



10 Kent Ridge Crescent Singapore 199260

BMA5112 Asia in the Global Economy

Country Report (Taiwan)

“How can Taiwan continue to grow its economy as its contract manufacturing customers increasingly shift to engage suppliers in other economies offering lower manufacturing costs?”

Agata Pętelka (NT081256Y)

Hege Knotten (NT081131B)

Sidhartha Kaushik (HT075677W)

Tan Shao Yi (HT075601H)

Tan Shu Juan (HT085599M)

Wong Weng Kong (HT075605A)

30 March 2009

NUS BUSINESS SCHOOL 2008/09

Contents

| | |
|--|-----------|
| Contents | a |
| Introduction | 1 |
| Literature review | 1 |
| Taiwan and China | 1 |
| Contract manufacturing customers move to China | 2 |
| Research question | 2 |
| Findings and discussion | 3 |
| Taiwan: Macroeconomic (social infrastructure and political institutions) competitiveness | 3 |
| Taiwan: Microeconomic competitiveness | 4 |
| Sophistication of company operations and strategy | 4 |
| Quality of the microeconomic business environment | 5 |
| Factor (input) conditions | 5 |
| Context for firm strategy and rivalry | 6 |
| Demand industries | 7 |
| Related and supporting industries | 7 |
| State of cluster development | 8 |
| Rescuing Taiwan contract manufacturers | 8 |
| Shifting along the value chain..... | 8 |
| Backward integration: Research and development (R&D)..... | 8 |
| Forward integration: Brands and distributions..... | 9 |
| “Country of origin”: Images and ethnocentrism | 10 |
| Conclusion | 12 |
| Implications for practice | 12 |
| Shifting along the value chain..... | 12 |
| Beefing up Taiwan’s institutions and financial market sophistication | 13 |
| Antagonising mainland China adds little value | 13 |
| Implications for research..... | 14 |
| References | i |

Introduction

Taiwan's economy experienced phenomenal growth after the Kuomintang took off to the island when it lost the Chinese civil war to the communists in 1949. Through rallying overseas Taiwanese, upgrading universities, setting up science parks and welcoming foreign companies, Taiwan has transitioned from an agricultural to an industrial economy in a short span of 40 years. For years, Taiwan has been able to ride on having comparatively lower wages and a highly educated workforce to fuel growth. However, rising wage costs, an appreciation in its currency and catch-up by neighbouring developing countries have eroded these original comparative advantages.

The result is an increase of Taiwan foreign direct investment in the form of its contract manufacturers relocating to other countries with lower labour costs. In addition, some contract manufacturing customers have stepped up direct contact with manufacturers in these countries, bypassing the Taiwan contract manufacturers. The phenomenon is important as in addition to being a threat to the economy, the contract manufacturers' shift to these countries (especially mainland China) may result in a second drain of capital and human resources; this time to the other side of the strait and dimming future economic prospects for the island.

In this report, we afford a perspective through Taiwan's macro- and microeconomic competitiveness to lend insight into how Taiwan contract manufacturers may improve their competitiveness in view of the challenges posed by globalisation. We conclude the report with implications of our findings and discussion for practice and further research.

Literature review

Taiwan and China

Thanks to a huge trade surplus with China, Taiwan has among the world's biggest holding of foreign-currency reserves at US\$291.7b, and accounts for US\$0.11b of China's US\$7.75b FDI inflows (January 2009) (MOC-PRC, 2009). Taiwan is third following Japan and South Korea as a source of Chinese imports (10.6% in 2007). The distribution of FDI is striking as the majority of FDI in China did not come from industrialised countries, but was received from Hong Kong (HKDI) and Taiwan (TDI) which fuelled the engine of China's export-oriented growth (Zhang, 2000). While China is the world's biggest IT hardware exporter to the USA, Taiwanese companies make more than 60% of these exports in China. For Taiwan, China is its largest export market (26.6% in 2007) and all 28 Taiwan firms in China's top 200 export companies were high-tech companies with Hon Hai Precision Industry, Quanta and Asustek topping the list. In fact, Taiwan has also moved so much of its

electronics production to the mainland that it now only makes the highest technology components at home while turning the mainland into a global leader in IT equipment (Economist, 2005).

When the Taiwan government in 2001 lifted restrictions that prevented laptop-makers from investing in China, virtually all of Taiwan contract manufacturers shifted their contract manufacturing to the mainland. With lower labour and land costs, each machine costs \$20 to \$30 less to make (Economist, 2007). Indeed, low-margin, low-technology activities have fuelled the success of many Chinese businesses. Although the lesser skilled employees and higher transport costs inland eroded China's original comparative advantage in lower labour and land costs, the saving grace for China is that other countries with similar comparative advantages (eg, Vietnam and Indonesia) have only a finite ability to expand quickly without overloading their infrastructure or sparking wage inflation (Economist, 2009c; Economist, 2007). Today, exporters enjoy more of the benefits of a cheaper¹ yuan (Economist, 2009a).

