promote knowledge sharing and social value of clusters.

2014 results were: (1) helping promote 11 innovative SME clusters, including 186 SMEs in technology, service, and business model innovation; and (2) helping establish 21 model enterprises, create 243 jobs, and generate incremental revenue of NT\$1,700 million (plan site: <http://www.smecluster.org.tw/>).

5. Small & Medium Enterprises Quality Optimization Project

The “Small & Medium Enterprises Quality Optimization Project” is aimed at helping SMEs improve the perceived quality of their products and services. The implementation measures adopted for this Plan include practical guidance, which comprises branding design, process of production and services, and customer relation management, showing SMEs how to adopt a service-oriented mindset, stay abreast of changes in consumer needs, and keep their finger on the pulse of the market. In 2015, main action items include (1) quality optimization diagnosis and counseling, (2) introducing international standards of consumer evaluation, and (3) promotion through workshop, media, and commercials. 2014 results were: (1) completing counseling of 14 enterprises, and helping establish 4 model enterprises and 2 potential model enterprises, and (2) generating incremental revenue of NT\$141 million (plan site: <http://qualia.moeasmea.gov.tw/index.aspx>).

6. Plan to Support Microenterprises and Sole Proprietorships

To address unique needs of micro-enterprises and sole proprietorships as diverse and flexible working patterns gradually replace traditional one, SMEA, MOEA launched a separate plan (used to merged into SME programs) to support and counsel micro-enterprises and sole proprietorships (less than 5 persons). In 2015, main work items include (1) expanding micro-enterprise and sole proprietorship servicing platform to provide toll free counseling line (0800-05-1638) and online consultation for market intelligence, diagnosis and assessment, (2) team counseling and mentoring on legal, financial, marketing and operation issues, (3) talent cultivation including SME online university, and (4) promoting business opportunity matching and community cooperation model. 2014 results were: (1) completing counseling of over 40 thousand people and 2,176 potential micro-enterprises, and (2) helping generate incremental revenue of NT\$196 million and introduce ICT and e-commerce solutions for about 2,800 enterprises (plan site: <http://micro.sme.gov.tw/>).

III Guidance to SMEs on Energy Conservation, Green Opportunities, and Carbon Emission

1. Project for Energy Saving and Carbon Emissions Reduction Consulting for SMEs

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, and (4) cultivating green elites. In 2015, main work items include (1) on-site diagnosis and counseling, (2) regulation and verification counseling such as on international green product directives, compliance with green product standards and certification, and the green procurement requirements of major international manufacturers, and (3) green talent cultivation. 2014 results were: (1) completing counseling of 75 enterprises, and helping reduce annual costs of NW\$75 million, (2) helping 10 enterprises establish standards and obtain international certificates, and generate incremental revenue of NW\$68 million, and (3) completing counseling of 10 industry clusters, and helped reduce annual costs of NW\$9 million (plan site: <http://GHGinfo.moeasmea.gov.tw/>).

2. Plan to Support Rising Green Stars in SMEs

To help SMEs respond to domestic and international green product directives and the green procurement requirements of major international manufacturers, establish a capability for green supply chain management, effectively adapt to customers’ green supply chains and create green business opportunities, the SMEA, MOEA has promoted the Plan to Support Rising Green Stars in SMEs with the 2015 priorities in on-site diagnosis and counseling, Bright-spot SMEs’ one on one counseling, green supply chain management, and green capability cultivation and promotion. 2014 results were: (1) completing counseling of 218 SMEs, and helping reduce costs of NW\$423 million and generate revenue of NW\$1,826 million, and (2) completing counseling of 14 enterprises, 9 industry clusters and/or supply chains covering expansion of 139 SMEs (plan site: <http://green.pidc.org.tw/>).

3. Energy Saving and Carbon Emissions Reduction in Manufacturing Sector

In order to provide greater assistance to manufacturing sector in energy conservation and carbon reduction, costs reduction, and response to international environmental guidelines/standards, the IDB, MOEA has formed the a service team for energy saving and carbon emissions reduction in manufacturing sector to offer guidance and counseling on green technologies, diagnosis tools, case studies, industrial collaboration, and talent cultivation. The 2015 priorities are: (1) technology

counseling on energy saving and carbon emissions reduction, (2) diagnosis and counseling of SMEs on energy saving and carbon emissions reduction, (3) guidance and test of efficiency of energy-consuming equipment, (4) demonstration of smart energy saving and detection technology application, (5) greenhouse gas swap project demonstration, and (6) talent cultivation. 2014 results were: (1) completing counseling and/or on-site examination of 338 SMEs, and helping promote diagnosis tools to 160 enterprises, and follow up greenhouse gas swap projects for 16 enterprises, and (2) helping enterprises reduce costs through energy saving of NT\$1,250 million (plan site: <http://www.ftis.org.tw/tigers/index.asp>).

IV SMEs: R&D Enhancement 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. SME Working Environment Improvement Project

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 in 2015: (1) basic technical guidance on working environment improvement; (2) guidance on risk management; (3) guidance on safety and health; (4) policy awareness promotions and campaigns. 2014 results were: (1) completing counseling of 209 enterprises, most of them were SMEs, and (2) overall improvement ratio at 81.9% including establishment of risk management systems for 6 enterprises (<http://www.cesh.twmail.org>).

2. Instant Technical Assistance to SMEs

In order to help SMEs upgrade and transform, the IDB, MOEA has implemented the “Instant Technical Assistance Program of SME” since 2009 by utilizing existing mature technological capabilities of the corporate world, academic community and technical services industry to provide R&D, design, production, logistics, automation and electronic technologies necessary for upgrading the industry and to provide real-time, small scale, short-term technical guidance, so that the technology levels of SMEs can be upgraded and their competitiveness enhanced. The 2015 priorities are: (1) one on one short-term, small scale, or comprehensive counseling on technological upgrade, and (2) case counseling management and promotion. In 2014, a total of 323 SMEs received counseling for technology upgrade and transformation, resulting in NT\$787 million output increase and NT\$170 million cost saving (plan site: <http://proj2.moeaidb.gov.tw/itap/index.php>).

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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 mainland China, 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. The 2015 priorities are: (1) product development, (2) product design, and (3) R&D alliance: joint development model for industrial clusters.

In 2014, a total of 271 cases approved with government subsidy of NT\$287 million and private investment of 520 million, resulting in NT\$7,700 million output increase and NT\$490 million cost saving (plan site: <http://www.citd.moeaidb.gov.tw/CITDweb/Web/Default.aspx>).

4. Industrial Upgrade and Innovation Platform Counseling Program

In 2015, IDB, MOEA merged the Plan of Bellwether New Product Innovation and R&D into the new "Industrial Upgrade and Innovation Platform Counseling Program" to help and subsidize bellwether firms, who have great potential in market expansion of their high value added new products or services, thereby enhancing their innovation and R&D. The main areas of subsidy are: (1) plan of leading new product development (for new products with great potential and at least domestically leading technology content), (2) plan of innovation application services and R&D (including Proof-of-Concept, Proof-of-Service and Proof-of-Business), and (3) theme-based development plan (themes initiated by IDB). In 2014, a total of 43 cases approved with government subsidy of NT\$843 million, and recommended loans of NW\$170 million to 19 cases with complete R&D plan (plan site: <http://tiip.itnet.org.tw>).

5. Small Business Innovation Research Program (SBIR)

To encourage SMEs to engage in innovating industrial technologies, products and services, Taiwan's government has continually promoted the "Small Business Innovation Research Program" (SBIR) in February 1999. In 2008, the "Promotion of Innovative R&D for Local Industries Program" (Local SBIR) was implemented, which is to assist in funding so that each municipal, county, city government can allocate more funds for R&D addressing the needs of industries with local characteristics. To ensure more SMEs can take advantage of this Program to grow stronger, upgrade and transform in response to fast industrial changes, the DOIT (Department of Industrial Technology, MOEA) will regularly and properly review funds allocated for innovative R&D projects applied by local industries to ensure that funds are catering to demands of SMEs.

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 to 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 May 2015, a total of 5,785 cases of innovation and R&D projects were approved and implemented, with government subsidies exceeding NT\$10.4 billion and SMEs' investment of NT\$19.9 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 site: <http://www.sbir.org.tw/SBIR/Web/Default.aspx>).

6. A⁺ Industrial Innovation R&D Program

To lead businesses into investing potential technologies in advanced industries, the DOIT announced that it would replace “Industrial Technology Development Program (TDP)” with “A⁺ Industrial Innovation R&D Program” to constantly encourage businesses into innovation in 2014. In the hope of guiding businesses to invest in high-end technology with higher industrial value, the DOIT encourages vertical- and cross-domain cooperation in order to tap industrial demands and develop comprehensive industrial ecosystem and the maximum efficiency.

By means of government subsidization, the A⁺ Industrial Innovation R&D Program 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, it 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.

Business TDPs can be divided into three programs: (1) Industrial Technology Foresight Research Program (emerging technologies, products, and services), (2) Integrated R&D Program (vertical- and cross-domain cooperation to tap industrial demands and develop comprehensive industrial ecosystem and the maximum efficiency), and (3) Industrial Technology Innovation Center Program (R&D management system, encouraging foreign firms to set up R&D in Taiwan, intellectual property right, etc.).

From the inception of the original TDP until May 2015, a total of 1079 cases were approved covering 1,678 enterprises, with their investment exceeding NT\$53.1 billion; and each NW\$1 subsidy generated output of NW\$11.56. From the inception of the A⁺ Industrial Innovation R&D Program in 2014 until May 2015, a total of 83 cases were approved with government subsidy of NW\$ 3.74 billion and private investment of NT\$5.33 billion (plan site: <http://aiip.tdp.org.tw/index.php>).

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7. Conventional Industry Technology Development

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 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 (launched in 2009), 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 to develop their R&D activity, and to make use of the R&D subsidies available from the government. The idea is to make the university sector a long-term partner for enterprise development, thereby strengthening SMEs' core technology capabilities and enhancing the competitiveness of Taiwanese industry.

Main action plans and results in 2015 are:

(1) Value Added Transformation Plan for Conventional Industry: selecting nine industries to support for their value added transformation, including Fitness Equipment, Footwear, Mould, Nonwoven Fabric, Aluminum Manufacturing, Sewing Machines, Kitchen Appliance, Printing Industry and Sporting Goods; as of May 2015, helping 2 SMEs obtain subsidies, and inducing a total of NT\$204 million investment, NT\$280 million output, and 95 new jobs (plan sites: <http://tipo.stars.org.tw/>).

(2) Plan for the Provision of Assistance to SME Technology Development by the University Sector: providing special project counseling and (6 month free) one on one counseling; as of May 2015, helping 10,421 SMEs by 6,912 experts from over 140 universities or colleges, and inducing a total of NT\$5,440 million private investment and output of NT\$5,500 million (plan sites: <http://sita.stars.org.tw/>).

(3) Southern Taiwan Industry Technology Service Center: providing counseling for microenterprises (small firm with no more than 5 employees); as of May 2015, helping 1,886 microenterprises apply for 644 cases of government counseling, facilitating establishment of 26 industrial alliances, and inducing a total of NT\$890 million private investment, output of NT\$102 million, and 310 new jobs (plan sites: <http://www.eitsc.org.tw/>).

8. 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. From the inception in 2014 until June 2015, a total of 113 cases were approved with private investment of NT\$130 million and 369 new jobs were created (plan site: <http://gcis.nat.gov.tw/neo-s/Web/Default.aspx>).

CHAPTER 10

Strengthening Startups and Incubation - Accelerating Forward-Looking SMEs' Global Connection

GEM 2014 Global Report (GEM denotes Global Entrepreneurship Monitor), published in Jan. 2015, showed that Taiwan's TEA (Total Early-Stage Entrepreneurial Activity) Index was 8.49 percent, about the average of innovation-driven economies at 8.54 percent; Taiwan's entrepreneurial intentions was 25.56 percent, much higher than the average of 12.34 percent, and ranked No. 3 among innovation-driven economies. Both indicators reflect an entrepreneur-friendly environment promoted by government agencies' joint efforts in Taiwan.

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, Ministry of Economic Affairs (SMEA, MOEA) launched the "Start-Up Taiwan Program" in 2012. The key theme is "refining the incubation process to speed up the achievement of excellence," which embodies three key strategies: "stimulating innovative ideas and strengthening the start-up function," "improving incubation to speed up new business growth," and "optimizing the support network for new businesses." Due to the accelerated pace of globalization, industrial evolution and the flow of capital, smart 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 has become a global trend. In 2014 "Young, Energy, Start-Up" or "YES Taiwan" became the key theme of the "Start-Up Taiwan Program," which embodies "Youth Entrepreneurship Program" and "Youth Entrepreneurship Work Platform" by joint effort of government agencies to integrate mentoring and incubation resources and form entrepreneur clusters.

This chapter consists of three sections. Section I discusses entrepreneurship counseling and incubation mechanism; section II focuses on incubation, emerging industry accelerator, and global connection; section III covers government counseling and supporting projects for youth and female entrepreneurs.

I Entrepreneurship Counseling and Incubation

The key theme “YES Taiwan” promoted in 2014 under the “Start-Up Taiwan Program” comprises 48 programs including “Entrepreneurship Consultation Services” and “Entrepreneurship Dream Building Plan” through joint efforts of 13 government agencies. It covers 4 main areas: start-up dream development, dream building incubation, financing and investment, and R&D and innovation, to promote resource integration and sharing through large business platform, with a concept similar to “Entrepreneur Café” in the U.S.

1. Entrepreneurship Consultation Services

SMEA, MOEA launched entrepreneurship consultation service plan in 2013 to help potential entrepreneurs stimulate innovative ideas, 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.

As of May 2015 (from January 2014), a total of 16,681 people received counseling, and 82 new businesses were founded with the help of the Entrepreneurship Consultation Services. Main services in 2015 are:

- (1) Free counseling service: access to over 100 professional entrepreneurship consultants through “0800-589-168” toll-free entrepreneurship counseling line and “youth entrepreneurship dream building” online consultation system (<http://sme.moeasmea.gov.tw/>);
- (2) Multi-level resources for entrepreneurs: (i) Entrepreneur Café: promote would-be entrepreneurs, entrepreneurs and mentors to share ideas, knowledge, and resources; (ii) Start-Up Taiwan Product Show: offer free marketing platform to increase visibility and business / investor matching opportunity for entrepreneurs; and Start-up Knowledge Bank, Start-Up Taiwan Newsletter, forums, and other in-depth publications;
- (3) 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 start-up owners, through the organizing of 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 start-up, 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 start-ups 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 start-up. Three main categories of the program are: (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, start-up funding, young entrepreneur financing, and so on.

As of May 2015, a total of 1,135 people received training in 7 entrepreneurship incubation classes and/or 4 start-up theme classes (plan site: <http://www.learningup.tw/index.php>).

3. Entrepreneurship Dream Building Plan

Entrepreneurship Dream Building Plan, a start-up service network launched by SMEA, is to help firms (mostly within five years from inception) with great potential enhance the operation, 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. Main services in 2015 are: (1) the use of start-up consultants to help firms that have been in existence for less than five years evaluate their business model and development strategy, thereby helping them stay competitive in business, (2) layered counseling for start-ups, including general counseling, mentorship, and mid- to long-term team assistance, (3) product exhibitions, B2B, B2C, and international commercial exhibitions, multi-media marketing and promotions, and (4) entrepreneurship awards.

As of May 2015 (from January 2014), a total of 280 start-ups (in existence for less than five years) received counseling, resulting in incremental private investment of NT\$2.7 billion and 1,727 jobs (created or maintained) (plan site: <http://sme.moeasmea.gov.tw/startup>).

