

This file was downloaded from the institutional repository BI Brage - <http://brage.bibsys.no/bi>  
(Open Access)

## The Taiwanese Economic “Miracle”: Continuing?

Authors:

**Anne Welle-Strand**, BI Norwegian Business School

**Pei-Fen Chen**, National Chi-Nan University, Taiwan

**Graeme Ball**, BI Norwegian Business School

This is the authors' final and accepted refereed manuscript to the article published in

***East Asia, 28 (2011) 4: 329-350***

DOI: 10.1007/s12140-011-9151-2

The publisher, *Springer*, allows the authors to self-archive the final version of his/her article (but not Springer's PDF version) on his/her own website and/or the repository of his/her institution..  
(Publisher's policy 2012).

## **The Taiwanese Economic “Miracle”: Continuing?**

**Anne Welle-Strand**

**Professor, BI Norwegian Business School**

**Nydalsveien 37, 0484 Oslo**

**+47 4641 0765**

**anne.welle-strand@bi.no**

**Pei-Fen Chen**

**Associate Professor, National Chi-Nan University, Taiwan**

**Graeme Ball**

**BI Norwegian Business School**

## The Taiwanese Economic “Miracle”: Continuing?

**Abstract:** The island of Taiwan has successfully managed sixty years of fast-paced economic growth. Taiwan is a demonstrably resilient player in the global economy, while also maintaining high levels of income equality. However, there is a great deal of uncertainty surrounding whether the factors that have enabled and sustained the Taiwanese development project thus far will be an adequate means of managing the contemporary challenges facing the island. Taiwan may be becoming increasingly vulnerable to global economic conditions, and the island’s future seems also to be increasingly tied to developments in the Chinese mainland. This paper examines the prospects for a continuing Taiwanese growth paradigm from both a cultural and an economic perspective and finds reason for optimism. This optimism is contingent on the strength of international export markets and prudent management of cross-Strait relations with the Chinese mainland.

**Key Words:** Export-orientation, East Asia, Taiwan, economic growth, development, cross-Strait relations

### *Introduction*

Taiwan has defied the norms of conventional development paths through the maintenance of a highly egalitarian social structure and high levels of income equality throughout its development, even while under authoritarian rule. Contemporary Taiwan exports nearly four times the value of goods and services per capita than the United States [33, 34]. Few countries can demonstrate comparably high levels of economic success while simultaneously enjoying one of the lowest unemployment rates in the world.

The small, mountainous island of Taiwan lies some 160 kilometres off the coast of Mainland China’s Fujian province. Subject to the destructive power of numerous natural hazards such as

earthquakes and typhoons, the island's 36,000 square kilometres of land nevertheless boasts 40,000 kilometres of paved roads [34]. This island of 23 million people has endured a long history of colonization by foreign powers, yet it has subsequently managed to achieve high levels of prosperity and to build a highly developed industrial society. Many other formerly colonized economies, such as those in Sub-Saharan Africa, have experienced economic difficulties since the exodus of their colonial overlords and remain comparatively stagnant. In the case of Taiwan however, the infrastructure constructed during the occupation by Japanese Imperial forces constituted the preliminary launching point for Taiwan's rapid modernization and development [8: 27]. Over a fifty year period, Japanese management "primed" the economy for further economic growth. The enabling effect of these infrastructural upgrades on economic growth was further assisted by large quantities of both financial<sup>1</sup> and military assistance provided by the United States between 1951 and 1964 [14: 18]. The combination of significant infrastructure projects completed under Japanese rule and the influx of large but temporary financial aid from the US provided the initial conditions for jumpstarting Taiwan's economic growth. The KMT's (Kuomintang) successful transfer of Chinese gold reserves to Taiwan in 1949 may have also had significant positive effects for the island's early economic stability and development.<sup>2</sup>

Taiwan has also succeeded in throwing off its entrenched dictatorship, having finalized the transition to democracy by freely electing its president in 1996 [21: 97]. Perhaps most surprisingly, Taiwan accomplished the last thirty years of its political and economic development under conditions of formal diplomatic isolation from the rest of the world. These occurrences together beg the question of how Taiwan was able to overcome the challenges to its development and achieve more

---

<sup>1</sup> American economic aid to Taiwan over the period 1951 to 1964 was recorded at roughly US\$ 1.5billion.