Recent trade developments concerning the "three direct links", communication, trade, and transportation offer more substantial business ties than ever before with direct air routes, new round-trip cargo flights and new sea links. (Economist, 2008a; Economist, 2005). The reinstatement of direct air and sea links are estimated to reduce shipping costs by 15 to 35%, halve sea transportation times and save air travellers \$390m a year. Labour-intensive Taiwan contract manufacturers are now further incentivised to locate production in the mainland.

Contract manufacturing customers move to China

When China joined the World Trade Organisation (WTO) in 2001, the dismantling of tariff and other barriers that went with WTO membership bound China more tightly into existing and highly sophisticated pan-Asian production networks. China's impetus profoundly altered the course of trade flows in Asia; countries that used to export finished goods to Europe and North America shifted toward exporting parts and components for assembly on the mainland. By 2007, the processing of imported parts and components accounted for more than half of all Chinese exports (Economist 2007).

Research question

Until a few years ago, Taiwan had undeniably one of the most competitive manufacturing sectors in the world. However, as Taiwanese products were all designed and marketed by foreign companies under the contract manufacturing model, Taiwan contract manufacturers could compete with each other only in terms of price. China accounts for 26.6% of Taiwan's exports and most of these exports

¹ Beijing has in recent years been accused of deliberately keeping the yuan cheap to give exporters an unfair advantage (Economist, 2009h).

originate from Taiwan's export manufacturing business. With China's abundance of cheaper land and labour, it is no longer feasible for Taiwan firms to compete on price alone. In addition, the manufacturers' shift to China bodes a problem for Taiwan especially when it accounts for such a large proportion of the economy's exports.

In this paper, we seek to understand how Taiwan can continue to grow its economy as its contract manufacturing customers increasingly shift to engage suppliers in other economies offering lower manufacturing costs.

The question is important as in addition to being a threat to the economy, the contract manufacturing shift to mainland China and other developing economies may result in a second drain of capital and human resources; this time to the other side of the strait and dimming future economic prospects for the island.

Findings and discussion

Taiwan: Macroeconomic (social infrastructure and political institutions) competitiveness

Taiwan embarked on a transition from an agricultural to an industrial economy in the 1950s to 1962. As the economy developed, it lifted the nationalistic economic measures it instituted in its formative years to encourage foreign trade. In the 1980s, the Taiwan government lowered tariffs, abandoned a central exchange rate and abolished interest rate controls. Trade increased further and the massive trade surpluses led to an appreciation of the Taiwan dollar; increasing wages and reducing the island's comparative advantage of lower labour costs.

Labour-intensive industries gradually moved to neighbouring countries in Southeast Asia as well as China. By 2008, the Taiwanese business sector had invested US\$150b in China, and a large portion of trade now flowed directly or indirectly to China (Economist, 2008a). Under Chen Shui-bian, Taiwan's president for eight years from 2000, Taiwan saw markedly worse relations with China. The recent meeting between Chinese President Hu and the Kuomintang Chairman Wu Poh-hsiung marked the highest level of contact between the two economies in 60 years. The result is stability in the situation for Taiwan to a large degree after the Democratic Progressive Party's confrontational policy towards the mainland under President Chen's charge. Taiwan now aims to leverage on the newly found stability to boost FDI flow into the country from more sources than just overseas Taiwanese.

In recent years, Taiwan is also finding itself increasingly isolated with the rise of mainland China as an economic power. Most countries chose to recognise the government in Taipei when faced with a regime in Beijing that was both communist and isolationist after the Chinese civil war. As mainland China opened up, the tide began to turn and most major countries in the world recognised the authorities in Beijing, rather than those in Taipei as the legitimate government of China. In recent years, China has demonstrated tremendous ability to flex its muscle in the political and economical landscape; when the then Deputy Prime Minister of Singapore paid an unofficial visit to Taiwan just weeks before his assumption of the city-state's premiership, Beijing expressed strong dissatisfaction warning of severe consequences. In November 2008, China called off the Sino-EU summit as the French President Nicolas Sarkozy dared to meet the Dalai Lama. China as a new economic superpower exercises great influence over Taiwan's political and economic connections.

Within Taiwan, the new administration of President Ma Ying-jeou has been working to turn the island into a financial centre for the Asia Pacific region. Three events have marked Taiwan's continuing, albeit slow, liberalisation in recent years: the Financial Institutions Merger Law² in November 2000, the Financial Holding Company Law³ in 2001, and the easing of restrictions on trade and capital flows with mainland China.

Taiwan: Microeconomic competitiveness

Taiwan has seen a fall in its ranking in the recent World Economic Forum's global competitiveness report. From a high of being ranked third in 2002—03, Taiwan fell to the rankings of 13, 14 and 17 in 2006, 2007 and 2008 respectively (Delios and Beamish, 2004; WEF, 2008). The economy is also listed as embarking on its transition from stage 2 (*efficiency-driven*) to stage 3 (*innovation-driven*) of the WEF's (2008) economic development path.