II Incubation and Acceleration Programs

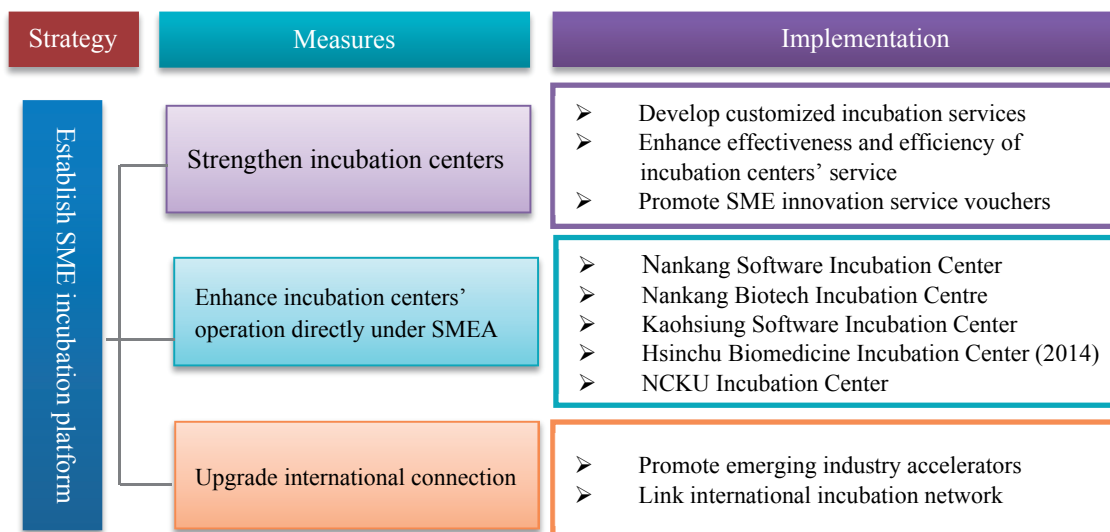
To help SMEs get established, undertake innovation and grow at various stages, strengthen start-ups and incubation, and accelerate forward-looking SMEs' global connection, since 1997 the SMEA has been working with other government agencies, research institutions, universities and private-sector companies to implement the government's incubation center policy and encourage the establishment of new incubation centers. The framework of SME incubation implementation mechanism is shown in Figure 10-2-1.

1. SME Incubation Center

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.

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Figure 10-2-1 Framework of SME Incubation Implementation



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2015.

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 start-up stage and in the early stages of R&D projects. By creating a first-class cultivation environment, incubation centers increase the likelihood that a new business will be a success. The following sections describe the current state of incubation center operation in Taiwan.

(1) Incubation centers: current state

There were over 130 incubation centers in Taiwan, located in 20 different counties and cities. The five main innovative practices of these incubation centers are: (A) focus on upgrade and transformation of core competencies in key industries, (B) develop special module such as youth and women entrepreneurship, innovative application, cross-border / network, and outreach projects in specialization, (C) cut the red tapes and simplify the application process (D) design exit mechanism, and (E) support incubation by networking.

Performance of all incubation centers: in 2014, 85 incubation centers received subsidy of NT\$152 million from SMEA. By the end of 2014, SMEA provided cumulated funding of NT\$2.8 billion to incubation centers; of over 130 incubation centers in Taiwan, 119 received subsidy from SMEA; 77 firms that had been cultivated in incubation centers had secured stock market or OTC listing. Besides, by the end of 2014, Taiwan's incubation centers had successfully induced incremental capital investment of NT\$93.2 billion. The total number of people working at these firms was 188,740; total number of patents secured by these firms over the years was 3,645; there had been 1,692 instances of technology transfer (Table 10-2-1) (plan site: <http://incubator.moeasmea.gov.tw>).

Table 10-2-1 Incubation Center Performance, 2009-2014

Unit: 100 million NT\$; enterprises; persons; items

Item \ Year		2009	2010	2011	2012	2013	2014	1997~2014
Input	SMEA subsidy	1.75	1.70	1.41	1.52	1.57	1.52	28.09
	No. of incubated SMEs	1,633	1,885	1,954	2,065	2,181	2,000	7,885
Output	No. of incubated startups	835	1,131	1,226	1,250	1,354	1,327	4,044
	Employees	28,038	31,038	30,489	34,185	29,368	27,138	156,128
	Patents secured	484	317	361	206	157	176	3,645
	Instances of technology transfer	270	162	195	84	62	71	1,692
	Ratio of increased capital over subsidy	36.57	31.76	45.11	36.43	49.32	63.16	33.17
	Increased capital	64	54	63.63	57.2	77.44	96	932
	No. of enterprises listed in stock market or OTC	5	3	3	2	5	9	77

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2015.

(2) Five incubation centers operated directly by SMEA

To cultivate R&D of key high-tech industries, MOEA has established four incubation centers through direct investment since 2002 to offer technology support and services in consultancy, resource sharing, brand marketing and business matching for startups and SMEs, and help them transform, enhance R&D abilities and boost their international presence. They are: (A) Nankang Software Incubation Center (E-commerce, Embedded Systems, Software, and Network Communications), (B) Nankang Biotech Incubation Center (Pharmaceuticals, Medical Equipment, and Healthcare, Agricultural Biotechnology), (C) Kaohsiung Software Incubation Center (Digital Content, Software, and Technology Services), (D) NCKU Incubation Center (Biotechnology and Healthcare, Green Energy and Environmental Protection, and Precision Machinery), and (E) in 2014, the new Hsinchu Biomedicine Industrial and Incubation Center was established. It integrates the links in the biotech industry development chain - R&D, trial production, clinical trials, patent transfer, and company incubation - within a single park, and provides “one-stop shop” support and regulatory verification services. This will deepen biotech research capabilities, accelerate the commercialization of R&D results, and enhance production efficiency. It focuses on Optoelectronic Imaging, Information Technology, Biomedical Chips, Biomedical Materials, Regenerative Medicine, Orthopedics, and combination products. The Information and Communications Technology (ICT) advantages of the neighboring Hsinchu Science Park will be employed to attract participation and investment and produce a biotech industry cluster effect.

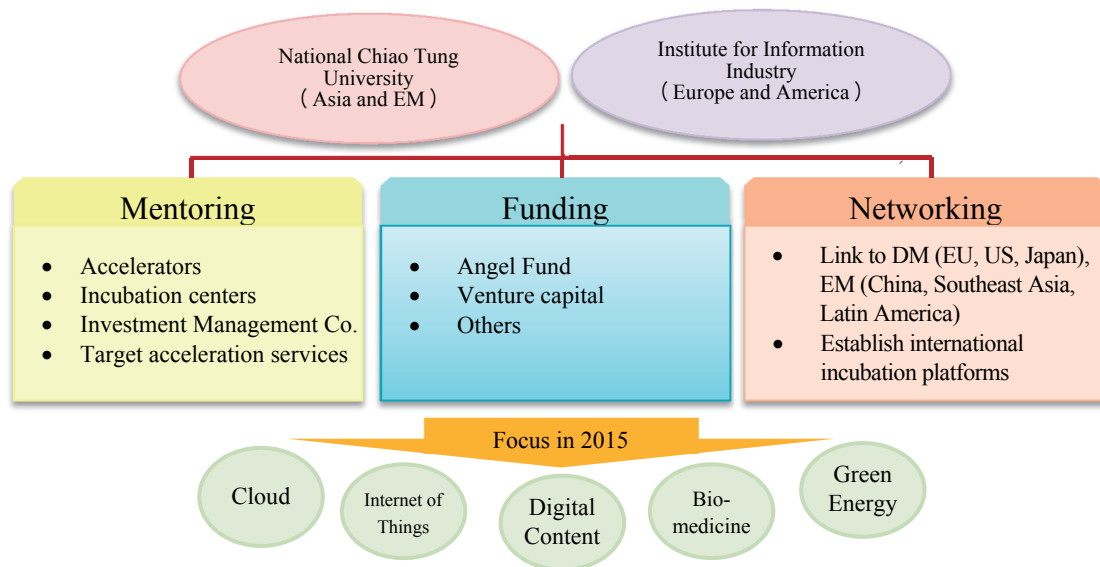
2. Emerging Industries Accelerator Program

From 2013, SMEA launched Emerging Industries Accelerator Program focusing on seven major industries: Cloud Computing, ICT, Biomedicine, Precision Machinery, Green Energy, Cultural and Creative industries, and Logistics. SMEA also established international incubation cooperation

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platforms in the America, Europe, Asia, and emerging market (such as NBIA, EBN, AABI, and AAN). It will select high quality firms with great potential from over 200 incubated firms for the Accelerator Program. The accelerator provides intensified consultation and offer target acceleration service toward medium to large enterprise from mentoring, funding, to networking. The goal of the program is to bring increased investment and help over selected firms join supply chain of the large enterprises, obtain international orders, and facilitate international cooperation. In 2015, five major emerging industries become new strategic focus: Cloud, Internet of Things, Digital Content, Biomedicine, and Green Energy (Figure 10-2-2).

Figure 10-2-2 Emerging Industries Accelerator Program



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2015.

3. Characteristics of Accelerator

In 2012, SMEA actively promoted “Star-Up Taiwan” plan, integrating regional industries and incubation resources, to provide a comprehensive “one-stop shopping” incubation services (including accelerator) (Figure 10-2-2).

There seems to be a considerable amount of confusion about the differences between accelerator and 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. 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. “Star-Up Taiwan” plan

integrates these two programs as follows.

An “Idea Factory” uses a selection mechanism to evaluate the potential of innovative start-up 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 start-up has passed selection, it begins to receive business opportunity-oriented, 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 start-ups, and realizing the ideal of accelerating (1) the transformation of innovative ideas into new technology, (2) the transformation of new technology into new products, and (3) the successful commercialization of those new products.

The wealth of new ideas created in the Idea Factory or in incubation centers can be brought into the Incubation Accelerator for the provision of business-opportunity-oriented, systematic guidance, so that the start-ups in question can grow and become more competitive, eventually being transformed into “Innovation-Oriented Core SMEs.”

III Youth and Female Entrepreneurship Counseling

Female-owned enterprises account for over 36% of all enterprises in Taiwan and generate annual sales of NT\$5.4 trillion. About 99% female-owned enterprises are SMEs. Funding is the most vital resource for youth and female entrepreneurs. Two major sources of low cost loans available to them are:

- (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, go to: <http://sme.moeasmea.gov.tw/SME/main/loan/ARM01.PHP>
- (2) Phoenix Microenterprise 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 start-up 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 some extra basis points (typically around 100 bps including credit guarantee cost per year). In the case of business owners whose households are classed as “households with special circumstances,” or who have been victims of domestic violence, occupational injury or crime, or who belong to a low-income household or a

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household that has been severely affected by a natural disaster, or who have been negatively impacted by trade liberalization, or 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 Ministry of Labor).

1. Youth Entrepreneurship Program

“Youth Entrepreneurship Program” is a three-year program (2014-2016) launched by SMEA through joint efforts of 13 government agencies (Industrial Development Bureau, Department of Industrial Technology, Bureau of Foreign Trade, Department of Commerce, Ministry of Labor, Ministry of Education, etc.). The Program offers the “Youth Entrepreneurship Work Platform,” and covers 4 main areas: start-up dream development, dream building incubation, financing and investment, and R&D and innovation, to promote resource integration and sharing through large business platform, with a concept similar to “Entrepreneur Café” in U.S.

Diverse entrepreneurship activities will be organized by government agencies, universities, incubation centers, and private organizations to fully tap young entrepreneurs and would-be entrepreneurs’ potential for creativity, entrepreneurship, and innovation, and encourage youth who aspire and dream of becoming entrepreneurs to take part in a series of entrepreneurship courses, competitions, lectures, and product presentations. On the funding side, the SMEA will continue to show full support for enterprises, and will promote venture capital and angel funding for startups as well as merge the “Youth Start-Up Loan” with the “Youth Dream-Building Program” into the “Young Entrepreneur Start-Up Loan.”

Budget of the three-year program is NT\$ 2.7 billion. A total of 3,979 star-ups (covering youth entrepreneurship, emerging agriculture, cultural & creative industry, social enterprises, and so on) have been supported by the Program with about 52,000 job created or maintained (plan site: <http://sme.moeasmea.gov.tw/SME/>).

2. U-start: A College Graduate Entrepreneurship Service Program

The Ministry of Education launched “U-start” in 2009 to prepare college graduates to be entrepreneurs through industry-university cooperation mechanism. 2015 College Graduate Entrepreneurship Service Program is divided into 3 industries: Service; Manufacturing; and Personal, Cultural and Recreational, for college graduates.

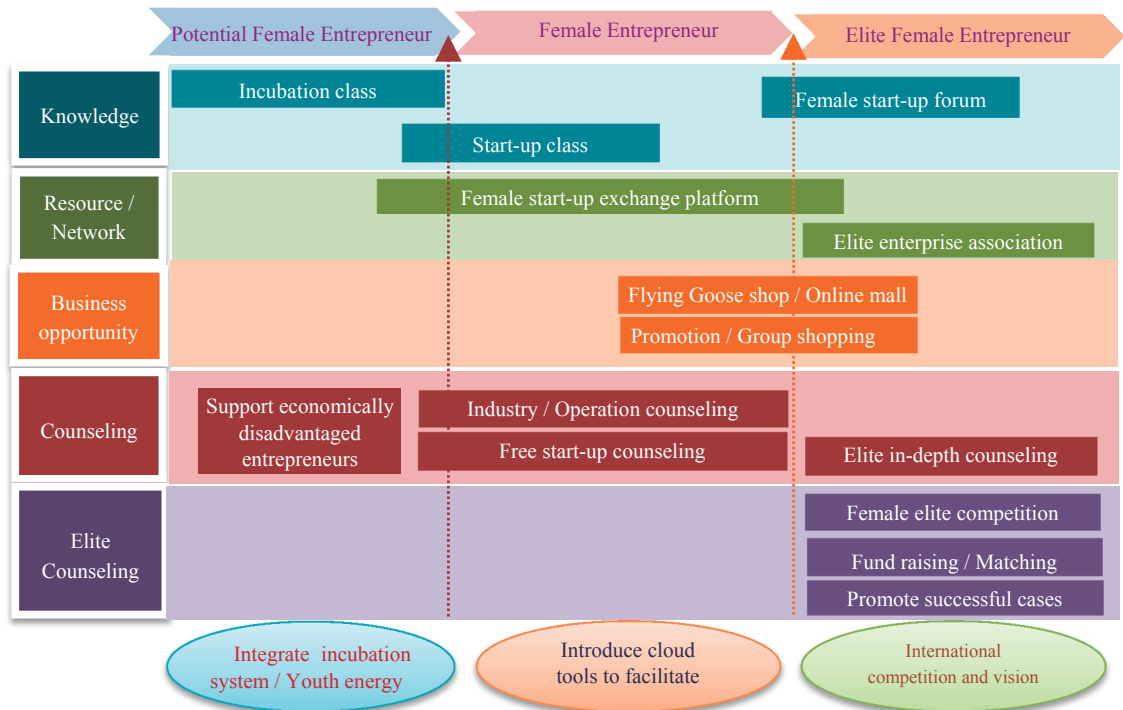
As of April 2015, a total of 599 start-up teams obtained subsidies from the Ministry of Education, of which 330 launched their new businesses (plan site: <http://ustart.moe.edu.tw/>).

3. Female Entrepreneurship Flying Goose Program

In 2015, MOEA’s Flying Goose Program help more female entrepreneurs with incubation services, such as incubation courses, team member type consultation, start-up funding, and so on to increase the success rate of female-owned start-ups, and enhance their operational efficiency and competitiveness. In 2014, a total of 2,100 female entrepreneurs obtained subsidies from the Ministry

of Education, and 138 female owned enterprises received counseling, resulting in investment of NT\$71 million. The implementation measures are shown in Figure 10-3-1 (plan site: <http://www.sysme.org.tw/woman>).