<sup>2</sup> Watch China Times news article (2011, 4 April) 'Nationalist gold stabilized Taiwan after civil war'

than sixty years of solid growth. More importantly, identifying the probable sources of resilience to seemingly negative economic influences of the past may serve as a guide in assessing whether Taiwan's development inertia is likely to be sustained in the face of present day challenges.

In this paper, we examine the position that Taiwan occupies in the international milieu through an historical examination of Taiwan's development characteristics over the period 1950-2010. As a starting premise, we contend that Taiwan deserves much more attention than it is currently accorded in the international community. As the world's 4<sup>th</sup> largest holder of foreign exchange reserves and the world's 17<sup>th</sup> largest exporter despite being confined to a small geographic domain, Taiwan is an economic powerhouse and has been so for decades [34]. A pertinent question to address then is how the tiny island of Taiwan achieved its disproportionately prominent economic standing.

The purpose of this paper is twofold. The primary aim is to identify the likely set of economic, and cultural factors that have significantly contributed to Taiwan's successful development. The identification of salient factors that affect development may provide a rough but informative set of potential guidelines for development practitioners elsewhere. The second objective is to provide a reasonable assessment of the most pressing contemporary challenges facing the island and outline some of the difficulties that these challenges may pose to future development. The broad structure of the paper is as follows: First, we identify key structural features of the Taiwanese economy and society and argue that these features have allowed for considerable flexibility to changing economic and socio-political conditions. We divide these features into two broad categories; the first addresses cultural factors and the second considers economic variables. Second, we provide historical evidence of Taiwan's successful adaptation to several disruptive macroeconomic events. We then present some of the key economic and cultural challenges facing contemporary Taiwan, and provide an assessment of the economic implications of these challenges on future growth. We argue

that there is a case for cautious optimism for continued high growth, but this prediction is contingent on a number of important factors. The final section provides concluding remarks.

## ***Adaptability***

One of the key characteristics of Taiwanese development has been the ability to change rapidly and successfully adapt to new economic and political conditions. While this characteristic may be a common element of many other successful development stories, the particular combination of policy factors and economic structures that enabled Taiwan to carry out various adaptations was unique, highly successful, and continuous over the course of a sixty year period. We identify five elements that were basic to Taiwanese success during the latter part of the twentieth century: the Confucian-derived preferences for hard work, accumulation, and social harmony, the high proportion of small and medium-sized enterprises (SMEs) in the economy, and the focus on export-oriented growth.

## ***Confucian Foundations***

Taiwan exhibits a shared cultural heritage with the Chinese mainland, as do the other economic success stories of East Asia. There are important elements of the Confucian culture that may bear explanation in regards to economic development, particularly because Confucianism “directly affects social and economic behaviour and institutional structures” [31: 134]. First and foremost, Confucian philosophy promotes a reverence for learning. In addition to Taiwan itself, the preference for education can be observed in Mainland China, Japan, South Korea, Hong Kong, and Singapore [24: 91]. Second, a focused work ethic pervades the Confucian ethos, and in general this emphasis on hard work also characterizes the countries of East Asia [14: 131-132]. An emphasis on social harmony is a third element common to Confucian societies and is likely to affect development characteristics of these societies, particularly with respect to equality [24: 91]. A key underlying

assumption of this paper is that the influence of Confucian culture, with specific regards to education, hard work and social harmony has been particularly advantageous in achieving Taiwan's economic "miracle". Hence, in addition to statistical data on economic variables, cultural influences on the economy will be explored. As Taiwan and the other East Asian economies are now integrated into the global economy and thus subject to the myriad political and cultural pressures therein, it is also worthwhile to examine the extent to which Confucian values still dominate the societal landscape and whether they continue to have explanatory power in the continuing success of these economies.