Sophistication of company operations and strategy

Taiwan's export-oriented industrialisation has been dominated by contracting contracts from foreign firms. Its linkages with major US electronics giants in its formative years have developed the local firms' competence in manufacturing electronics products. Better known as adaptive innovators, Taiwan contract manufacturers have adopted and adapted foreign technology through imitation and borrowing; saving on costly R&D expenses and allowed Taiwanese firms to leap-frog other firms still working to prime their innovations for market. The many years and intensity of contract

² The Financial Institutions Merger Law is aimed to spur consolidation in Taiwan's overcrowded and under-performing financial sector.

³ The Financial Holding Company Law provides the legal framework for the creation of financial holding companies.

manufacturing have also indirectly provided local firms with exposure to different cultures of the world; an asset invaluable in today's networked economies.

Small-medium enterprises (SMEs) are the pillars of Taiwan's economy, and at 1.24m SMEs, they account for 97.63% of all enterprises in Taiwan. The SMEs employed 7.74m people, making up 77.12% of the island's overall employment with exports reaching NT\$1.6t. In the World Competitiveness Yearbook 2008, the International Institute of Management Development (IMD) ranks the operating performance of Taiwan's SMEs as fourth in the world and second in Asia. Being significantly smaller than the large, diversified business groups common in other developing economies, Taiwan's SMEs are nimble, have outstanding asset utilisation efficiency, have benefitted from the industrial clustering effects, and have accelerated the growth of R&D spending. (CEPD, 2009). The small size is a plus especially when these SMEs focused on high-paced electronics industries. In addition, the government's Small Business Innovation Research project, Industrial Technology Development and Innovative Technology Applications programmes serve to underscore the importance of innovation to future continued growth of the Taiwan economy.

Quality of the microeconomic business environment

The business environment quality has a strong impact on the productivity of companies. We provide an examination of the Taiwan contract manufacturers' microeconomic business environment through four interrelated dimensions: the quality of factor (input) conditions, the context of rules in which firm strategy and rivalry takes place, the quality of local demand conditions, and the presence of related and supporting industries (Porter, 1990).

Factor (input) conditions

Drawing its greatest competitive strengths from its education sector and related business innovation, Taiwan is the first worldwide in terms of the patenting per capita of new innovations (WEF, 2008). Compulsory nine years of school has ensured high enrolment rates in education at all levels. Further⁴ education is encouraged and the island's close links with the US has enabled thousands of young adults to study in US universities, many of whom eventually worked in Silicon Valley. In addition, companies provide a high level of continuing on-the-job training, thus ensuring workforce adaptability to the rapidly changing economy.

⁴ In 2007, the Taiwan government budgeted 19.18% (NT\$462 million) of its expenditures to education, with more than 30% invested in higher education over the past six years (MOE-ROC, 2008). Four decades of education has positioned the nation as the top in Asia in the World Bank's Knowledge Economy Index for 2008, surpassing Japan (World Bank, 2008).

As an agricultural economy, Taiwan transitioned to an industrial economy through venturing into electronics on a license basis. The transition was aided by the Taiwanese belief in the importance of higher education, and its diaspora in the US that provided Taiwan with first-mover opportunities to produce for other brands. In a bid to attract its diaspora to return and grow the economy, the Taiwan government established the National Taiwan University of Science and Technology in 1974, and from the 1980s zoned science parks (Taipei Times, 2009). The first science park, the Hsinchu Science Park, was setup in 1984 (NSC, 2009), and was modelled after Silicon Valley. Strategically positioned in the Hsinchu Science Park is the Industrial Technology Research Institute (ITRI), a national research centre dedicated to building the technological competitiveness of the nation.

Coupled with high company spending on R&D and strong collaboration between these research institutions and the business sector in innovation, the continued investments in the education have reinforced education and innovation as a source of competitive advantage for Taiwan into the long-term.

In administrative infrastructure, the Taiwan administration offers much transparency with regards to rules and regulations for export and customs. In intellectual property rights, Taiwan is ranked 28 (WEF, 2008).

Context for firm strategy and rivalry

Recent trade developments with China have seen restrictions being lifted and the reinstatement of direct air and sea links, absence of which for years have marginalised Taiwan from global supply chains (Economist, 2008a). Direct air and sea links are required for Taiwan firms to compete more effectively with other global firms as China becomes an increasingly important part⁵ of global supply chains. In spite of the complexities of cross-strait transport, China has emerged in recent years as Taiwan's largest trading partner and Taiwan as one of China's biggest investors (Economist, 2008b). However, barriers remain not least to Taiwan financial services in China. The main financial regulator—the Financial Supervisory Commission—bans Taiwan banks from setting up operations or investing in China.

The financial markets in Taiwan represent a comparative weakness, with concerns about the soundness of banks (ranked 117) and the restriction of capital flows (ranked 78) (WEF, 2008). For many years, Taiwan SMEs and start-ups have been underserved by China's big state banks and have often resorted to illegal underground lenders (Economist, 2008c). In addition, Taiwan banks have

⁵ China and the US have recently been called the "G2" that suggests China's influence and grip over the world's economy (Economist, 2009f).

only recently been allowed to trade the yuan for the first time since the Communist revolution—a challenge previously when both economies are each other’s largest trading partner or investor.