Figure 10-3-1 Female Entrepreneurship Flying Goose Program – Implementation Measures



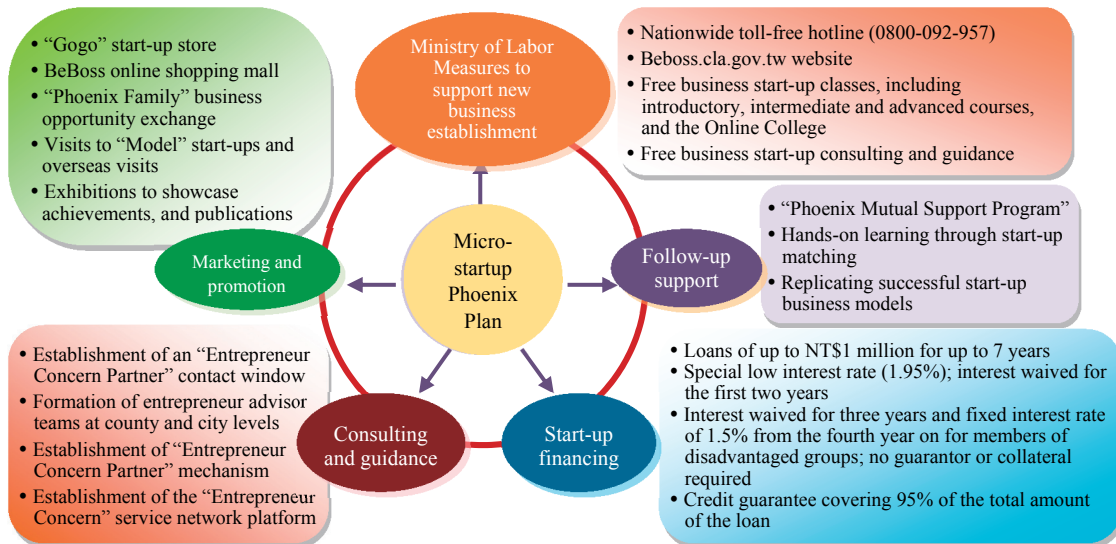
Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2015.

4. Micro-startup Phoenix Plan

The Ministry of Labor launched the Micro-startup Phoenix Plan to boost labor force participation by women (20-65 year old) and the middle-aged (45-65 year old), establish a business environment conducive to new business creation, and help women and the middle-aged to start their own microenterprises, thereby creating new jobs. The Plan also provides entrepreneurs with advisors, and help in securing credit guarantees and loans. As of 2014 (from 2007), a total of 30,006 women received counseling, of whom 13,175 female entrepreneurs launched their new businesses and created a total of 35,557 new jobs. The structure of the Micro-startup Phoenix Plan and the implementation measures are shown in Figure 10-3-2.

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Figure 10-3-2 Micro-startup Phoenix Plan – Implementation Measures



Source: Ministry of Labor, 2015.

CHAPTER 11

Revitalizing Local Industries by Outreach Development and Regional Branding

Over the last few years, the government has been actively working to promote the development of local specialty industries. The Small and Medium Enterprise Administration (SMEA), Ministry of Economic Affairs (MOEA) launched Factory Tourism Guidance Plan and One Town One Product (OTOP) program to offer traditional SMEs an alternative for transformation and bring glamour to all corners of Taiwan. 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 Specialty 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); 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 specialty 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 local industrial clusters and the Local Industry Development Fund Plan; section II focuses on measures to help local industries build marketing capabilities and regional brand development; section III covers measures promoting business matching opportunities and overseas expansion for local SMEs.

I Local Industrial Cluster: Development Strategy

1. Development Strategy for Local Specialty Industry

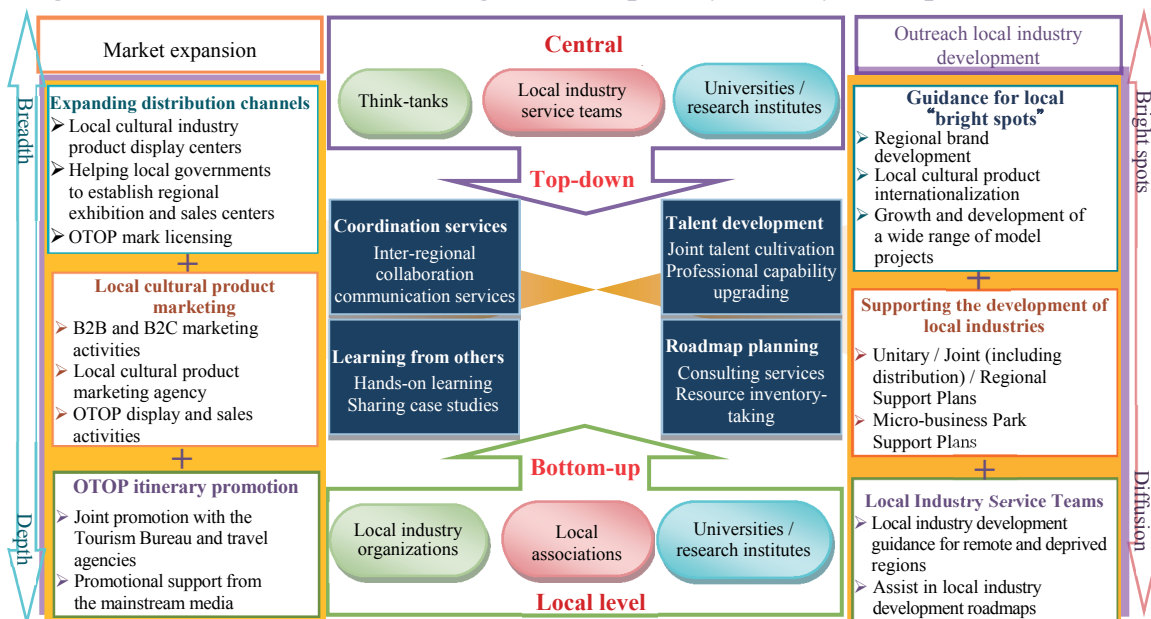
The term “local specialty industries” is normally used to refer to local industry clusters that have evolved in a particular township, rural township, city or community and which are engaged in manufacturing or service provision involving special local products with particular historic or cultural significance, or uniqueness, and making use of local materials, natural resources and traditional handicraft techniques, as well as local labor. “One Town, One Product” (OTOP, <https://mall.otop.tw/>) local specialty industry products can be divided into six broad categories: Processed Food products, Cultural and Handicraft products, Innovative Lifestyle products, Local Cuisine, Leisure-Tourism Service, and Traditional Festivals and Cultural Traditions. The program

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does not simply develop one product, but takes a very holistic approach to the 319 local economies that it has identified for economic aid. Assistance Projects were identified in every locality to make the chosen cottage industry of each village attractive to buyers. Results were measured in project outcomes.

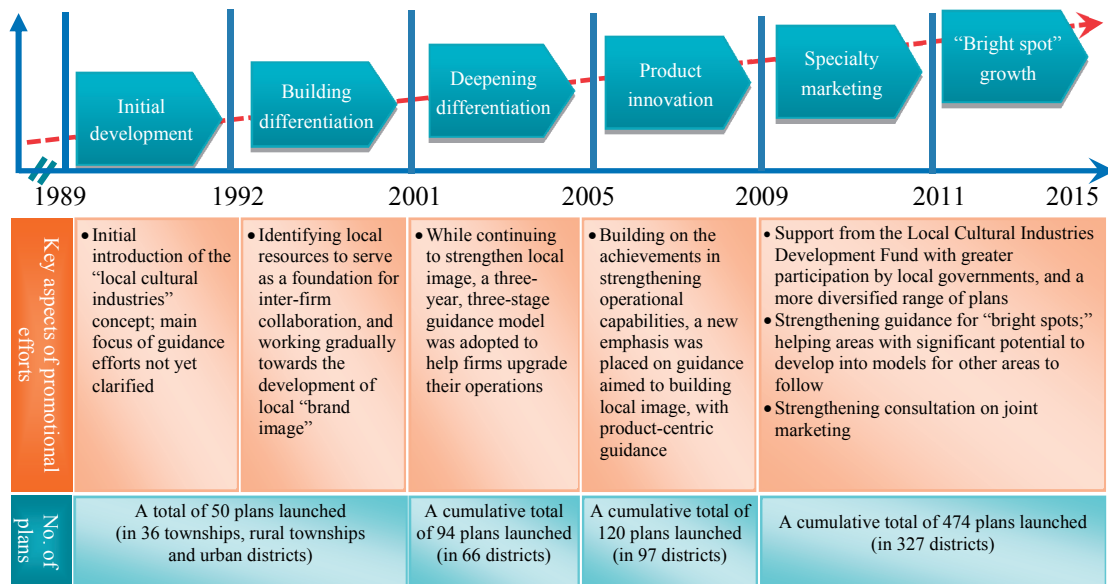
In 2012, SMEA, MOEA began implementation of a new Local Cultural Industry Guidance Plan based on the vision of building competitive Taiwanese local cultural industries, and with the objectives of revitalizing local economies and creating jobs in local communities. The main emphasis in terms of guidance is on helping domestic local cultural industries to 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. The strategy and framework for local specialty industry development are outlined in Figures 11-1-1.

Figure 11-1-1 Framework and Strategies: Local Specialty Industry Development



Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2015.

In 1989, the SMEA, MOEA began to allocate resources to support the development of local specialty industries. Over the years, the support and guidance measures have focused on different aspects of local specialty industry development, from "Initial Development," "Deepening," to "Bright Spot" as shown in Figure 11-1-2.

Figure 11-2 Timeline of the Development of Local Specialty Industries in Taiwan

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2015.

2. Local Industry Development Fund: Promote Local Specialty Industry Development

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 to transform the face of Taiwan's local communities, encouraging people to move back to their home areas from the big cities and from overseas, creating new job opportunities, and imbuing local economic development with new vigor. (plan site: <http://fund.sme.gov.tw/index.php>).

In 2015, a total of NT\$153 million subsidies went to 18 projects (individual funding support projects and integrated funding support projects combined). Since the Fund inception in 2009, government resource has covered 89% of all 327 administrative districts (vs. 17% before 2009).

The 4 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 (note: 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.

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- (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.
- (4) Micro Park funding support projects: the proposals are submitted by central, city and county governments covering micro parks for low pollution local specialty SMEs. The total funding per project is capped at NT\$55.5 million over a three-year period (note: for development project - capped at NT\$50 million over a three-year period). Plans are to be implemented over a period of 3 years.

3. Factory Tourism Plan and Transformation of Traditional SMEs

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. 2014 results were: counseling of 49 cases and 12 million visitors, resulting in investment of NT\$711 million, output value at NT\$407 million and 214 new jobs (plan site: <http://taiwanplace21.org>).

4. Competition Enhancement Plan for Shopping Districts

Department of Commerce, MOEA launched the Competition Enhancement Plan for Shopping Districts in 2012 (for 2012-2015) to strengthen shopping districts through integration of government and local resources. 2015 key action items are: (1) enhance the shopping districts' competitive advantage through integration of trends and technologies; (2) customized counseling; (3) create hot topics and enhance shopping districts' image through integrated specialty marketing strategy. Results as of June 2015 (from January 2014) are: inducing incremental private investment of NT\$1,480 million, financial earning from shopping of NT\$2.02 million, and 35.62 million visitors and/or shoppers.

II Help Local Industries Build Marketing Capabilities and Regional Brands

1. OTOP (One Town One Product) Program

Taiwan OTOP is a guiding program aimed at promoting and developing local specialty 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. Based on its website, 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, etc.

In 2015, Local Specialty Product Marketing Plan of the Taiwan One Town One Product policy implemented several main projects: (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 Tour 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.

2014 results were: 36,000 visitors, incremental business opportunities valued at NT\$270 million, 33 product licenses, matching 6,580 OTOP products on shelf, resulting in sales of NT\$1,010 million (plan site: <http://www.otop.tw/index.html>).

OTOP program is implemented with techniques and integration of innovation that result in new products and services with value-added features and brands that drive growth and development of local special industries. 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 specialty industries gradually exhibit unique and refined new image, presenting both cultural and fashion taste that highlight the touching Taiwan OTOP style.

2. OTOP (One Town One Product) International Marketing Alliance Program

The specialty and recreational tourism industry of each town is upgraded from industry technology and service to industry co-marketing alliance through the counseling of local cultural industry program, so that the characteristics of each town or city will disseminate to whole Taiwan and show at international stage. Theme industries counseling project selected internationally competitive potential of the industry (e.g.: Tea, Ceramics, Glass, Pastry, Bamboo) for counseling, and established OTOP International Marketing Alliance. Content of counseling through network collaboration, features enhanced, access provisioning, marketing and other ways to enhance the theme industrial product characteristics, industry characteristics and marketing of energy to improve the overall industry value.

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2014 results were: promoting tea theme industry, resulting in incremental investment of NT\$152 million, sales of NT\$355 million, and 953 jobs maintained; completing 6 talent cultivation sections for 137 people (plan site: <http://global.otop.tw>).

3. Building Regional Brands: “Bright Spot” and “Town Brands”

In 2009, SMEA, MOEA launched the Local Industry Development Fund Plan, the objective of which was to support the development of local “bright spots,” using the “local government authorities submit applications, and the central government commissions service providers give guidance” model. It was anticipated that the creating of local specialty industry “bright spots” would contribute to the ongoing development of local industries, while also enhancing their overall production value, strengthening the image of local specialty industries and their appeal as tourist attractions, and helping to 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.

III Measures Promoting Business Matching and Exchange for SMEs

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 2014-2015, focusing on business matching and exchange for SMEs.

1. Promoting Collaboration between Taiwan and Japan SMEs

Developments in recent years have created excellent opportunities to further deepen the already strong and longstanding industrial and trade 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. In 2014 SMEA, MOEA initiated the plan for cooperation and exchanges between Taiwan and Japan SMEs, and in particular the establishment of “Taiwan-Japan SME Cooperation and Exchange Platform,” 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.”

Recently, 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; the establishment of Taiwan-Japan SME Cooperation and Exchange Promotion Platform, served as a service window and integrating Taiwan-Japan SME exchange channels; and 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>). Results as of 2014 were: 89 strategic partnerships with expected potential business opportunities amounting to NT\$1.35 billion (plan site: www.technomart.org.tw).

In 2015, main implemented projects include (www.technomart.org.tw):

- (1) Introducing key technologies integrated application development: matching supply / demand between Taiwan and Japan to promote substantive, practical collaboration between Taiwanese and Japanese enterprises.
- (2) Helping government introduce counseling resource and R&D subsidy for innovative technology and innovative service development.
- (3) Organizing Taiwan-Japan SME business matching activities: 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.

2. SME Marketing Value Creation Plan: Integrating Marketing Resources for SMEs

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

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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 to access up-to-date information about the latest SME Marketing Value Creation Plan activities.

In 2015, main projects are: (1) SME Marketing Service Center; (2) integrating overseas marketing alliance and conducting bellwether marketing alliance / cluster counseling; and (3) linking overseas cooperation units, and inviting overseas channels and agents to Taiwan and form business teams for overseas opportunities. 2014 results were: (1) successfully integrating three overseas channels including Malaysia's retailer "Sunshine" and Mexico's channel, and (2) marketing 1,128 products, resulting in sales of NT\$452 million (plan site: <http://www.mkt-sme.pro/>).

3. Global Marketing Plan for SME Linkage to Industry Value Chain

In 2015, SMEA, MOEA launched the Global Marketing Plan for SME Linkage to Industry Value Chain, to offer counseling and help SMEs link to global value chains, enhance value added through innovative products or services, and strengthen design, branding, marketing and service capabilities, and their international competitiveness.