### Hard Work

East Asian societies are characterized, *inter alia*, by what is referred to as the Confucian work ethic or more concretely "the desirability of hard work as a social discipline" [24: 91]. Often interpreted, rightly or wrongly, as an Asian version of the Protestant work ethic, the Confucian preference for hard work is a likely explanatory factor in East Asia's development success. In the words of one scholar, "there is a tendency to credit the Confucian work ethic...with providing people in the Confucian regions with the motivation, discipline, and skill necessary to engage in many essential processes of modernization" [31: 133]. A common cultural emphasis on hard work may have had positive economic effects in Taiwan, particularly during the latter phases of its development, as the island economy registered average annual manufacturing output increases of above 6 percent, higher than any other country including the United States over the period 1979-2009 [2: 2]. Although it is very likely that factors other than Confucian-based cultural norms affected Taiwan's productivity, it appears at least intuitively acceptable that a collective societal predisposition towards hard work would bear positively on development efforts.

## Capital Accumulation

In Taiwan, the Confucian-derived cultural preference for capital accumulation can be observed in two distinct forms: the accumulation of financial or physical capital, which can be inferred from the domestic savings rate, and accumulation of human capital, which is economist jargon for education.

Much like their mainland Chinese and Japanese counterparts, the people of Taiwan seem to exhibit a cultural preference for saving, and this phenomenon can be observed in government as well as in the household sector. During the early stages of Taiwan's development project in the 1960s, significant increases in the savings rate coincided with a sharp increase in government savings, largely enabled by a decrease in government consumption [20: 24]. The high rate of savings is a hallmark of the East Asian development model and continues to characterize contemporary Taiwan. Financing domestic capital formation through domestic savings (i.e. a high domestic savings rate) indicates relatively low reliance on foreign capital for investment needs, and therefore provides the added benefit of a significant degree of economic insulation from international capital market volatility. The stability of investment resulting from domestic financing permits the national government to exhibit considerable autonomy in shaping the development of the economy. The memory of hyperinflation was still fresh in the minds of the ruling elite as they retreated from the Chinese mainland to the island of Taiwan in 1949, and they may have been motivated to do whatever was necessary in order to avoid vulnerability, economic or otherwise, to communist influences. Ensuring a reliable source of investment funds and thereby a strong economy through the maintenance of a high domestic savings rate may have been one way of minimizing susceptibility to such communist influence from the Mainland.

The degree to which the preference for saving has affected Taiwanese development should not be underestimated. Domestic savings provided virtually all the financial capital required for the investment boom that was crucial to Taiwan's growth throughout the period between 1965 and



1981. The average domestic savings rate of 28.7 percent over this period marginally exceeded the investment rate of 28.4 percent [14: 157]. The current savings rate, calculated as of 2008, sits virtually unchanged at 27.0 percent [See Fig. 1]. Present day Taiwan's maintenance of high domestic investment financing indicates that the preference for saving continues to characterize the country. Moreover the domestic savings rate has remained consistently (on average) above the rate of investment and this is a key component that has conferred a significant degree of national economic autonomy to the island.

Taiwan is also characterized by a cultural preference for human capital accumulation, that is, education. Taiwan's leaders apparently grasped the importance of education early on in the country's development project and consistently devoted a substantial portion of the national budget to education expenditures, approximately 6 percent of gross domestic product (GDP) per year on average between 1961 and 2009 [39: 15]. These investments in human capital have very likely been instrumental in enabling the economy to re-orient itself from manufacturing towards high-tech industry and services, which require specialized knowledge of sophisticated technical and managerial procedures.

As evidence of the above claim, Taiwan's average years of schooling has increased dramatically, more than 50 percent over the past thirty years, while educational inequality has fallen by more than 40 percent over the same time period [16: 612]. In 1980, over 70 percent of Taiwan's population had not attended senior high school while by 2008 the percentage had dropped to less than 25 percent. Inhabitants with at least a high school education increased from 19.5 percent to over 35 percent. Over the same period, the percentage of the population with a college or university education nearly doubled from 10.4 percent to 23 percent by 2008, and the pace of this increase has steadily risen since 2000 [39: 17]. Knowledge structures are salient elements of the innovation process and "in the long run, the quality of human capital will enable Taiwan to adjust and upgrade its industrial

structure to meet the new challenges” [4: 215]. The preference for the accumulation of human capital has played, and is likely to continue to play, a significant role in Taiwan’s development.