Various aspects of the institutional environment could see improvements too, especially with relatively low public trust in politicians, concerns about a lack of judicial independence (Economist, 2009d), and increasing complaints about the regulatory burden faced by companies operating in the economy (eg, Economist, 2009e). The biggest risk for possible investors in Taiwan has been political and military tensions in the economy’s relations with mainland China. This tension has at times been higher, for instance during Chen Shui-bian’s rule when they displayed a more open intent of becoming an independent nation. In recent years, Chinese officials have however shown far greater willingness to leave Taiwan be, so long as it resists any formal declaration of independence (Economist, 2008a). To continue to engage China as a key player in global supply chains, Taiwan must refrain from antagonising the Chinese leaders with nationalistic advances toward independence.

Demand industries

With a small domestic market of 22.7m residents, foreign trade has been the engine for Taiwan’s growth for the past 40 years. With China, Hong Kong, US and Japan as the top buyers of Taiwanese goods at 26.6%, 16.2%, 13.6% and 6.8% respectively, international demand has largely substituted for weaker domestic consumption. 99.1% of national exports consisted of industrial products from the high-technological industry (DGBAS, 2008). Being the third and fourth largest trading partners, the demanding domestic markets for the US and Japanese supplier contracts encourage Taiwan firms to develop more sophisticated and superior quality products to secure these foreign manufacturing contracts. Collaborations between Taiwan and US Information Technology (IT) and electronics industries also facilitated the development of an industry global supply chain. Indeed the demands for sophisticated and superior quality products by its export partners have a reinforcing effect in increasing local domestic demand and sophistication.

Related and supporting industries

The Taiwan government’s efforts in zoning industrial development through the clustering of science parks, research institutions and universities have reinforced the upgrading of knowledge, innovation and sped up industry growth. Government planned industry clusters like the Hsinchu Science Park situated near National Chiao Tung and National Tsing Hua Universities—two of Taiwan’s top science and engineering universities—have claimed credit to more than 2,536 industrial patents. The Science Park also houses the Taiwan Semiconductor Manufacturing Company and United Microelectronics Corporation—the world’s top two semiconductor foundries—and reported a total product level of NT\$553.379b and a growth of 4.25% over the previous year (Chan and Pretorius, 2006; China Post,

2008). In addition, the close proximity of Taiwan to technology clusters in China like Zhongguancun China Science Park may foster increased technology sharing and thus improve the region's competitiveness

The Taiwan SMEs have also benefited from the government's special exports loan policies that offered significantly lower interest rates in borrowing. Although Taiwan is plagued by less than sound banks, SMEs enjoy ease of access to loans (ranked 38) and venture capital availability (ranked 14) (WEF, 2008). The financial institutions appear to be geared toward being capable of financing only SMEs.

State of cluster development

With small SMEs filling almost all the cracks and crevices in an industry, Taiwan SMEs have collectively created a critical mass that makes up for the inefficiencies of each undersized member. The business network is so dense with an army of scientists and engineers⁶, companies sticking to their "core competence" in every niche, high company investments in R&D and strong collaboration between research institutions and the business sector in innovation. Taiwan's cluster economy is positioned first worldwide in terms of the patenting per capita of new inventions and in the state of cluster development (WEF, 2008).

Rescuing Taiwan contract manufacturers

Shifting along the value chain

As Taiwan embarks on its transition from an efficiency-driven to an innovation-driven economy, it begins to face many of the same economic issues that have plagued other developed economies: the relocation of labour-intensive industries to countries with even lower costs of labour. Taiwan firms are increasingly acting as management centres that take in orders, produce them in other countries with lower labour costs and then ship the final products to the US and other markets. Taiwan's future development will have to rely on further transformation to carve its new niche in the global supply chain. In this subsection, we follow Lin's (2004) argument that transformation may go either backward (an even stronger focus on R&D through global innovation networks), or forward (brand-building) through the value chain.

Backward integration: Research and development (R&D)

In strengthening its position in the value chain, the contract manufacturer has to go beyond manufacturing to cooperation with other partners in the global innovation networks, bridging the

⁶ In 1998, Taiwan produced nearly 50,000 engineers per year, 25% of them graduates (Economist, 1998).

relationship between its customers and key technology/component providers. Thus, Taiwan's contract manufacturing firms must start integrating their contract manufacturing strategy with the firm's overall corporate strategy. These firms should enhance their *network innovation agility*⁷ (Lin, 2004) through increasing flexibility of their manufacturing system, modularising their products, facilitating cross-functional integration, and building a culture of market orientation.

By embarking on modularity of products, Taiwan contract manufacturers may relieve themselves of the scope of activities it performs on the island, and delegate the final modification to other destinations with lower labour costs (eg, China) while expanding their grip on the overall supply chain. Coupled with the rise of major R&D hubs around the world, and a well-educated and well-associated (business) Taiwanese diaspora in other countries (eg, Silicon Valley), Taiwan contract manufacturers have already a foot in the global innovation network that it needs to integrate with its contract manufacturing business. The Taiwan government must now summon its prodigal children and coordinate their operations and efforts with key technology/component providers in the product innovation processes; for instance, Intel and Asustek working together to produce the Eee PC. Intel agreed to produce a 900-megahertz microprocessor and associated chips while Asustek leveraged on its connections with big component manufacturers to produce a prototype in one month (Nam, 2007).