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. 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. 2014 results were: helping 11 service enterprises conduct overseas marketing, resulting in sales of NT\$7.7 million.

5. 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 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. 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 2013-2014 were: (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.

In 2015, main projects are: (1) platform for innovation, R&D and production; (2) integrated platform for overseas marketing; and (3) platform for market intelligence and talent cultivation. Results in the first half of 2015: creating business opportunities valued at US\$1.86 billion (plan site: <http://mvp-plan.cdri.org.tw/index.aspx>).

CHAPTER 12

Other Government Resources to Optimize Business Environment for 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 three sections that will discuss other SME supporting resources and measures not covered in previous chapters. Section I presents statistics regarding the utilization of government resources to assist SMEs, such as government procurement and SME financing. Section II examines the regulatory framework and forward looking programs and plans undertaken by the government. Section III outlines the active role of government agencies in organizing and participating in international affairs and activities of SMEs.

I 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. 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. Assistance to SMEs Totaled NT\$30.45 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 (SMEA), Ministry of Economic Affairs (MOEA), Industrial Development

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Bureau, Bureau of Foreign Trade, Department of Commerce, Department of Industrial Technology and Department of Investment Services, as well as training expenses of the Ministry of Labor.

As for government agencies with a substantial involvement in providing guidance to SMEs, the total amount was NT\$37.62 billion in 2014, of which NT\$27.56 billion was allocated to SMEs, representing 73.27 percent in the final accounts. When viewed by government agencies, the Department of Industrial Technology was ranked first with NT\$11.63 billion in terms of allocation to SMEs, followed by the SMEA, with NT\$6.52 billion. The next highest was the Bureau of Foreign Trade, with NT\$ 4.81 billion (Table 12-1-1).

In 2014, total amount allocated to SMEs in 2014 rose by NT\$1,080 million, or up 4.08 percent from 2013, due to increased amount of NT\$567 million from Department of Industrial Technology, followed by NT\$517 million from SMEA, NT\$277 million from Bureau of Foreign Trade, and NT\$174 million from Department of Commerce; amount allocated to SMEs from Department of Industrial Technology declined by NT\$454 million due to overall budget cut (Table 12-1-1).

Table 12-1-1 MOEA Resources and Funding Allocated to SMEs

Unit: Thousand NT\$; %

Organizer	Annual funding		Fiscal year final accounts		Total amount allocated to SMEs		Increase (decrease) ③=②-①
	2013	2014	2013 ①	2014 ②	2013 ①	2014 ②	
SMEA (incl. SME Development Fund)	6,005,603	6,522,304	6,005,603 (100.00)	6,522,304 (100.00)	6,005,603 (100.00)	6,522,304 (100.00)	516,701
IDB (incl. industrial technology guidance and Industrial Park Development and Management Fund)	5,066,834	6,311,938	3,392,085 (66.95)	3,959,094 (62.72)	3,392,085 (66.95)	3,959,094 (62.72)	567,009
BOFT (incl. overseas marketing and marketing consultation, and Trade Promotion Fund)	5,747,690	6,355,431	4,528,174 (78.78)	4,805,279 (75.61)	4,528,174 (78.78)	4,805,279 (75.61)	277,105
DOC (incl. promotion of trade modernization and commercial technology development)	1,132,522	1,129,881	470,620 (41.56)	644,303 (57.02)	470,620 (41.56)	644,303 (57.02)	173,683
DOIT	18,028,617	17,300,847	12,087,317 (67.05)	11,633,422 (67.24)	12,087,317 (67.05)	11,633,422 (67.24)	-453,895
Total	35,981,266	37,620,401	26,483,799 (73.60)	27,564,402 (73.27)	26,483,799 (73.60)	27,564,402 (73.27)	1,080,603

Note:

1. MOEA stands for Ministry of Economic Affairs; SMEA: Small and Medium Enterprise Administration; IDB: Industrial Development Bureau; BOFT: Bureau of Foreign Trade; DOC: Department of Commerce; DOIT: Department of Industrial Technology.

2. Figures in parentheses represent the percentages in the final accounts.

Source: Various government agencies listed in note above.

In 2014, 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\$2.5 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\$0.38 billion. Therefore, total public and private sector guidance resources available to SMEs totaled NT\$30.45 billion in 2014.

2. Providing SMEs with Special Loans Totaling NT\$2.0 Billion

Eligible SMEs in Taiwan have access to the following six types of special loans: SME Upgrade Guidance Loans, Youth Entrepreneurship Guidance Loans, SME Development Fund Special Loans, Assistance for SMEs to Take Root Special Loans, Indigenous Integrated Development Fund Loans (Indigenous Youth Business Loans, Indigenous Economic Industry Loans, and Indigenous Micro-business Activities Loans), and Micro-startup Phoenix Loans (Ministry of Labor). A total of NT\$1.97 billion in government-funded SMEs loans was made in 2014 (Table 12-1-2).

Table 12-1-2 Special Loans to SMEs Funded by the Government in 2014

Unit: 100 million NTS

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%)	22.96	5.74
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 National Development Fund, Executive Yuan	33.99	3.72
SME Development Fund Special Loan	SMEs	SME Development Fund	30.38	0.00
Assistance for SMEs to Take Root Special Loan	SMEs	earmarked funds from CEPD Long-term Fund	5.36	5.36
Indigenous Integrated Development Fund Loans (Indigenous Youth Business Loans, Indigenous Economic Industry Loans, Indigenous Micro-business Activities Loans included)	Indigenous people	Fully funded by the Council of Indigenous Peoples	4.90	4.90
Micro-startup Phoenix Loan	Women aged 20-65 and people aged 45-65	Loans provided by banks' own funds and interests subsidized by the Ministry of Labor	2.30	0.00
Total			99.89	19.72

Source: Various government agencies.

3. Government Procurement from SMEs Reached NT\$674.4 Billion

According to Government Procurement System statistics on awarded contracts, in 2014 the amount of government procurement totaled NT\$1,136.7 billion, a substantial decrease of NT\$111.1 billion from NT\$1,247.8 billion in 2013; the total amount contracted or subcontracted by SMEs (including all cases over NT\$0.1 million) in government procurement totaled NT\$674.4 billion, an increase of NT\$23.7 billion from NT\$650.7 billion in 2013. Share of government procurement from SMEs in 2014 was 64.36%, up 9.5 percentage points from 54.86% in 2013.

4. National SME Awards from Ministry of Economic Affairs

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Various national awards granted to SMEs offered by MOEA with the purpose of encouraging the upgrade and development of SMEs with sound management, outstanding performance according to various management criteria, as well as sustainable contribution to the society.

“National Award of Outstanding Small and Medium Enterprises” was set up in 1992, through the joint efforts of SMEA and MOEA. The National Award of Outstanding Small and Medium Enterprises were seen as the Academy Awards (Oscars) for SMEs in Taiwan, representing the highest honor of the industries. The management styles of the award-winning SMEs form an important role model in each of the relevant industries. In the past 23 years (as of the end of 2014), 250 SMEs have won the award. Among the award-winning companies, 104 (approximately 42%) are publicly listed companies in Taiwan. Some of the winning companies are leaders in the global market for specific major products they manufacture, the top three in a specific industry, or holders of a significant market share. The winners of the award are widely spread through diversified industries, including Textiles, Food, Construction, Printing, Electronics, Information Technology, Environmental Protection, as well as the Medical & Biotechnology sector. 12 SMEs are expected to win the Award in 2015 (award site:<http://smeaward.moeasmea.gov.tw/moeasmea/wSite/mp?mp=00208>).

“The Rising Star Award” was set up in 1998 and given to SMEs that display excellence in global trading. The selection and awards ceremony is organized by SMEA, MOEA and the awards are officially conferred on SMEs that have their management base rooted domestically and that have enthusiastically developed their international orientation through progressive operations and management. The award recognizes their exceptional efforts in gaining an entrance into the global community and their contribution to development of the country’s economy and trade activities. The award thus encourages more enterprises to strive together to grow the country’s economy and its global trading prospects. In the past 17 years (as of the end of 2014), 248 SMEs have been recognized as “Rising Stars.” These winners have developed a spirit of small but ingenious, strong, and elegant. No matter whether the winning enterprises are in the field of Electronics, Information, Metals, Mechanics, Materials, or Chemicals, they can rely on their uniquely advantageous positions to play an active part in the international market (award site: <http://award.moeasmea.gov.tw/>).

“Taiwan SMEs Innovation Award” was set up in 1993 and given to SMEs that exhibited excellent performances in innovation and research. The purpose of the award is to create a climate promoting innovative R&D to inspire the prosperity of SMEs. In the past 22 years (as of the end of 2014), 742 have won the award. Among the award-winning companies, 54 are publicly listed companies in Taiwan. 30 SMEs are expected to win the Award in 2015 (award site: <http://tsia.moeasmea.gov.tw>).

“Business Startup Awards” is the only SME national award given to start-ups that had been in existence for less than 3 years, and exhibited excellent innovation in technology, product / service, and/or business model. As of the end of 2014, 184 start-ups have won the award. Among the award-winning companies, 13 are publicly listed companies in Taiwan, 67 won other national awards as mentioned above, and 24 have received investment from venture capital and / or been acquired by large enterprises, showing excellent competitive advantage of these award winners (award site: <http://sme.moeasmea.gov.tw/startup/modules/funding/detail/?sId=21>).

In addition, in view of most recent events of food safety, MOEA has set up the award revocation mechanism in 2014 (applied to winners of above mentioned awards who breach the related laws) to maintain the credibility of the national awards.

II Regulatory Framework and Forward Looking Programs and Plans

In recent years, nations worldwide introduced many notable policies measures supporting SMEs' flexibility, innovation and exports to enhance the overall competitiveness of their countries. In Japan, in line with promoting Abenomics' "third arrows growth strategy," the "Framework for Supporting SMEs in Overseas Business" was revised in March 2012, to achieve synergy with JICA (Japan International Cooperation Agency) and other related official development assistance (ODA) agencies to accelerate the overseas development of SMEs. In the U.S., under the framework of the U.S. Reindustrialization, the National Export Initiative (NEI) was launched in 2010 to help meet the U.S. Administration's goal of doubling exports over the next 5 years by working to remove trade barriers abroad, by helping firms - especially small businesses - overcome the hurdles to entering new export markets, by assisting with financing, and in general by pursuing a government-wide approach to export advocacy abroad, among other steps.

Taiwan SMEs have been recognized as the key driving force of the country's economic development over the past half century. Although the SME sector has changed its structure and operations over time, it will maintain its position as the mainstay of Taiwan's economy for years to come with continued government support in business environment and transformation of technology and export strategies.

1. Policy Planning and Operational Mechanism

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 via 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.

The SMEA, MOEA uses two mechanisms: Instant Response and Coordination, and Proactive Planning and Management to remove barriers and bolster competitiveness.

(1) Instant response and coordination

SMEA, MOEA uses multiple channels gathering SMEs' needs - relevant activities involving government officers, opinion leaders, and businessmen, service line, online consulting, special project window, investment and financing forum, local service network and other platforms that link internal and external resources - for quick response and coordination. Instant Response and

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Coordination comprises “information service and policy announcement” and “regulatory examination, adjustment and follow-up.”

(2) Proactive planning and management

SMEA of MOEA actively promoted policy measures for counseling and cultivating SMEs in emerging industries and for effective strategic government resource allocation.

2. Major Legal and Regulatory Projects Relating to SMEs

Major legal and regulatory issues relating to SMEs undertaken in 2014 and the first half of 2015 are listed in Table (12-2-1).

Table 12-2-1 Major Legal and Regulatory Issues Relating to SMEs, 2014-2015

Major projects	Content and action
Amendment / revision	• Revision of the Act for Development of Small and Medium Enterprises.
	• Revision of Standards for Identifying SMEs.
Regulatory adjustment	• Allowed the flexibility to determine face values or no face value; abolished the rule of requiring minimum face values of NT\$10 for shares of companies listed on Taiwan's equity markets.
	• Allowed issuance of gift certificate by third party.
	• Relax the 7-day right to cancel a purchase in Article 19-1 of Consumer Protection Law.
	• Extension of the time limit for foreign blue-collar workers in Taiwan.
	• Revision of the Labor Standards Act on labor protection regarding severance, salary and pension in case of business shutdown, liquidation or bankruptcy.

Source: Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2015.

Followed are summaries of major amendments and revision undertaken in 2014 and the first half of 2015.

(1) Amendments to the Article 35-1, Article 36-2, and Article 36-3 of Act for Development of Small and Medium Enterprises; and revision of Articles 35 and Articles 40 of Act for Development of Small and Medium Enterprises

Article 35

This article is enacted to promote innovation and research and development of small and medium enterprises. A small and medium enterprise, by investing in research and development, may select to get the amount of tax credit up to 30% of the current year profit-seeking enterprise income tax payable between the following two methods. No change of the method is allowed once the choice is made.

- A. Tax credit up to 15% of the research and development expenses, applied to the current year profit-seeking enterprise income tax payable.
- B. Tax credit up to 10% of the research and development expenses, applied to the annual profit-seeking enterprise income tax payable for three years, starting from the current year.

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 35-1

To promote circulation and application of innovation and R&D results, new shares of stock issued to a small and medium enterprise in exchange of its intellectual property rights, by an enterprise that is not listed in the Taiwan Stock Exchange, OTC, or the Emerging Stock Board, shall be excluded from the current year profit-seeking enterprise taxable income of the said small and medium enterprise.

New shares of stock issued to an individual in exchange of her (his) intellectual property rights, by an enterprise that is not listed in the Taiwan Stock Exchange, OTC, or the Emerging Stock Board, shall be excluded from the current year taxable consolidated income of the said individual.

When shares of stock mentioned in preceding Paragraph 1 and 2 are transferred through an actual transaction, stock gift, or inheritance, the total stock value shall be included in the current year taxable income of the recipient(s), calculated based on the actual transaction price or the fair market value of the stock at the time of the transfer, minus the related expenses or cost, incurred but not recognized yet, in obtaining the stock.

The above mentioned enterprise that issues new shares of stock to obtain intellectual property rights should report to the local tax authority within 30 days from the day after the date of the stock transfer. The said enterprise is subject to a 20% fine based on the actual transfer amount and required to resubmit the report with voucher(s) in required format if it fails to meet the reporting deadline, to report the fact, or to report with voucher(s) in required format.

In case the said small and medium enterprise or the individual who receive the shares of stock through intellectual property transfer is unable to provide the cost basis of the transfer for income calculation, a default 30% of the transaction price shall be applied to the cost basis of obtaining the stock.

Article 36-2

This article is enacted to respond to changes in the international economic situation and promote the willingness of domestic small and medium enterprises to invest and raise the domestic employment rate. During the period when the Composite Leading Indicators (MEI) are above certain levels, if a newly created small and medium enterprise or an existing small and medium enterprise that is in capital expansion commits certain amount of capital, hires certain number of additional people and increases its aggregate gross salary payments, it can deduct up to 130% of the annual gross salary payments to the additional domestic hires from its current year taxable income.

During the applicable period of this Article, if the said small and medium enterprise fails to meet the preceding key requirement in a year, it shall calculate its profit-seeking enterprise income and income tax payable based on the provisions of the Income Tax Act, starting from that year.

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Article 36-3

In case a small and medium enterprise is qualified for the tax benefit of the same nature in the Act for Industrial Innovation, it can only select one Act for this tax benefit.

Article 40

This Statute shall come into force from the date of promulgation. However, Article 35, Article 35-1, and Article 36-2 come into force for 10 years from May 20, 2014.