#### Socio-Political Harmony: Income Distribution, Unemployment, and Democracy

The socio-political structure of Taiwan has traced a markedly different path than other societies, particularly with regard to inequality, and these socio-political differences have contributed to the relatively smooth development of the economy. We highlight three broad areas in which the preference for social harmony has manifested itself in Taiwan: egalitarian levels of income distribution, a sustained history of extraordinarily low levels of unemployment, and democratization. In terms of democratization, it is fair to assume that Taiwan style democracy may have several different roots. One is the age-old, local understanding of “social harmony” according to Confucianism. Another is the impact of President Sun Yat-sen’s political thinking, shaped by Confucian tradition, Western liberalism and Leninist ideology<sup>3</sup>. Lastly, an important influence was that of Western cultures, the United States’ in particular. This was the result of a natural shift in perceptions and attitudes introduced by students returning from overseas studies, but also an outcome of the U.S. struggle to promote Western understanding of democracy in Taiwan.

The tremendous growth in Taiwan’s GDP over time has been accompanied by only marginally increasing income inequality, and inequality remains demonstrably low when compared with other economies at a comparable stage of development [40]. Even Taiwan’s recent historical unemployment peak of above 5 percent was still only around half the US rate of 9.6 percent [2: 1]. The preference for social harmony and the need for political stability were jointly satisfied through the agrarian land reforms of the 1950s which provided an initial state of relative equity between rich

---

<sup>3</sup> More details in James Gregor’s “Confucianism and the Political Thought of Sun Yat-Sen”

and poor<sup>4</sup>. This initial equity allowed Taiwan to largely avoid the “disparity problem” often observed in industrializing countries at the middle-income stage, where dissatisfaction caused by income inequality between agricultural and industry workers often becomes a significant source of social instability [10: 4]. Because industrialization in Taiwan was also not focused exclusively on urban areas, farmers too were able to increase their income by taking off-farm employment in less busy farm seasons. The end of the 1970s also saw a further equalization of incomes as the Taiwanese government intervened in market affairs by offering protectionist policies towards agriculture [14: 57]. Taiwan has experienced very little income inequality over the course of its rapid development.

In 1953 the highest quintile of income earners received 60 percent of Taiwan’s total household income while the lowest quintile earned less than 3 percent. However, between 1953 and 1980 there was a fairly dramatic convergence between the lowest and highest income groups which indicates the burgeoning of a middle class by the early 1970s [See Fig. 2]. The disparity between lowest and highest income earners became progressively smaller over time, which suggests that over time most income earners became relatively richer, while the income of high earners stagnated. From 1976 to 2008, the lowest income earners in Taiwan experienced a gradual decrease as a percentage of total earnings from almost 9 to 6.6 percent while the top earners in the economy have enjoyed a gradual increase from just above 37 to a little over 40 percent. In other words, the rich have been growing relatively richer and the poor have been growing relatively poorer, though the magnitude of increase in the degree of inequality is fairly small, especially in comparison with other areas of the world.

For all income groups, average disposable income increased from 1976 to 2008, the period in which exports came to dominate the economy, indicating an increase in absolute incomes across the

---

<sup>4</sup> A detailed description of the Taiwanese agrarian land reforms can be found in Lawrence Lau’s monograph “Models of Development – A Comparative Study of Economic Growth in South Korea and Taiwan”.

span of the entire working population of Taiwan [See Fig. 3]. The average income for the highest quintile has however increased more in absolute terms than the other groups, and the lowest quintile has experienced the least increase in income. However, when looking at relative income distribution over the same period, it seems that the percentage change is quite constant. Historical Gini coefficient calculations for income inequality in Taiwan also indicate a similarly low but marginally rising level of income inequality<sup>5</sup>. The income inequality Gini for Taiwan fell rapidly in the late 1960s from over 0.32 in 1965 to less than 0.28 in 1980, after which it rose steadily, peaking between 2000 to 2001 [See Fig. 4]. The exceedingly low levels of income inequality experienced during Taiwan's initial growth phase had the important effect of minimizing popular opposition to government. With the incomes gained through the land reforms there was little opposition to economic growth under the Taiwanese dictatorship. The Confucian values of duty and piety may have also played a role. Low inequality allowed the authoritarian government to implement economic and social reforms with little resistance, and this state of affairs also permitted the government to channel resources that would have been used to compensate or suppress inequality to more productive purposes such as fostering economic growth.