There is no point in trying to create the next Silicon Valley without the Valley's remarkable resources: two world-class universities, Stanford and Berkeley, and a big financial centre, San Francisco (Economist, 2009g). Taiwan has its National Taiwan University of Science and Technology, National Chiao Tung and National Tsing Hua Universities and the ITRI, however, its financial market sophistication is ranked 58 and languishes behind its peers in the transitional 2—3 stage (WEF, 2008). To ease businesses getting credit, the Taiwan government has recently amended its civil code to allow parties to a pledge agreement to set the loan amount as a maximum line of credit (World Bank, 2008b). The local financial institutions with their unique loans policies have created a unique environment where SMEs thrived in, however, there is still much to be done to beef up the soundness of its banks, and improve financial market sophistication to support firms that must participate in global network innovation agility.

Forward integration: Brands and distributions

By marketing its own-brand products, contract manufacturers can increase their profitability and fully utilise their manufacturing capacities. However, the Taiwan contract manufacturers' efforts in brand-building have been largely dismal, and in certain cases have not been as profitable as the contract

⁷ Network innovation agility, the ability to respond quickly to new market trends and to accelerate product development in the context of the global innovation networks, determines the competitiveness of networked firms in the knowledge economy (Lin, 2004).

manufacturers would have liked. In Tang, Liou and Peng (2008), the authors found that Taiwan contract manufacturers were limited in establishing their own brand names outside the industrial channel networks. End consumers in other parts of the world do not have any clue to associate these contract manufacturers with the end products. The island's contract manufacturers have established a global reputation for their products but yet these same firms still operate primarily as anonymous contract manufacturers. Many consumers still regard Taiwan as being typical of low-cost, down-market Asian producers of commodities with no other defining characteristics of their own; for example, Acer Japan's performance remained only modest after eight years of doing battle and Acer America abandoned the US consumer market after losing \$45m and struggling for three years (Amine, Chao and Arnold, 2008).

Taiwan contract manufacturers must break from being a follower of directions of their big contract manufacturing customers and start getting a direct understanding of consumers when building their own brands. They have to disengage from the tendency to "me too, but better" non value-adding activities, and stop continually adding more features to existing products without a clear market orientation. To increase the new product success rate, Taiwan contract manufacturers must learn to integrate the firm's manufacturing with R&D and marketing resources to respond to market demands. In recent years, Taiwan contract manufacturers like Acer and Asustek have carved out a niche market and created a disruption in the IT arena with the introduction of Netbooks (Kharif, 2008). The introduction of Netbooks is significant as it plays on the Taiwan contract manufacturers' economies of scale with big component manufacturers to obtain component prices lower than any Western manufacturer could through large orders. The Taiwan contract manufacturers need to identify more of such niche markets that play well to their strengths instead of trying to compete in already overcrowded markets by increasing functionality.

"Country of origin": Images and ethnocentrism

Zhang (1996) defines country of origin (COO) as "information pertaining to where a product is made" and is operationalised and communicated through the "made in" prefix. It is important to understand the effects that COO has on brand-building as they are not absolute for any given country. COO effects may be influenced by a product class (Kaynak and Cavusgil, 1983), and are more favourable for countries in higher levels of development (Amine and Shin, 2002). Nagashima (1970, 1977) found that a country's image is influenced by *representative products, national characteristics, economic and political background, and history and traditions*, and these variables may change rapidly.

Regrettably for Taiwan contract manufacturers, Western and Japanese consumers have associated the "Made in Taiwan" label with a strong negative image of poor-quality products, and remain unconvinced that a Taiwanese company could manufacture and support products of sufficient quality

and reliability to meet their needs. Few consumers know that Taiwan manufactured good quality products for sale to foreign producers as OEM components. In addition, a lack of recognition of many Taiwan contract manufacturers' names further undermined consumer confidence. The Taiwan Ministry of Economic Affairs pursued a vigorous and persistent "good-quality producers" advertising campaign in Western business publications to transform its early COO effect from negative to positive—from "It's very well made in Taiwan" in 1993 to "Taiwan: Helping leading companies reach targets" ten years later⁸. The good-quality producers' promotion and marketing activities were unfortunately, not adequate to distinguish them from other poor-quality contract manufacturers (Amine, Chao and Arnold, 2005). More recently, mainland Chinese companies have been plagued by an actual or perceived lack of quality (eg, the recent poisoned dairy products incident in Economist (2009c)) and this has done nothing to help to improve the image of Chinese products.

Taiwan contract manufacturers (eg, Acer) found greater success in China though a shared Chinese culture and history despite persistent animosity between the countries' leaders. In another light, Chinese consumers might prefer Taiwanese products for the reason that they are the "least foreign". "Made in Taiwan" may thus promote positive COO cues through persuasive advertising campaigns that are targeted to ethnocentric consumers in China.