This article is enacted to respond to changes in the international economic situation and promote the willingness of domestic small and medium enterprises to invest and raise the domestic employment rate.

During the period when the Composite Leading Indicators (MEI) are above certain levels, if a newly created small and medium enterprise or an existing small and medium enterprise that is in capital expansion commits certain amount of capital, hires certain number of additional people and increases its aggregate gross salary payments, it can deduct up to 130% of the annual gross salary payments to the additional domestic hires from its current year taxable income.

During the period when the Composite Leading Indicators (MEI) are above certain levels, if a small and medium enterprise raises the average salary payments to junior employees, it can deduct up to 130% of the additional annual salary payments to the current domestic hires due to the salary raise from its current year taxable income. However, the benefit of deductible expense from the annual gross salary payments to the additional domestic hires, which is already addressed in the rule of the preceding Paragraph, shall not be applied here and double counted.

During the applicable period of this Article, if the said small and medium enterprise fails to meet the key requirement of the preceding Paragraph1 or the key requirement of the preceding Paragraph 2 in a year, it shall calculate its profit-seeking enterprise income and income tax payable based on the provisions of the Income Tax Act, starting from that year.

(2) Revisions to the Article 2 and Article 4 of Standards for Identifying SMEs of Act for Development of Small and Medium Enterprises

Article 2

- A. The enterprise is an enterprise in the manufacturing, construction, mining or quarrying industry with either paid-in capital of NT\$80 million or less, or less than 200 regular employees. This revision came into force from March 30, 2015.
- B. The enterprise is an enterprise in the industry other than any of those mentioned in the Sub-paragraph immediately above and either had its sales revenue of NT\$100 million or less in the previous year, or has less than 100 regular employees. This revision came into force from March 30, 2015.

Article 4

To match the revision of Article2, subparagraph 3 of paragraph1 in Article 4 is also revised as follows:

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\$100 million or less. This revision came into force from March 30, 2015.

(3) Removal of the rule that requires minimum face values of NT\$10 for shares of companies listed on Taiwan's equity markets

After the face value rule is removed, listed or would-be listed companies on the main board, the over-the-counter market and the emerging market will be allowed the flexibility to determine face values or no face value based on their own needs. Many listed companies whose share prices have fallen below NT\$10 have urged financial authorities to get rid of the requirement because it hurts them when they want to raise funds. The move to abolish the rule will help internationalize Taiwan's equity markets and bring them in line with regional markets that have no face-value restrictions.

(4) Allowing issuance of gift certificate by third party (Consumer Protection Law)

Coming into force from October 16, 2014.

(5) Relaxing the 7-day right to cancel a purchase in Article 19-1 of Consumer Protection Law

Coming into force from June 2, 2015.

(6) Extension of the time limit for foreign blue-collar workers in Taiwan (Labor Standards Act)

Extended to maximum 15 years (from 12 years) and coming into force from April 22, 2015.

3. Regulatory Adjustments

MOEA will continue to actively promote SME regulatory examination and analysis to reduce regulations that are unfair or improper, enhance industrial regulation coordination and service network, integrate inputs from SMEs, and integrate regulatory adjustment platform to improve effectiveness of regulatory examination.

III 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), Organization for Economic Cooperation and Development (OECD), 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

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of a more international outlook and bilateral exchange. Followed are a list of important events Taiwan hosted or participated in 2014 and 2015.

1. Hosting or Participating SME International Conference and Events

(1) 38th APEC Small and Medium Enterprises Working Group, SMEWG (March 2014)

Taiwan hosted the event on March 24-27 in the Splendor Hotel in Taichung.

“APEC SMEs’ Participation in Global Production Chains,” was co-sponsored by the United States, Australia, and Taiwan. The Forum offers sessions with over 50 well-known speakers providing SMEs valuable advice and understanding of participation in global production chains, particularly in 5 major industries: Agriculture, Food Processing, Auto Parts, Electronics and Handicrafts, utilized a format of symposium style discussions and structured networking sessions in order to generate visionary commentary.

“APEC High Level Policy Dialogue on Resilient SMEs for Better Global Supply Chains:” in order to strengthen the effectiveness of disaster resiliency improvement and to secure supply chain connectivity of SMEs, the multi-year project on “Improving Natural Disaster Resilience of APEC SMEs to Facilitate Trade and Investment” will organize several training workshops and a high-level policy dialogue to raise awareness of disaster preemptive mechanisms among APEC regions. Additionally, during the above events, Taiwan showcased Policy Framework Models (PFMs) and Business Continuity Plans (BCPs) achieved in two years (2012-2013). Furthermore, this project generated a Focal Point Network at the end of the meeting, which would integrate related experts from all sectors to practice this project.

“APEC Accelerator Network (AAN) Forum” was established in March 2014 and has 44 members from 14 APEC economies. The Forum offers mentoring and training sessions with well-known speakers providing start-ups valuable advice and understanding of global business trends. In 2013, Taiwan submitted a proposal for an APEC Accelerator Network Initiative (AAN) to APEC. The proposal won wide acceptance among the economic leaders and ministers of APEC’s member economies, and was subsequently formally adopted. As part of the implementation of the AAN, on March 25, 2014 an APEC Accelerator Network Forum was held in Taichung. The Forum brought together representatives of leading accelerators from throughout the Asia-Pacific region to build consensus regarding resource linkage; Taiwan is continuing to promote accelerator collaboration with Europe, North America, the Asia Pacific region, and emerging markets in other parts of the world. The SMEA, MOEA has established a Taiwan - U.S. Accelerator Collaboration Platform; Taiwan and the U.S. will be working together to promote the growth of the APEC Accelerator Network, helping start-ups to build up the capabilities needed to develop overseas markets

“38th APEC Small and Medium Enterprises Working Group, SMEWG:” under the theme “Innovation and Sustainability,” Ministers exchanged views and shared experience to increase innovation capacities of SMEs, improve the policy environment for SMEs’ innovation, promote SMEs’ growth through innovation, and help SMEs participate in global production chains.

(2) 21st APEC Small and Medium Enterprises Ministerial Meeting (September 2014)

On September 5, 2014, the 21st APEC Small and Medium Enterprises Ministerial Meeting was held in Nanjing, China under the theme “Innovation and Sustainability.” The Ministers exchanged views and shared experience to increase innovation capacities of SMEs, improve the policy environment for SMEs’ innovation and promote SMEs’ growth through innovation. The Ministers endorsed the Joint Ministerial Statement and the Nanjing Declaration on Promoting SME Innovative Development.

Taiwan has been able to make numerous important contributions towards the achievement of APEC goals. During the Ministerial Meeting, Vice Minister Cho gave two addresses, on the topics of “Increasing innovation capacities of SMEs through APEC Accelerator Network” and “Business continuity plans for better global supply chains,” which outlined the results achieved by Taiwan in APEC-related work in the SME sphere. With Taiwan taking a leading role, the APEC Accelerator Network was formally established during the APEC Accelerator Network Forum held on March 25, 2014. So far, 14 APEC member economies have expressed interest in the APEC Accelerator Network initiative, and 44 accelerators have joined the Network to work together to help create a better business start-up environment for the Asia Pacific region.

(3) 23rd European Business & Innovation Center Network, EBN (June 2014)

SMEA, MOEA participated the event on June 25-27 in Spain. Under the theme “Strengthen the youth, accelerate entrepreneurship, and change life”. The Ministers exchanged views and shared experience to address youth unemployment problem, particularly in EU.

(4) 2014 International Entrepreneurship and Innovation Forum (November 2014)

Taiwan hosted the forum based on the theme of global entrepreneurship and environment for start-ups. Experts have been invited from the Global Entrepreneurship Monitor (GEM), The International Council for Small Businesses (ICSB), Asia Council for Small Businesses (ACSB) and other international bodies to share international entrepreneurship trends, analyze global economic development factors, and create a stimulating environment for global entrepreneurship.

(5) 2014 Global Entrepreneurship Week (November 17-23, 2014)

Taiwan hosted the Global Entrepreneurship Week event, in order to enhance Taiwan’s entrepreneurial power under the theme “YES Taiwan.”

(6) 2015 APEC Global Challenge (2015)

The SMEA, MOEA, Intel, and Siemens officially kicked off the 2015 APEC Accelerator Network Summit & Global Challenge on April 12. Participating entrepreneurial teams received counseling from international experts, potential for financial investment, and a chance for media exposure. The event also connected Taiwan’s innovative energy with the global entrepreneurial ecosystem, highlighting island nation’s thriving and abundant creative energy, under the themes “Interactive Learning,” “Immersive Collaboration,” “Smart Mobility,” and “Smart Home.”

Minister Deng stated that, due to the fruitful results of the past two years’ challenges, APEC members actively expressed a desire to host the Challenge with Taiwan overseas. As a result, the Challenge has been expanded to a global scale. A series of meetings will be convened in the United

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States on June 8 in Atlanta, and in the Philippines in September to warm up for the global finals that will be held on October 19 and 20 and to recruit more excellent entrepreneurial teams to join. Mr. Yeh, the Director General of the Small and Medium Enterprise Administration, pointed out that the APEC accelerator network set up by Taiwan already has 15 member countries and 47 business incubators and accelerators. The network includes well known American accelerators such as 500 Startups, Mass Challenge, Plug & Play, and many more. Moreover, in the past Challenges hosted by APEC, Taiwan has had many successful cases that promoted APEC accelerators and the global entrepreneurship challenge, establishing the competition as a springboard for startup companies to receive investment and enter the global market. Taiwan's startup team Gogolook was purchased by Naver, the parent company of Line, in 2013 for US\$18 million; the winner of the 2014 challenge, ServTech, also won first place for the Internet, Mobile, and Software Computing Category in the Intel Entrepreneurship Program in November this year in Silicon Valley. ServTech became the first team from Taiwan to have won first place in the Intel Entrepreneurship Program. AirSig also received a US\$ 2 million investment from Hon Hai after the challenge, and set a new record for the value of a startup company in Taiwan.

2. Promoting SME International Exchange and Collaboration

(1) International exchange and collaboration

SMEA of MOEA signed Taiwan SME Memorandum of Cooperation with India and with El Salvador; participated in bilateral annual ministerial meetings with India, Philippines and so on, and promoted plurilateral and multilateral cooperation, such as TPP, WTO, and between Taiwan and New Zealand.

(2) Promoting global collaboration in innovation and start-up

Siemens Taiwan signed a Letter of Intent with the Ministry of Economic Affairs (MOEA) and Intel to jointly promote entrepreneurship and innovation, beginning with the 2014 APEC Challenge to be held in Taipei in August 2014. Industrial Technology Research Institute (ITRI) signed Memorandum of Cooperation with Wilson Sonsini Goodrich & Rosati (WSGR) to jointly promote cross-border incubation, and cooperation in R&D, market development, and marketing resource connection for speedy overseas expansion.

(3) APEC and OECD

APEC and OECD are two of important international organizations that Taiwan has been participating actively to foster the commitment. For enhancing the collaboration and interaction among APEC economies, the SMEA has been proposing initiatives to APEC, hosting APEC symposiums and related activities. Besides, it has launched official delegation to annual APEC Ministerial Meeting and related meetings, and SME delegation for APEC SME Forum and exhibition. The SMEA has been joining the OECD related meetings and activities, such as the 2nd SME Ministerial Meeting, the automobile case study of Enhancing the Role of SMEs in Global Value Chains. For promoting international SME collaboration, the SMEA attempts to propose bilateral initiatives and invite the foreign SME-related officials to share policymaking and development experiences for SMEs. The SMEA has also been participating in the activities of non-governmental organizations, for instance, the ICSB, ISBC, APO, and other international conferences for SMEs.

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.

Revised in accordance with the Presidential Decree dated June 4, 2014.

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.

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Article 3

The term “competent authority” used in this Act shall be the Ministry of Economic Affairs at the central government level, the provincial (municipal) government at the province (municipality) level, and the county (city) government at the county (city) level.

Where any of the matters set forth in this Act involves the functional duties of an authority in charge of a particular enterprise, the competent authority referred to in this Act shall handle such matters in coordination with the said authority in charge of such enterprise.

For enforcement of this Act, government at various levels shall set up or designate a government agency to provide assistance and guidance.

Article 4

For achieving the objectives of this Act, the competent authority concerned shall take appropriate assisting or encouraging measures in respect of the following:

1. Market research and development;
2. Furtherance of rationalization of business operations;
3. Promotion of mutual cooperation;
4. Acquisition and securing of production factors and technology;
5. Education and training of competent personnel; and
6. Other matters relating to the establishment or sound development of small and medium enterprises.

In formulating the policy, acts and regulations, and measures in the preceding paragraph, the competent authority concerned shall aim the contents at the furtherance of improvement and development of the business operations of small-scaled enterprises without unfair treatment in respect of financial and taxation systems and other related matters.

The central competent authority shall publish a white paper, at the end of each fiscal year, on small and medium enterprises given the enforcement status, the review results and the prospective development of the provisions of the preceding two paragraphs.

Article 5

For furthering small and medium enterprises to conduct market research and development activities, the assistance and guidance provided by the competent authority to small and medium enterprises shall be emphasized on the provision of information services, the creation of exclusive brands for their own products, arrangement of marketing channels and/or development of potential market.

Article 6

For furthering small and medium enterprises to rationalize their business operations, the assistance and

guidance provided by the competent authority shall be emphasized on the following:

1. Research and development and development of new products;
2. Modernization and renovation of production facilities and improvement of production technology;
3. Improvement of the methods of operational management;
4. Expansion of market and acquisition of necessary information;
5. Conversion and adjustment of the field of business; and
6. Acquisition of resources and technical know-how for business operation.

Article 7

For encouraging mutual cooperation between small and medium enterprises, the assistance and guidance to be provided by the competent authority shall be emphasized on the following:

1. Vertical 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. Establishment 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 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

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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;
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 handling 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.

Article 23

In order to prevent small and medium enterprises from involvement in domino effect resulted from the

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close-down of their respective related enterprises, the competent authority may coordinate and assist industrial associations to establish, either separately or jointly, mutual guaranty fund(s) for prevention of chain close-down of small and medium enterprises so as to provide credit guarantee in respect of special financing facilities for the small and medium enterprises having financial or operational difficulties in such cases.

The small and medium enterprise development fund may, when necessary, contribute to such mutual guaranty fund(s) at the initial stage upon its (their) establishment.

Chapter 3 Operation Management, Market and Product Development

Article 24

The competent authority may establish or assist the private sector to establish a small and medium enterprise guidance and service center, and may cooperate with relevant public and private institutions to provide small and medium enterprises with the following guidance and services:

1. Business operation diagnosis;
2. Improvement of the marketing and production technology, operation management and financial structure of small and medium enterprises;
3. Training of management or technical personnel of small and medium enterprises;
4. Production and market information and consultation services; and
5. Other relevant businesses activities.

Article 24-1

The competent authority may set up funds to assist in the development of local culture industries for local economic prosperity.

Article 25

For improvement of the operating efficiency and reinforcement of the competitiveness of small and medium enterprises, the competent authority may assist small and medium enterprises to jointly engage in activities such as production, marketing, procurement, transportation, cooperation in technology development, and research and development.

Article 26

The central competent authority may work jointly with relevant institutions, universities and colleges in the training of professionals in the fields of operation diagnosis and business administration so as to provide small and medium enterprises with guidance and services.

Article 27

The competent authorities may provide necessary assistance to various industrial associations or industrial and commercial organizations which have a dedicated service unit responsible for providing services to small and medium enterprises.

Article 28

For encouraging small and medium enterprises to manufacture quality and/or high value-added products or service, and to expand export market, the competent authority shall provide, in conjunction with institutions concerned, technical and marketing guidance and assist medium and small enterprises to participate in overseas exhibition, acquire market information, make joint advertising activities, trademark registration, patent application, or establish joint distribution warehouses abroad.