Recent market developments in China have highlighted that the *asset-augmenting* alternative (Deng, 2007; Hoskisson et al., 2004) to brand-building may be another viable route. In 2004, the Lenovo Group acquired IBM's PC business, and in 2002, another large Chinese PC maker, TCL acquired Schneider, a bankrupt German television maker with the intention of selling its product line under the century-old brand name (Hamm, Engardio, and Balfour, 2004; Khermouch, Einhorn, and Roberts, 2003). The mainland Chinese have levered on acquisitions to avoid investing in expensive brand-building as their Taiwanese cousins have had to do.

Taiwan contract manufacturing may embark on a two-pronged strategy of brand-building. In going global, Taiwan contract manufacturers should take a leaf out of its cross-strait neighbour's globalisation books by acquiring foreign brands to absorb the positive COO messages usually associated with Western brands. In brand-building in China, it should play to its strengths of a shared Chinese culture and positive ethnocentrism to compete effectively against Western brands in the Chinese market.

⁸ The government embarked on promoting Taiwan as a tourist destination from 2004 with "Today's Taiwan: Taiwan welcomes you with a smile", and "Taiwan: Touch your heart" in recent years.

Conclusion

This paper has attempted to provide ideas on how Taiwan can continue to grow its economy as its contract manufacturing customers increasingly shift to engage the contract manufacturers in other economies offering lower manufacturing costs.

The findings suggest that Taiwan firms should shift along the value chain (either direction) with deeper cooperation with other technology/component providers for network innovation agility, or to make further inwards downstream by engaging in brand-building and growing channels of distribution. In brand-building, we have also highlighted the effects that COO has on brand building. In this section, we highlight the implications that our findings have for practice and future research.

Implications for practice

Shifting along the value chain

With its large pool of scientists and engineers, high company spending on R&D, and strong collaboration between research institutions and the business sector in innovation, Taiwan is positioned first worldwide in terms of patenting per capita of new innovations (WEF, 2008). However, it appears that Taiwan has not been able to convert its findings of technological research to engines for economic growth. Taiwan's GDP per capita exceeded US\$10,000 in as early as 1992, but has remained stagnant even up to recent years at between US\$14,000 (2004) and US\$17,000, barely registering US\$17,270 in 2008. Economists even expect the 2009 GDP per capita to fall to US\$13,870 (EIU, 2009). The tangible contribution of technology research to Taiwan's economic growth appears to be limited and may be caused by declining profit margins in contract manufacturing. Taiwan has to upgrade its position in the value chain to engage in greater value-adding activities.

In shifting upwards the manufacturing value chain, Taiwan contract manufacturers have to cooperate with other partners in the global innovation networks and to do more to bridge the relationships between its contract manufacturing customers and key technology/component providers. Network innovation agility, the key focus of these relationships requires the Taiwan government to ease restrictions on the production of higher-end goods such as semiconductors and LCD panels; a restriction it has held for fear of China's inferior business development. Since the late 1990s, the mainland Chinese authorities have been doing everything they could to tempt expats back, upgrading their universities, often working with foreign institutions, setting up science parks and welcoming foreign companies. Mainland China is now playing an important role in providing key technologies and components and Taiwan must engage its cross-strait neighbour in its global innovation network.

The shift downwards the value chain is however, not without its perils. Taiwanese firms need to be cognisant that the “Made in Taiwan” label may not always conjure the expected COO images. Both nationality and product class were found to influence COO imagery. Taiwan firms would do well to leverage on ethnocentrism; eg, to focus on a “Made in Taiwan” label when exporting to China as the cultural distance for Taiwan is less distant as compared to a western brand. When considering entering western economies, Taiwan firms would do well to focus on brand name licensing through joint ventures or acquisitions through merger and acquisitions. Care must be taken though when approaching brand-building so as not to incur the wrath of contract manufacturing customers, revenues from these customers ultimately pay for the expensive, long-term brand-building efforts.

Beefing up Taiwan’s institutions and financial market sophistication

While Taiwan receives top marks in many of the pillars of an economy’s competitiveness (WEF, 2008), the economy does less well in its institutions (ranked 40), and financial market sophistication (ranked 58). The deterioration in its institutions may be attributed to the political struggle between the Kuomintang and the Democratic Progressive Party that polarised the island’s population. It must now reform and isolate its political differences from the bureaucracy to restore public trust in its institutions. Its lag in financial market sophistication among its peers in the transition stage 2—3 has been the result of less-than-sound banks and restrictions on capital inflows. The island’s government has taken initial steps in the early 2000s to liberalise its financial institutions: the passage of legislative packages on financial reform, the mergers of state-owned financial institutions, and the easing of restrictions on trade and capital flows with mainland China. However, these steps have taken too long with reforms frequently tainted by accusations of corruption. Coupled with the current economic downturn, financial reform is likely to be an uphill task for President Ma’s government. To support its contract manufacturers in achieving global network innovation agility and/or brand-building, Taiwan’s government has to evolve its financial institutions with greater agility.