Where the plan of a small or medium enterprise for manufacturing quality and/or high value-added products or service planning has been evaluated and approved by the competent authority in conjunction with authorities concerned, the said small or medium enterprise may apply to the small and medium enterprise development fund to subsidize the expenses incurred in product and market developments.

Article 29

For upgrading the level of production skill of small and medium enterprises, the competent authority may entrust technical service institutions or retain technical experts to make research and development for new products or to acquire advanced technology for providing relevant guidance and services to various industries.

For transfer of new products or advanced technology, the competent authority may collect reasonable charges for amortization of costs incurred; If necessary, these charges may also be partly subsidized by the small and medium enterprise development fund.

Article 30

In order to assist small and medium enterprises for research and development, the competent authority may cooperate with appropriate technology research institutes in the establishment of institutes or places for exclusive use by small and medium enterprise conducting research , testing and development of technical skill and/or new products.

Small and medium enterprises may apply for use, by paying necessary charges, the equipment and facilities of the institutes or places set forth in the preceding to conduct experiment and research activities.

Article 31

The competent authority may, when it deems necessary, negotiate with public or private enterprises for appointment of their respective technical personnel, and support and assistance system to provide guidance in the fields of production skill or service know-how as required by small and medium enterprises.

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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

This article is enacted to promote innovation and research and development of small and medium enterprises. A small and medium enterprise, by investing in research and development, may select to get the amount of tax credit up to 30% of the current year income tax payable between the following two methods. No change of the method is allowed once the choice is made.

1. Tax credit up to 15% of the research and development expenses, applied to the current year income tax payable.
2. Tax credit up to 10% of the research and development expenses, applied to the annual income tax payable for three years, starting from the current year.

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.

The standards referred to the tax credit from investment in this Article, regarding scope, application deadline, application procedure, approving authority, applicable period, tax credit rate and other related matters shall be stipulated by the Executive Yuan.

Article 35-1

To promote distribution and application of innovation and R&D results, new shares of stock issued to a small and medium enterprise in exchange of its intellectual property transfer, by an enterprise that is not listed in the Taiwan Stock Exchange, OTC, or the emerging market, shall be excluded from the current year taxable income of the said small and medium enterprise as a profit seeking enterprise.

New shares of stock issued to an individual in exchange of her (his) intellectual property rights, by

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an enterprise that is not listed in the Taiwan Stock Exchange, OTC, or the emerging market, shall be excluded from the current year taxable comprehensive income of the said individual.

When shares of stock mentioned above are transferred through an actual transaction, stock gift, or inheritance, the total stock value shall be included in the current year taxable income of the recipient(s), calculated based on the actual transaction price or the fair market value of the stock at the time of the transfer, minus the related expenses or cost, incurred but not recognized yet, in obtaining the stock.

The above mentioned enterprise that issues new shares of stock to obtain intellectual property rights should report to the local tax authority within 30 days from the day after the date of the stock transfer. The said enterprise is subject to a 20% fine based on the actual transfer amount and required to resubmit the report with voucher(s) in required format if it fail to a) meet the deadline, b) report correctly, or c) report with voucher(s) in required format.

In case the said small and medium enterprise or the individual who receive the shares of stock through intellectual property transfer is unable to provide the cost basis of the transfer, a default 30% of the transaction price shall be applied to the cost basis of obtaining the stock.

Article 36

A small and medium-sized enterprise may retain and withhold from distributing a surplus earning in an amount not exceeding double the amount of its paid-in capital. In case the retained and undistributed earnings exceed the aforesaid limit, any additional surplus earning retained in each year thereafter shall be free from the restriction stipulated in the Income Tax Act after as profit seeking enterprise income tax at the rate of 10% has been surcharged.

The retain and withhold from distributing a surplus earning after 1998 until then, shall obey the Income Tax Acts, and not apply to the preceding paragraph.

Article 36-1

Small and medium enterprises development companies may raise the preparation to investment loss, under 20% of the investment amount, so as to compensate for actual loss. If there is no actual loss situation within 5 years, they shall turn the raising preparation to be the benefit of the 5th year.

When corporations calculate the clearing accounts income due to cancellation, rescission, revocation, merger, or transference with Article 75, of the Income Tax Act, the accumulate remaining amount from the investment loss preparation within the preceding paragraph, shall turn to be the benefit of the same year.

Article 36-2

This article is enacted to respond to changes in the international economic situation and promote the willingness of domestic small and medium enterprises to invest and raise the domestic employment rate. During the period when the Economic Sentiment Index (ESI) is above a certain level, if a newly created small and medium enterprise or an existing small and medium enterprise that is in capital expansion

commits certain amount of capital, hires certain number of additional people and increases its aggregate gross salary payments, it can deduct up to 130% of the annual gross salary payments to the additional domestic hires from its current year taxable income.

During the applicable period of this Article, the said small and medium enterprise will not be qualified for the benefit of the above deductible if it fails to meet the preceding key requirement.

The standards referred to the first paragraph of this Article, regarding level of the Economic Sentiment Index (ESI), applicable period, investment amount, number and types of additional people hired, aggregate gross salary payments, approving authority, application deadline, application procedure, and other related matters shall be stipulated by the Executive Yuan.

Article 36-3

In case a small and medium enterprise is qualified for the tax benefit of the same nature in this article and in other articles related to industrial innovation, it can only select one article for the tax benefit.

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. However, Article 35, Article 35-1, and Article 36-2 come into force for 10 years from May 20, 2014.

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.

Revision approved by Executive Yuan Order Yuan Tai Jing #1040008378 on March 4, 2015.

Revision promulgated by Ministry of Economic Affairs Order Jing Chi Tzu #10404601530 on March 30, 2015.

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 either paid-in capital of NT\$80 million or less, or less than 200 regular employees.
2. The enterprise is an enterprise in the industry other than any of those mentioned in the Sub-paragraph immediately above and either had its sales revenue of NT\$100 million or less in the previous year, or has less than 100 regular employees.

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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\$100 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 enterprise 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

The Standards shall come into effect on the date of promulgation.

APPENDIX C

SME Statistics by Industry

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Table C-1 The Number of Enterprises by Industry and Enterprise Size, 2012-2014

Unit: Enterprises; %

Industries	Size	Total	SMEs		Large enterprises	
			Share		Share	
Total	2012	1,337,890	1,306,729	97.67	31,161	2.33
	2013	1,363,393	1,331,182	97.64	32,211	2.36
	2014	1,386,128	1,353,049	97.61	33,079	2.39
Agriculture, Forestry, Fishing and Animal Husbandry	2012	11,868	11,817	99.57	51	0.43
	2013	12,088	12,027	99.50	61	0.50
	2014	11,638	11,568	99.40	70	0.60
Mining and Quarrying	2012	1,226	1,203	98.12	23	1.88
	2013	1,192	1,166	97.82	26	2.18
	2014	1,177	1,151	97.79	26	2.21
Manufacturing	2012	142,918	137,436	96.16	5,482	3.84
	2013	144,760	139,099	96.09	5,661	3.91
	2014	147,404	141,817	96.21	5,587	3.79
Electricity and Gas Supply	2012	451	320	70.95	131	29.05
	2013	553	423	76.49	130	23.51
	2014	680	546	80.29	134	19.71
Water Supply and Remediation Services	2012	7,426	7,127	95.97	299	4.03
	2013	7,506	7,211	96.07	295	3.93
	2014	7,480	7,155	95.66	325	4.34
Construction	2012	104,394	103,130	98.79	1,264	1.21
	2013	108,779	107,498	98.82	1,281	1.18
	2014	113,400	112,164	98.91	1,236	1.09
Wholesale and Retail Trade	2012	678,054	661,201	97.51	16,853	2.49
	2013	683,983	666,857	97.50	17,126	2.50
	2014	686,183	668,428	97.41	17,755	2.59
Transportation and Storage	2012	31,707	30,662	96.70	1,045	3.30
	2013	31,345	30,283	96.61	1,062	3.39
	2014	31,399	30,281	96.44	1,118	3.56
Accommodation and Food Services	2012	126,894	126,499	99.69	395	0.31
	2013	131,083	130,653	99.67	430	0.33
	2014	134,809	134,326	99.64	483	0.36

Table C-1 The Number of Enterprises by Industry and Enterprise Size, 2012-2014
(Continued)

Unit: Enterprises; %

Industries	Size	Total	SMEs		Large enterprises	
			Share		Share	
Information and Communication	2012	17,526	16,823	95.99	703	4.01
	2013	18,521	17,794	96.07	727	3.93
	2014	18,882	18,141	96.08	741	3.92
Finance and Insurance	2012	16,410	14,165	86.32	2,245	13.68
	2013	17,381	14,947	86.00	2,434	14.00
	2014	17,989	15,490	86.11	2,499	13.89
Real Estate	2012	28,460	27,180	95.50	1,280	4.50
	2013	31,499	29,986	95.20	1,513	4.80
	2014	34,318	32,766	95.48	1,552	4.52
Professional, Scientific and Technical Services	2012	40,214	39,549	98.35	665	1.65
	2013	41,881	41,167	98.30	714	1.70
	2014	43,675	42,932	98.30	743	1.70
Support Services	2012	29,968	29,563	98.65	405	1.35
	2013	29,039	28,607	98.51	432	1.49
	2014	28,857	28,376	98.33	481	1.67
Education	2012	1,432	1,421	99.23	11	0.77
	2013	1,630	1,622	99.51	8	0.49
	2014	1,866	1,852	99.25	14	0.75
Human Health and Social Work Services	2012	417	407	97.60	10	2.40
	2013	616	604	98.05	12	1.95
	2014	683	667	97.66	16	2.34
Arts, Entertainment and Recreation	2012	22,511	22,407	99.54	104	0.46
	2013	23,899	23,791	99.55	108	0.45
	2014	26,685	26,572	99.58	113	0.42
Other Services	2012	76,014	75,819	99.74	195	0.26
	2013	77,638	77,447	99.75	191	0.25
	2014	79,003	78,817	99.76	186	0.24

Note:

1. The term "SME" 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 above and had its sales revenue of NT\$100 million or less in the previous year, according to the Standards for Identifying Small and Medium Enterprises.
2. The industries are classified according to the 9th revision of Industry Classification Standard by DGBAS.
3. Representative office of foreign company in the form of organization is excluded in the data since 2014.

Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2012-2014.

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Table C-2 Total Sales Value by Industry and Enterprise Size, 2012-2014

Unit: Million NT\$, %

Industries	Size	Total	SMEs		Large enterprises	
				Share		Share
Total	2012	37,649,075	11,381,770	30.23	26,267,306	69.77
	2013	38,460,894	11,321,842	29.44	27,139,052	70.56
	2014	40,240,506	11,839,868	29.42	28,400,638	70.58
Agriculture, Forestry, Fishing and Animal Husbandry	2012	37,067	19,966	53.87	17,101	46.13
	2013	40,262	21,881	54.35	18,381	45.65
	2014	47,134	23,508	49.87	23,627	50.13
Mining and Quarrying	2012	44,830	35,402	78.97	9,428	21.03
	2013	47,718	37,180	77.92	10,538	22.08
	2014	48,033	37,712	78.51	10,321	21.49
Manufacturing	2012	14,002,782	4,375,488	31.25	9,627,294	68.75
	2013	14,368,660	4,074,252	28.36	10,294,408	71.64
	2014	15,054,553	4,323,807	28.72	10,730,746	71.28
Electricity and Gas Supply	2012	895,151	3,692	0.41	891,458	99.59
	2013	944,235	4,281	0.45	939,954	99.55
	2014	1,016,077	4,557	0.45	1,011,519	99.55
Water Supply and Remediation Services	2012	181,289	55,632	30.69	125,658	69.31
	2013	182,086	54,501	29.93	127,586	70.07
	2014	187,655	55,979	29.83	131,676	70.17
Construction	2012	2,088,385	1,235,537	59.16	852,848	40.84
	2013	2,040,944	1,340,692	65.69	700,251	34.31
	2014	2,162,496	1,411,725	65.28	750,770	34.72
Wholesale and Retail Trade	2012	13,439,023	4,102,447	30.53	9,336,576	69.47
	2013	13,545,522	4,151,590	30.65	9,393,932	69.35
	2014	14,154,603	4,266,050	30.14	9,888,553	69.86
Transportation and Storage	2012	1,049,942	262,656	25.02	787,285	74.98
	2013	1,077,132	262,169	24.34	814,963	75.66
	2014	1,098,184	269,873	24.57	828,311	75.43
Accommodation and Food Services	2012	460,649	321,381	69.77	139,267	30.23
	2013	492,075	342,378	69.58	149,697	30.42
	2014	540,748	371,052	68.62	169,696	31.38

Table C-2 Total Sales Value by Industry and Enterprise Size, 2012-2014 (Continued)

Unit: Million NT\$, %

Industries \ Size		Total	SMEs	Share	Large enterprises	Share
Information and Communication	2012	961,866	105,364	10.95	856,503	89.05
	2013	1,016,833	109,473	10.77	907,360	89.23
	2014	957,248	113,244	11.83	844,004	88.17
Finance and Insurance	2012	2,235,043	186,220	8.33	2,048,823	91.67
	2013	2,179,157	195,397	8.97	1,983,760	91.03
	2014	2,387,871	207,354	8.68	2,180,517	91.32
Real Estate	2012	944,188	189,948	20.12	754,240	79.88
	2013	1,161,144	225,317	19.40	935,827	80.60
	2014	1,136,063	226,824	19.97	909,239	80.03
Professional, Scientific and Technical Services	2012	628,374	189,138	30.10	439,236	69.90
	2013	653,793	198,268	30.33	455,525	69.67
	2014	674,048	210,774	31.27	463,274	68.73
Support Services	2012	371,661	130,672	35.16	240,989	64.84
	2013	396,116	131,896	33.30	264,220	66.70
	2014	441,608	137,081	31.04	304,526	68.96
Education	2012	9,577	6,820	71.21	2,757	28.79
	2013	10,523	7,822	74.33	2,701	25.67
	2014	12,282	8,708	70.90	3,574	29.10
Human Health and Social Work Services	2012	5,440	1,933	35.53	3,507	64.47
	2013	6,036	2,179	36.11	3,856	63.89
	2014	8,995	2,184	24.28	6,811	75.72
Arts, Entertainment and Recreation	2012	80,578	48,023	59.60	32,555	40.40
	2013	80,067	48,626	60.73	31,441	39.27
	2014	85,389	50,765	59.45	34,624	40.55
Other Services	2012	213,242	111,460	52.27	101,782	47.73
	2013	218,593	113,942	52.12	104,652	47.88
	2014	227,519	118,670	52.16	108,849	47.84

Note and source: See Table C-1.