Antagonising mainland China adds little value

The island economy could perhaps also do better in not antagonising mainland China with outward declarations of independence. In post Chinese civil war and faced with a communist and isolationist regime in Beijing, most countries recognised the government in Taipei as the legitimate Chinese government. However, with the then US President Richard Nixon’s visit to Beijing in 1972, and the later visit to the US by the then Chinese Vice-Premier Wu Yi with more than 200 entrepreneurs, the opening up of China has released millions of new entrepreneurs onto the world market. The Chinese authorities have certainly taken a leaf off Taiwan’s books on the part that the overseas Chinese have played in the island economy’s take-off. It has now grown into an economic and political powerhouse that has considerable influence over other countries’ relations with Taiwan without even needing to

resort to military invasion. To participate effectively in global network innovation agility, Taiwan must avoid antagonising the mainland Chinese government or it risks further isolation when Beijing threatens draconian penalties on other economies that have dealings with the island (eg, China calling off the Sino-EU summit when Nicolas Sarkozy met the Dalai Lama). Perhaps this time, President Ma and future Taiwan government officials should reach toward the olive stalk from the outstretched paws of Tuantuan and Yuanyuan, the goodwill gift of two pandas from China to Taiwan that symbolise “peace, unity and friendship”.

Implications for research

As Taiwan contract manufacturers engage in a strategy change to brand-building, these endeavours have opened up opportunity for conflict in growth segments with the contract manufacturers’ customers. The strategy change is risky as it fundamentally changes the firm’s external business relationships and sends a strong signal to their customers that the commitment to the OEM partnership is weak. Some customers with strong bargaining power will transfer their contracts to dedicated manufacturing service providers, while others have even taken drastic measures such as seeking import bans of branded products of their contract manufacturing suppliers (eg, IBM vs Asustek in Allison and Hille (2007)). It is thus important to investigate what strategies are available to Taiwan contract manufacturer firms to build brands while not incurring the wrath of their contract-manufacturing partners.

References

- Allison, K. and Hille, K. (2007). IBM seeks import ban on Asustek. *Financial Times*. London (UK). December 7, 2007.
- Amine, L. S. and Chao, M. C. H. and Arnold, M. J. (2005). Executive Insights: Exploring the Practical Effects of Country of Origin, Animosity, and Price-Quality Issues: Two Case Studies of Taiwan and Acer in China. *Journal of International Marketing*, 13(2), 114—150.
- Chan, K. Y. and Pretorius, M. W. (2006). Successful experience from Taiwan's Hsinchu Science Park - a guideline for a new Innovation Hub. In *Proceedings of the 15th International Conference on Management of Technology*, 2006.
- China Post. (2008). Hsinchu Science Park production up 4.25% in first half of year. <http://www.chinapost.com.tw/business/asia/%20taiwan/2008/08/12/169717/Hsinchu-Science.htm>. The China Post, August 12, 2008. Retrieved March 20, 2009.
- CEPD. (2009). IMD: Taiwan's SME Performance 4th Best in the World. *Taiwan New Economy Newsletter*, 94, <http://www.cepd.gov.tw/encontent/print.aspx?sNo=0010855>. Retrieved March 26, 2009.
- DGBAS. 2008. National Statistics, Republic of China (Taiwan). <http://eng.stat.gov.tw/mp.asp?mp=5>. Directorate General of Budget, Accounting and Statistics. Retrieved March 20, 2009.
- Delios, A. and Beamish, P. W. (2004). *International Business: An Asia Pacific Perspective*. Pearson Education South Asia (Prentice Hall), 2004.
- Deng, P. (2007). Investing for strategic resources and its rationale: The case of outward FDI from Chinese companies. *Business Horizons*, 50, 71—81.
- Economist, The. (1998). Silicon Valley (East): Making computers for other people may not be glamorous, but it has shown Taiwan its future. *The Economist*, November 7, 1998.
- Economist, The. (2005). Onshoring: Taiwan is shifting much of its manufacturing to the mainland. *The Economist*, January 13, 2005.
- Economist, The. (2007). The export juggernaut: Good for China, but good for its neighbours too. *The Economist*, March 29, 2007.
- Economist, The. (2008a). Resisting China's charm offensive: Rather than bringing unification closer, new economic ties solidify the status quo. *The Economist*, November 6, 2008.
- Economist, The. (2008b). Event cuddler: Man and mail can now travel directly between Taiwan and China. *The Economist*, December 18, 2008.
- Economist, The. (2008c). Finally thinking Strait: The first steps in what could become financial integration in Greater China. *The Economist*, July 10, 2008.
- Economist, The. (2009a). Burger-thy-neighbour policies: Attacks on China's cheap currency are overdone. *The Economist*, February 5, 2009.
- Economist, The. (2009b). Mirror, mirror on the wall: The ugliest economy of them all?. *The Economist*, February 12, 2009.
- Economist, The. (2009c). The flaws in Chinese business: Time to change the act. *The Economist*, February 19, 2009.
- Economist, The. (2009d). Trying times for Taiwan's judiciary: The prosecution of a former president may be compromising judicial integrity. *The Economist*, January 29, 2009.