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Table C-3 Domestic Sales Value by Industry and Enterprise Size, 2012-2014

Unit: Million NT\$, %

Industries \ Size		Total	SMEs	Share	Large enterprises	Share
Total	2012	27,797,659	9,633,690	34.66	18,163,970	65.34
	2013	28,624,527	9,897,617	34.58	18,726,910	65.42
	2014	30,019,115	10,345,095	34.46	19,674,021	65.54
Agriculture, Forestry, Fishing and Animal Husbandry	2012	32,021	18,178	56.77	13,843	43.23
	2013	34,984	19,202	54.89	15,782	45.11
	2014	40,699	20,198	49.63	20,500	50.37
Mining and Quarrying	2012	44,332	35,285	79.59	9,047	20.41
	2013	47,193	37,045	78.50	10,148	21.50
	2014	47,525	37,498	78.90	10,026	21.10
Manufacturing	2012	7,578,558	3,080,012	40.64	4,498,546	59.36
	2013	7,725,245	3,100,360	40.13	4,624,886	59.87
	2014	8,051,699	3,285,618	40.81	4,766,081	59.19
Electricity and Gas Supply	2012	880,884	3,653	0.41	877,231	99.59
	2013	929,802	4,235	0.46	925,567	99.54
	2014	997,862	4,425	0.44	993,436	99.56
Water Supply and Remediation Services	2012	169,914	54,222	31.91	115,692	68.09
	2013	171,929	53,109	30.89	118,819	69.11
	2014	176,909	54,551	30.84	122,358	69.16
Construction	2012	1,918,300	1,224,656	63.84	693,644	36.16
	2013	2,014,371	1,330,485	66.05	683,886	33.95
	2014	2,129,604	1,399,939	65.74	729,665	34.26
Wholesale and Retail Trade	2012	10,770,509	3,688,686	34.25	7,081,823	65.75
	2013	10,971,012	3,741,734	34.11	7,229,278	65.89
	2014	11,594,689	3,852,488	33.23	7,742,201	66.77
Transportation and Storage	2012	746,315	253,739	34.00	492,576	66.00
	2013	783,928	252,503	32.21	531,424	67.79
	2014	778,744	260,866	33.50	517,878	66.50
Accommodation and Food Services	2012	459,807	321,254	69.87	138,553	30.13
	2013	490,928	342,200	69.70	148,728	30.30
	2014	539,368	370,911	68.77	168,457	31.23

Table C-3 Domestic Sales Value by Industry and Enterprise Size, 2012-2014 (Continued)

Unit: Million NT\$, %

Industries \ Size		Total	SMEs	Share	Large enterprises	Share
Information and Communication	2012	864,099	99,309	11.49	764,790	88.51
	2013	914,074	103,183	11.29	810,892	88.71
	2014	855,122	106,414	12.44	748,708	87.56
Finance and Insurance	2012	2,231,191	185,531	8.32	2,045,659	91.68
	2013	2,174,011	194,720	8.96	1,979,291	91.04
	2014	2,382,067	206,663	8.68	2,175,404	91.32
Real Estate	2012	940,420	189,165	20.11	751,255	79.89
	2013	1,157,318	224,626	19.41	932,692	80.59
	2014	1,133,146	226,218	19.96	906,927	80.04
Professional, Scientific and Technical Services	2012	496,563	182,713	36.80	313,851	63.20
	2013	514,741	191,581	37.22	323,160	62.78
	2014	536,299	203,699	37.98	332,600	62.02
Support Services	2012	363,645	129,550	35.63	234,095	64.37
	2013	390,026	130,685	33.51	259,342	66.49
	2014	435,345	135,978	31.23	299,367	68.77
Education	2012	9,468	6,780	71.61	2,688	28.39
	2013	10,431	7,803	74.80	2,628	25.20
	2014	12,198	8,673	71.10	3,525	28.90
Human Health and Social Work Services	2012	5,148	1,911	37.13	3,237	62.87
	2013	5,857	2,126	36.29	3,731	63.71
	2014	6,531	2,118	32.43	4,412	67.57
Arts, Entertainment and Recreation	2012	80,451	47,942	59.59	32,509	40.41
	2013	79,852	48,442	60.66	31,410	39.34
	2014	85,037	50,436	59.31	34,601	40.69
Other Services	2012	206,034	111,103	53.92	94,931	46.08
	2013	208,825	113,578	54.39	95,246	45.61
	2014	216,274	118,402	54.75	97,872	45.25

Note and Source: See Table C-1.

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Table C-4 Export Sales Value by Industry and Enterprise Size, 2012-2014

Unit: Million NT\$; %

Industries \ Size		Total	SMEs	Share	Large enterprises	Share
Total	2012	9,851,416	1,748,080	17.74	8,103,336	82.26
	2013	9,836,367	1,424,225	14.48	8,412,142	85.52
	2014	10,221,390	1,494,773	14.62	8,726,617	85.38
Agriculture, Forestry, Fishing and Animal Husbandry	2012	5,046	1,788	35.44	3,258	64.56
	2013	5,278	2,679	50.76	2,599	49.24
	2014	6,435	3,309	51.42	3,126	48.58
Mining and Quarrying	2012	498	117	23.53	381	76.47
	2013	525	135	25.71	390	74.29
	2014	509	214	42.07	295	57.93
Manufacturing	2012	6,424,224	1,295,476	20.17	5,128,748	79.83
	2013	6,643,414	973,892	14.66	5,669,522	85.34
	2014	7,002,855	1,038,190	14.83	5,964,665	85.17
Electricity and Gas Supply	2012	14,266	39	0.28	14,227	99.72
	2013	14,432	45	0.31	14,387	99.69
	2014	18,215	132	0.72	18,083	99.28
Water Supply and Remediation Services	2012	11,375	1,409	12.39	9,966	87.61
	2013	10,158	1,391	13.70	8,766	86.30
	2014	10,746	1,428	13.29	9,318	86.71
Construction	2012	170,085	10,881	6.40	159,204	93.60
	2013	26,573	10,207	38.41	16,366	61.59
	2014	32,892	11,787	35.83	21,105	64.17
Wholesale and Retail Trade	2012	2,668,514	413,761	15.51	2,254,753	84.49
	2013	2,574,510	409,856	15.92	2,164,655	84.08
	2014	2,559,914	413,562	16.16	2,146,352	83.84
Transportation and Storage	2012	303,627	8,917	2.94	294,709	97.06
	2013	293,204	9,666	3.30	283,538	96.70
	2014	319,440	9,007	2.82	310,432	97.18
Accommodation and Food Services	2012	841	127	15.10	714	84.90
	2013	1,147	177	15.48	969	84.52
	2014	1,380	140	10.18	1,240	89.82

Table C-4 Export Sales Value by Industry and Enterprise Size, 2012-2014 (Continued)

Unit: Million NT\$, %

Industries \ Size		Total	SMEs	Share	Large enterprises	Share
Information and Communication	2012	97,767	6,055	6.19	91,713	93.81
	2013	102,758	6,290	6.12	96,468	93.88
	2014	102,126	6,829	6.69	95,296	93.31
Finance and Insurance	2012	3,853	689	17.88	3,164	82.12
	2013	5,146	677	13.16	4,469	86.84
	2014	5,803	691	11.90	5,113	88.10
Real Estate	2012	3,757	773	20.56	2,985	79.44
	2013	3,826	691	18.05	3,135	81.95
	2014	2,917	606	20.76	2,312	79.24
Professional, Scientific and Technical Services	2012	131,811	6,425	4.87	125,385	95.13
	2013	139,052	6,687	4.81	132,365	95.19
	2014	137,749	7,076	5.14	130,674	94.86
Support Services	2012	8,016	1,122	14.00	6,894	86.00
	2013	6,090	1,211	19.89	4,879	80.11
	2014	6,263	1,104	17.63	5,159	82.37
Education	2012	109	40	36.68	69	63.32
	2013	91	19	20.61	73	79.39
	2014	84	35	41.63	49	58.37
Human Health and Social Work Services	2012	292	22	7.37	270	92.63
	2013	178	54	30.00	125	70.00
	2014	2,464	66	2.66	2,399	97.34
Arts, Entertainment and Recreation	2012	127	81	63.87	46	36.13
	2013	215	184	85.47	31	14.53
	2014	352	329	93.59	23	6.41
Other Services	2012	7,208	357	4.95	6,851	95.05
	2013	9,769	363	3.72	9,405	96.28
	2014	11,246	268	2.39	10,977	97.61

Note and Source: See Table C-1.

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Table C-5 Total Employment by Industry and Enterprise Size, 2012-2014

Unit: Thousand persons; %

Industries	Size	Total		SMEs		Large enterprises		Government
			Share		Share		Share	
Total	2012	10,860	100.00	8,484	78.12	1,349	12.42	1,027
	2013	10,967	100.00	8,588	78.30	1,359	12.39	1,020
	2014	11,079	100.00	8,669	78.25	1,387	12.52	1,023
Agriculture, Forestry, Fishing and Animal Husbandry	2012	544	100.00	538	98.94	1	0.21	5
	2013	544	100.00	537	98.78	1	0.25	5
	2014	548	100.00	540	98.52	1	0.27	7
Mining and Quarrying	2012	4	100.00	4	87.13	0	0.58	1
	2013	4	100.00	3	85.30	-	-	1
	2014	4	100.00	3	86.48	0	0.00	1
Manufacturing	2012	2,975	100.00	2,171	72.99	780	26.22	24
	2013	2,988	100.00	2,195	73.48	768	25.70	25
	2014	3,007	100.00	2,196	73.01	786	26.14	25
Electricity and Gas Supply	2012	29	100.00	3	11.36	3	10.78	23
	2013	29	100.00	3	11.77	3	9.69	23
	2014	29	100.00	4	14.05	3	8.64	22
Water Supply and Remediation Services	2012	82	100.00	36	43.13	1	1.68	45
	2013	84	100.00	37	43.78	2	2.85	45
	2014	82	100.00	38	46.07	2	2.52	42
Construction	2012	845	100.00	826	97.80	10	1.14	9
	2013	861	100.00	843	97.99	10	1.11	8
	2014	881	100.00	865	98.08	9	1.01	8
Wholesale and Retail Trade	2012	1,800	100.00	1,731	96.16	60	3.35	9
	2013	1,817	100.00	1,745	96.03	64	3.51	8
	2014	1,825	100.00	1,756	96.19	62	3.39	8
Transportation and Storage	2012	414	100.00	302	72.77	58	13.90	55
	2013	425	100.00	310	72.88	63	14.84	52
	2014	433	100.00	316	73.16	68	15.62	49
Accommodation and Food Services	2012	750	100.00	731	97.52	18	2.41	1
	2013	775	100.00	756	97.46	19	2.47	1
	2014	792	100.00	768	96.99	23	2.97	1

Table C-5 Total Employment by Industry and Enterprise Size, 2012-2014 (Continued)

Unit: Thousand persons; %

Industries \ Size		Total		SMEs		Large enterprises		Government
			Share		Share		Share	
Information and Communication	2012	228	100.00	165	72.13	63	27.57	1
	2013	234	100.00	165	70.67	68	29.08	1
	2014	241	100.00	170	70.49	71	29.26	1
Finance and Insurance	2012	426	100.00	323	75.68	86	20.28	17
	2013	422	100.00	320	75.82	86	20.31	16
	2014	416	100.00	316	75.87	84	20.23	16
Real Estate	2012	90	100.00	85	95.27	3	3.17	1
	2013	92	100.00	88	96.31	2	2.38	1
	2014	98	100.00	94	95.89	3	2.95	1
Professional, Scientific and Technical Services	2012	342	100.00	274	80.20	43	12.48	25
	2013	347	100.00	278	80.21	44	12.74	24
	2014	354	100.00	287	81.18	44	12.35	23
Support Services	2012	260	100.00	237	91.40	22	8.39	1
	2013	263	100.00	242	91.81	21	7.98	1
	2014	273	100.00	251	91.81	22	8.02	1
Public Administration and Defense; Compulsory Social Security	2012	384	100.00	1	0.26	0	0.02	383
	2013	383	100.00	1	0.23	0	0.02	382
	2014	378	100.00	1	0.16	0	0.00	377
Education	2012	630	100.00	230	36.43	67	10.57	334
	2013	634	100.00	232	36.65	69	10.87	333
	2014	645	100.00	235	36.47	63	9.82	346
Human Health and Social Work Services	2012	420	100.00	216	51.47	125	29.73	79
	2013	427	100.00	222	52.02	128	29.88	77
	2014	432	100.00	217	50.09	136	31.45	80
Arts, Entertainment and Recreation	2012	95	100.00	76	80.13	5	5.17	14
	2013	96	100.00	75	77.48	6	6.36	16
	2014	95	100.00	76	79.82	6	5.91	14
Other Services	2012	541	100.00	534	98.83	4	0.81	2
	2013	541	100.00	534	98.58	5	0.99	2
	2014	543	100.00	536	98.75	4	0.81	2

Note:

1. The industries are classified according to the 9th 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 paid employees, and firms in other industries with less than 100 regular paid employees.
3. “-”: no data available.

Source: Directorate-General of Budget, Accounting and Statistics (DGBAS), Manpower Survey data, 2012-2014.

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Table C-6 The Number of Paid Employees by Industry and Enterprise Size, 2012-2014

Unit: Thousand persons; %

Industries \ Size		Total	Share	SMEs	Share	Large enterprises	Share	Government
Total	2012	8,495	100.00	6,122	72.06	1,346	15.85	1,027
	2013	8,615	100.00	6,237	72.40	1,357	15.76	1,020
	2014	8,737	100.00	6,329	72.44	1,385	15.85	1,023
Agriculture, Forestry, Fishing and Animal Husbandry	2012	85	100.00	79	93.26	1	1.31	5
	2013	88	100.00	81	92.42	1	1.57	5
	2014	90	100.00	82	90.93	1	1.64	7
Mining and Quarrying	2012	4	100.00	3	86.71	0	0.60	1
	2013	4	100.00	3	84.72	-	-	1
	2014	4	100.00	3	85.76	0	0.00	1
Manufacturing	2012	2,721	100.00	1,919	70.52	779	28.62	24
	2013	2,734	100.00	1,942	71.04	767	28.06	25
	2014	2,763	100.00	1,952	70.67	785	28.41	25
Electricity and Gas Supply	2012	29	100.00	3	11.36	3	10.78	23
	2013	29	100.00	3	11.77	3	9.69	23
	2014	29	100.00	4	13.78	3	8.67	22
Water Supply and Remediation Services	2012	74	100.00	27	36.34	1	1.88	45
	2013	77	100.00	30	39.29	2	3.07	45
	2014	75	100.00	31	40.79	2	2.77	42
Construction	2012	708	100.00	690	97.37	10	1.36	9
	2013	727	100.00	710	97.62	10	1.31	8
	2014	750	100.00	733	97.74	9	1.19	8
Wholesale and Retail Trade	2012	1,110	100.00	1,041	93.78	60	5.41	9
	2013	1,116	100.00	1,044	93.55	64	5.70	8
	2014	1,112	100.00	1,043	93.76	62	5.55	8
Transportation and Storage	2012	329	100.00	217	65.76	58	17.47	55
	2013	341	100.00	226	66.21	63	18.48	52
	2014	351	100.00	235	66.92	68	19.24	49
Accommodation and Food Services	2012	451	100.00	433	95.99	18	3.88	1
	2013	481	100.00	461	95.99	19	3.90	1
	2014	496	100.00	472	95.20	23	4.72	1

Table C-6 The Number of Paid Employees by Industry and Enterprise Size, 2012-2014
(Continued)

Units: Thousand persons; %

Industries	Size	Total	Share	SMEs	Share	Large enterprises	Share	Government
Information and Communication	2012	213	100.00	149	70.17	63	29.50	1
	2013	220	100.00	152	68.99	68	30.75	1
	2014	228	100.00	157	68.83	70	30.91	1
Finance and Insurance	2012	422	100.00	318	75.44	86	20.48	17
	2013	418	100.00	316	75.57	86	20.52	16
	2014	412	100.00	312	75.63	84	20.43	16
Real Estate	2012	80	100.00	76	94.70	3	3.55	1
	2013	83	100.00	80	95.94	2	2.62	1
	2014	90	100.00	86	95.54	3	3.20	1
Professional, Scientific and Technical Services	2012	267	100.00	199	74.64	43	15.97	25
	2013	274	100.00	205	74.90	44	16.16	24
	2014	280	100.00	214	76.29	44	15.55	23
Support Services	2012	236	100.00	213	90.57	22	9.19	1
	2013	241	100.00	220	91.07	21	8.69	1
	2014	252	100.00	230	91.11	22	8.70	1
Public Administration and Defense; Compulsory Social Security	2012	384	100.00	1	0.26	0	0.02	383
	2013	383	100.00	1	0.23	0	0.02	382
	2014	378	100.00	1	0.16	0	0.00	377
Education	2012	596	100.00	195	32.74	67	11.18	334
	2013	600	100.00	198	33.05	69	11.45	333
	2014	613	100.00	203	33.12	63	10.34	346
Human Health and Social Work Services	2012	386	100.00	182	47.13	125	32.38	79
	2013	396	100.00	191	48.23	128	32.24	77
	2014	403	100.00	188	46.52	136	33.70	80
Arts, Entertainment and Recreation	2012	73	100.00	54	74.30	5	6.60	14
	2013	75	100.00	53	71.07	6	8.10	16
	2014	73	100.00	54	73.71	6	7.70	14
Other Services	2012	327	100.00	321	98.06	4	1.33	2
	2013	328	100.00	320	97.65	5	1.63	2
	2014	338	100.00	331	97.99	4	1.31	2

Note and source: See Table C-5.