- Economist, The. (2009e). Bye bye sell: Tired of bad news about the financial markets? Censor it. The Economist, February 5, 2009.
- Economist, The. (2009f). A time for muscle-flexing: As Western economies flounder, China sees a chance to asses itself—carefully. The Economist, March 19, 2009.
- Economist, The. (2009g). Magic formula: The secrets of entrepreneurial success. The Economist, March 12, 2009.
- Economist, The. (2009h). How China sees the world: And how the world should see China. The Economist, March 19, 2009.
- Ghemawat, P. (2003). The Forgotten Strategy. Harvard Business Review, November, 2003.
- Hamlin, K. (2009). China's Economy Shows Signs of Recovery on Stimulus (Update3). <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=ackHHxtWoFHc#>. Bloomberg. February 13, 2009.
- Hamm, S. and Engardio, P. and Balfour, F. (2004). Big Blue's Bold Step into China. BusinessWeek, December 20, 35—36.
- Hoskisson, R. E. and Kim H. and White. R. E. and Tihanyi, L. (2004). A framework for understanding international diversification by business groups from emerging economies. Advances in International Management, 16, 137—163.
- Jaworski, S. P. and Fosher, D. (2003). National Brand Identity and Its Effect on Corporate Brands: The National Brand Effect (NBE). Multinational Business Review, 11(2), 99—108.
- Kaynak, E. and Cavusgil, S. T. (1983). Consumer Attitudes Towards Products of Foreign Origin: Do They Vary Across Product Classes? International Journal of Advertising, 2(2), 147—57.
- Kharif, O. (2008). Small, cheap—and frighteningly popular. BusinessWeek, December 8, 2008.
- Khermouch, G. and Elhorn, B. and Roberts, D. (2003). Breaking into the Name Game. BusinessWeek, April 7, 54.
- Lin, B.-W. (2004). Original equipment manufacturers (OEM) manufacturing strategy for network innovation agility: the case of Taiwanese manufacturing networks. International Journal of Production Research, 42(5), 943—957.
- Lin, C.-H. and Kao, D. T. (2004). The Impacts of Country-of-Origin on Brand Equity. The Journal of American Academy of Business, September, 2004, 37—40.
- MOC-PRC. (2009). News Release of National Assimilation of FDI in January 2009. http://www.fdi.gov.cn/pub/FDI_EN/Statistics/FDIStatistics/ExpressofForeignInvestment/t20090219_101920.htm. Ministry of Commerce, PRC. February 19, 2009. Retrieved March 9, 2009.
- MOE-ROC. (2008). Educational Statistical Indicators. <http://english.moe.gov.tw/ct.asp?xItem=9081&ctNode=816&mp=1>. Ministry of Education, ROC. June 6, 2008. Retrieved March 19, 2009.
- NSC. (2009). National Science Council: Hsinchu Science Park. <http://web1.nsc.gov.tw/ct.asp?xItem=5137&ctNode=1011&mp=7>. Retrieved March 19, 2009.
- Nagashima, A. (1970). A Comparison of Japanese and US Attitudes Towards Foreign Products. Journal of Marketing, 34, 68—74.
- Nagashima, A. (1977). A Comparative 'Made In' Product Image Survey Among Japanese Businessmen. Journal of Marketing, 41, 95—100.

- Nam, S. (2007). The Jonney Machines. *Forbes*, 180(11), 152—54.
- Norris G.(2005). Manufacturers under pressure to create famous brand names. *Taiwan Journal*. November 11, 2005.
- Pao, W.C.(2006). Taiwan to remain a successful economy. <http://www.chinapost.com.tw/print/78117.htm>. The China Post. March 6,2006. Retrieved March 20, 2009.
- Porter, M. E. (1998). *The Competitive Advantage of Nations*. Free Press, 1998.
- Shih, S. (2002). *Growing Global: A Corporate Vision Masterclass*. Singapore: John Wiley & Sons, 2002.
- Tang, Y.-C. and F.-M. Liou and S.-Y. Peng. (2008). B2B brand extension to the B2C market—The case of the ICT industry in Taiwan. *Brand Management*,15(6), 399—411.
- Tsai, K.-H. and Chang, H.-C. (2008). The Contingent Value of Inward Technology Licensing on the Performance of Small High-Technology Firms. *Emerging Markets Finance & Trade*, 44(4), 88—98.
- World Bank, The. (2008a). *Knowledge Economy Index (KEI) 2008 Rankings*. http://siteresources.worldbank.org/INTUNIKAM/Resources/KEI2008Highlights_final12052008.pdf. Retrieved March 19, 2009.
- World Bank, The. (2008b). *Doing business 2009. The international bank for reconstruction and development / The World Bank*, 2008.
- WEF. (2008). *The Global Competitiveness Report 2008—2009*. World Economic Forum, 2008.
- Zhang, K. H. (2001). China's Inward FDI Boom and the Greater Chinese Economy. *The Chinese Economy*, 34(1), 74—88.
- Zhang, X. (2000). Motivations, objectives, locations and partner selections of foreign invested enterprises in China. *Journal of the Asia Pacific Economy*, 5(3), 190—203.