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Table C-7 Overview of Newly-Established Enterprises in 2014 by Industry and Enterprise

Size		Unit: Enterprises; million NT\$; %				
Industries	Size	Total	SMEs	Share	Large enterprises	
					enterprises	Share
The number of enterprises						
Total		94,162	93,968	100.00	194	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		745	744	0.79	1	0.52
Mining and Quarrying		80	80	0.09	-	-
Manufacturing		5,478	5,410	5.76	68	35.05
Electricity and Gas Supply		118	118	0.13	-	-
Water Supply and Remediation Services		447	447	0.48	-	-
Construction		9,067	9,061	9.64	6	3.09
Wholesale and Retail Trade		41,053	40,967	43.60	86	44.33
Transportation and Storage		1,240	1,235	1.31	5	2.58
Accommodation and Food Services		14,964	14,960	15.92	4	2.06
Information and Communication		1,884	1,880	2.00	4	2.06
Finance and Insurance		1,053	1,050	1.12	3	1.55
Real Estate		3,956	3,948	4.20	8	4.12
Professional, Scientific and Technical Services		4,070	4,065	4.33	5	2.58
Support Services		2,349	2,346	2.50	3	1.55
Education		297	296	0.32	1	0.52
Human Health and Social Work Services		91	91	0.10	-	-
Arts, Entertainment and Recreation		2,000	2,000	2.13	-	-
Other Services		5,270	5,270	5.61	-	-
Total sales						
Total		206,808	176,134	100.00	30,674	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		*	673	0.38	*	*
Mining and Quarrying		414	414	0.24	-	-
Manufacturing		25,195	22,506	12.78	2,689	8.77
Electricity and Gas Supply		120	120	0.07	-	-
Water Supply and Remediation Services		1,101	1,101	0.63	-	-
Construction		25,362	24,701	14.02	661	2.16
Wholesale and Retail Trade		100,906	81,331	46.18	19,575	63.81
Transportation and Storage		3,625	3,007	1.71	618	2.02
Accommodation and Food Services		19,593	18,633	10.58	960	3.13
Information and Communication		3,624	2,624	1.49	1,000	3.26
Finance and Insurance		*	1,371	0.78	*	*
Real Estate		8,157	5,814	3.30	2,342	7.64
Professional, Scientific and Technical Services		6,596	5,493	3.12	1,103	3.60
Support Services		*	3,025	1.72	*	*
Education		*	613	0.35	*	*
Human Health and Social Work Services		50	50	0.03	-	-
Arts, Entertainment and Recreation		1,660	1,660	0.94	-	-
Other Services		2,997	2,997	1.70	-	-

Table C-7 Overview of Newly-Established Enterprises in 2014 by Industry and Enterprise Size (Continued)

Unit: Million NT\$, %

Industries	Size	Total	SMEs	Share	Large enterprises	Share
Domestic sales						
Total		190,771	164,772	100.00	25,999	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		*	617	0.37	*	*
Mining and Quarrying		390	390	0.24	-	-
Manufacturing		18,869	17,245	10.47	1,624	6.25
Electricity and Gas Supply		111	111	0.07	-	-
Water Supply and Remediation Services		1,094	1,094	0.66	-	-
Construction		25,341	24,685	14.98	655	2.52
Wholesale and Retail Trade		92,557	76,141	46.21	16,416	63.14
Transportation and Storage		3,144	2,749	1.67	395	1.52
Accommodation and Food Services		19,590	18,630	11.31	960	3.69
Information and Communication		3,432	2,432	1.48	1,000	3.84
Finance and Insurance		*	1,242	0.75	*	*
Real Estate		8,147	5,805	3.52	2,342	9.01
Professional, Scientific and Technical Services		6,202	5,321	3.23	881	3.39
Support Services		*	3,016	1.83	*	*
Education		*	612	0.37	*	*
Human Health and Social Work Services		50	50	0.03	-	-
Arts, Entertainment and Recreation		1,645	1,645	1.00	-	-
Other Services		2,987	2,987	1.81	-	-
Export sales						
Total		16,037	11,362	100.00	4,676	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		*	56	0.49	*	*
Mining and Quarrying		24	24	0.22	-	-
Manufacturing		6,326	5,262	46.31	1,065	22.78
Electricity and Gas Supply		9	9	0.08	-	-
Water Supply and Remediation Services		7	7	0.06	-	-
Construction		22	16	0.14	6	0.13
Wholesale and Retail Trade		8,349	5,190	45.68	3,159	67.56
Transportation and Storage		481	258	2.27	223	4.78
Accommodation and Food Services		4	4	0.03	0	0.00
Information and Communication		192	192	1.69	0	0.00
Finance and Insurance		*	129	1.14	*	*
Real Estate		9	9	0.08	0	0.00
Professional, Scientific and Technical Services		394	172	1.51	222	4.75
Support Services		*	9	0.08	*	*
Education		*	0	0.00	*	*
Human Health and Social Work Services		0	0	0.00	-	-
Arts, Entertainment and Recreation		16	16	0.14	-	-
Other Services		10	10	0.08	-	-

Note: 1. “-”: no data available. 2. *: to protect business operation, we don't disclose the value with the number of enterprises equal or less than 3.

Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2014.

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Table C-8 Overview of Female-Owned Enterprises in 2014 by Industry and Enterprise Size

Unit: Enterprises; million NT\$; %

Industries		Size	Total	Female-owned enterprises	SMEs	Share	Large enterprises	Share
The number of enterprises								
Total		1,373,006	496,866	490,688	100.00	6,178	100.00	
Agriculture, Forestry, Fishing and Animal Husbandry		11,628	2,769	2,753	0.56	16	0.26	
Mining and Quarrying		1,175	286	282	0.06	4	0.06	
Manufacturing		146,234	39,938	39,381	8.03	557	9.00	
Electricity and Gas Supply		664	131	116	0.02	15	0.24	
Water Supply and Remediation Services		7,461	2,204	2,132	0.43	72	1.17	
Construction		113,153	28,484	28,256	5.76	228	3.69	
Wholesale and Retail Trade		678,998	257,565	253,778	51.72	3,787	61.30	
Transportation and Storage		30,921	7,949	7,773	1.58	176	2.85	
Accommodation and Food Services		133,624	63,583	63,480	12.94	103	1.67	
Information and Communication		18,266	5,277	5,183	1.06	94	1.52	
Finance and Insurance		17,638	5,634	5,101	1.04	533	8.63	
Real Estate		34,044	10,152	9,840	2.01	312	5.05	
Professional, Scientific and Technical Services		42,756	15,281	15,134	3.08	147	2.38	
Support Services		28,641	10,901	10,812	2.20	89	1.44	
Education		1,805	739	738	0.15	1	0.02	
Human Health and Social Work Services		673	185	184	0.04	1	0.02	
Arts, Entertainment and Recreation		26,562	9,731	9,716	1.98	15	0.24	
Other Services		78,763	36,057	36,029	7.34	28	0.45	
Total sales								
Total		36,148,091	5,413,359	2,844,426	100.00	2,568,933	100.00	
Agriculture, Forestry, Fishing and Animal Husbandry		46,572	9,656	5,150	0.18	4,506	0.18	
Mining and Quarrying		47,931	4,901	4,716	0.17	185	0.01	
Manufacturing		13,283,502	1,067,340	714,001	25.10	353,338	13.75	
Electricity and Gas Supply		1,000,365	7,318	715	0.03	6,603	0.26	
Water Supply and Remediation Services		185,874	43,690	15,849	0.56	27,841	1.08	
Construction		2,066,420	426,824	332,483	11.69	94,342	3.67	
Wholesale and Retail Trade		12,518,211	2,611,343	1,256,612	44.18	1,354,731	52.74	
Transportation and Storage		978,260	144,822	73,569	2.59	71,253	2.77	
Accommodation and Food Services		502,069	151,812	129,050	4.54	22,761	0.89	
Information and Communication		870,970	121,757	27,713	0.97	94,045	3.66	
Finance and Insurance		2,252,326	341,882	57,343	2.02	284,540	11.08	
Real Estate		1,122,301	201,766	60,921	2.14	140,845	5.48	
Professional, Scientific and Technical Services		597,363	122,267	63,246	2.22	59,021	2.30	
Support Services		365,326	71,745	43,907	1.54	27,838	1.08	
Education		11,793	*	2,073	0.07	*	*	
Human Health and Social Work Services		8,759	*	620	0.02	*	*	
Arts, Entertainment and Recreation		81,595	18,591	13,740	0.48	4,851	0.19	
Other Services		208,454	64,215	42,718	1.50	21,497	0.84	

Table C-8 Overview of Female-Owned Enterprises in 2014 by Industry and Enterprise Size
(Continued)

Unit: Million NT\$, %

Industries	Size	Total	Female-owned enterprises	SMEs	Share	Large enterprises	Share
Domestic sales							
Total		27,630,633	4,637,186	2,577,696	100.00	2,059,490	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		40,164	8,654	4,576	0.18	4,078	0.20
Mining and Quarrying		47,446	4,857	4,671	0.18	185	0.01
Manufacturing		7,537,996	783,964	584,196	22.66	199,768	9.70
Electricity and Gas Supply		983,764	7,317	713	0.03	6,603	0.32
Water Supply and Remediation Services		175,487	42,447	15,423	0.60	27,023	1.31
Construction		2,038,106	423,566	331,077	12.84	92,489	4.49
Wholesale and Retail Trade		10,291,160	2,153,165	1,127,834	43.75	1,025,331	49.79
Transportation and Storage		733,402	126,230	71,798	2.79	54,432	2.64
Accommodation and Food Services		500,707	151,669	128,994	5.00	22,675	1.10
Information and Communication		778,569	117,841	26,255	1.02	91,586	4.45
Finance and Insurance		2,247,838	341,222	57,026	2.21	284,196	13.80
Real Estate		1,119,408	201,178	60,716	2.36	140,462	6.82
Professional, Scientific and Technical Services		468,877	118,249	61,689	2.39	56,560	2.75
Support Services		360,634	70,945	43,681	1.69	27,264	1.32
Education		11,711	*	2,066	0.08	*	*
Human Health and Social Work Services		6,321	*	619	0.02	*	*
Arts, Entertainment and Recreation		81,247	18,543	13,700	0.53	4,843	0.24
Other Services		207,795	63,920	42,662	1.66	21,258	1.03
Export sales							
Total		8,517,458	776,173	266,730	100.00	509,443	100.00
Agriculture, Forestry, Fishing and Animal Husbandry		6,408	1,002	574	0.22	428	0.08
Mining and Quarrying		484	44	44	0.02	0	0.00
Manufacturing		5,745,506	283,376	129,806	48.67	153,570	30.14
Electricity and Gas Supply		16,601	1	1	0.00	0	0.00
Water Supply and Remediation Services		10,387	1,244	426	0.16	818	0.16
Construction		28,314	3,258	1,405	0.53	1,853	0.36
Wholesale and Retail Trade		2,227,051	458,178	128,778	48.28	329,400	64.66
Transportation and Storage		244,859	18,591	1,770	0.66	16,821	3.30
Accommodation and Food Services		1,362	143	57	0.02	86	0.02
Information and Communication		92,400	3,917	1,457	0.55	2,459	0.48
Finance and Insurance		4,487	660	317	0.12	343	0.07
Real Estate		2,893	588	205	0.08	383	0.08
Professional, Scientific and Technical Services		128,486	4,018	1,557	0.58	2,461	0.48
Support Services		4,692	800	226	0.08	574	0.11
Education		82	*	7	0.00	*	*
Human Health and Social Work Services		2,439	*	1	0.00	*	*
Arts, Entertainment and Recreation		347	49	41	0.02	8	0.00
Other Services		659	295	56	0.02	239	0.05

Note: The totals given in this table do not conform to those given in Table C1 because some enterprises are registered as being owned by other enterprises or by foreigners; these enterprises were excluded from the data used in this table.

Source: Fiscal Information Agency, Ministry of Finance, VAT data, 2014.

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Table C-9 Export Value of SMEs by Manufacturing Industry, 2012-2014

Unit: Million NT\$, %

Industry \ Indicator	Export value			Share of total		
	2012	2013	2014	2012	2013	2014
Total	1,295,476	973,892	1,038,190	100.00	100.00	100.00
Food Manufacturing	8,065	8,475	9,728	0.62	0.87	0.94
Beverages Manufacturing	690	847	763	0.05	0.09	0.07
Tobacco Manufacturing	0	0	0	0.00	0.00	0.00
Textiles Mills	21,482	23,093	23,468	1.66	2.37	2.26
Wearing Apparel and Clothing	18,076	16,828	16,825	1.40	1.73	1.62
Leather, Fur and Related Products	14,213	13,805	13,597	1.10	1.42	1.31
Wood and Bamboo Products	3,201	3,114	3,421	0.25	0.32	0.33
Pulp, Paper and Paper Products	11,786	11,693	11,900	0.91	1.20	1.15
Printing and Reproduction of Recorded Media	6,617	4,943	4,614	0.51	0.51	0.44
Petroleum and Coal Products	141	114	143	0.01	0.01	0.01
Chemical Material Manufacturing	22,086	22,666	23,272	1.70	2.33	2.24
Chemical Products Manufacturing	12,904	12,117	14,576	1.00	1.24	1.40
Pharmaceuticals and Medicinal Chemical Products	277	341	708	0.02	0.04	0.07
Rubber Products Manufacturing	10,596	10,974	12,250	0.82	1.13	1.18
Plastic Products Manufacturing	49,789	51,925	54,583	3.84	5.33	5.26
Non-metallic Mineral Products Manufacturing	40,081	31,966	25,344	3.09	3.28	2.44
Basic Metal Manufacturing	47,307	43,453	48,500	3.65	4.46	4.67
Fabricated Metal Products	113,839	111,827	122,381	8.79	11.48	11.79
Electronic Parts and Components Manufacturing	575,576	287,526	295,299	44.43	29.52	28.44
Computers, Electronic and Optical Products Manufacturing	43,802	36,597	47,687	3.38	3.76	4.59
Electrical Equipment Manufacturing	53,070	49,753	51,538	4.10	5.11	4.96
Machinery and Equipment Manufacturing	133,801	125,846	136,860	10.33	12.92	13.18
Motor Vehicles and Parts Manufacturing	17,746	17,773	17,795	1.37	1.82	1.71
Other Transport Equipment Manufacturing	38,042	34,193	42,358	2.94	3.51	4.08
Furniture Manufacturing	13,994	14,868	16,951	1.08	1.53	1.63
Manufacturing Not Elsewhere	32,124	32,813	34,061	2.48	3.37	3.28
Repair and Installation of Industrial Machinery and Equipment	6,170	6,343	9,566	0.48	0.65	0.92

Note and source: See Table C1.

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