The outward orientation of Taiwan's main industries, which were labour-intensive industries before the 1980s, has likely contributed to somewhat higher income inequality in recent decades. Taiwan's transition to technology-intensive industry has also led to widened income disparities between high-skilled and low-skilled workers. Similarly, the proportion of Taiwanese employed in the service industry has also been increasing over time [39: 34]. Higher levels of schooling have had an equalizing effect on income distribution, but in Taiwan's high-tech industries, educational inequality has led to income inequality. Service industries like insurance and financial services generally require

---

<sup>5</sup> The Gini coefficient is a relative statistical measure of inequality and the Gini for income distribution measures income inequality on a scale of 0 to 1, where 0 implies complete equality and 1 signifies complete inequality.

skilled labour, and skill-based technological change due to trade pattern changes led to an increase in relative labour demand for skilled workers and a proportionate decrease in demand for unskilled workers [16: 613]. This shift in relative labour demand may also be responsible for Taiwan's currently increasing income inequality. However, few countries of the world can boast as continuously low levels of inequality across time as Taiwan.

Another characteristic of Taiwanese development has been low unemployment. Taiwanese industries in the 1950s and 1960s began operations in rural as well as urban locations in order to take advantage of cost differentials, effectively limiting the size of the income gap between urban and rural workers. A rapidly growing urban sector and later export opportunities kept demand for agricultural output high, and these two factors together prevented the agricultural sector from experiencing declining terms of trade that have often occurred in other developing areas of the world [14: 58-9]. As a result, farmers were able to sustain high employment throughout the initial period of Taiwanese development.

Developed countries typically exhibit unemployment rates of between 4 and 12 percent [33]. In contrast, the unemployment rate in Taiwan has been comparatively low for as long as statistics have been made available. The unemployment rate has not (yet) crept higher than 6 percent and up until the turn of the millennium it fluctuated between 1.5 and 3 percent, dipping as low as 1.23 percent in 1980 [See Fig. 5]. After 2001 unemployment increased, likely due to the declining exports from global economic slowdown, as well as an economically stagnant cross-Strait relationship in the early 2000s, and peaked at over 5 percent in 2002. However, unemployment began to decrease again after 2002, perhaps supported by strong GDP growth. Since 2007-08 the unemployment rate has jumped upwards again, likely in response to the recent Global Financial Crisis.

Relatively continuous low unemployment over time helped to minimize economic and social inequality in Taiwan, and this in turn enabled the government to allocate comparatively more resources on economic growth rather than equity issues. The relatively low unemployment experienced by both the rural and urban sectors in Taiwan over the course of its development is a unique feature that distinguishes it from virtually all other countries, developed or otherwise.

After being ruled by autocracy for decades, Taiwan successfully made the transition to democracy and held its first direct presidential election in 1996. The island thus seems to occupy a hybrid position with respect to political structure wherein autocracy is seemingly beneficial for development initially, but is better replaced with a democratic rule once the country has become sufficiently affluent. In terms of development paradigm, democracy might well be unachievable at a low stage of development as “democracy and societal development require economic affluence” [4: x-xi]. Democratic elements such as free and fair elections are likely deprioritized among a largely unorganized population more concerned with agricultural yield or poverty alleviation. However, democratic reform may matter considerably more further along the course of development. The case of Taiwan appears to support this proposition. However, as discussed above (p. 9), in the case of Taiwan the concept of democracy may be unique due to the various influences it received from both the Confucian tradition of thought and the Western democracies. In terms of the relation between economic development and democracy, the Chinese mainland today seems successful in achieving economic development, while applying Confucianism and Communism.

The preferences for both physical and human capital accumulation, a domestically financed investment strategy, and conservative fiscal and financial orientation combined in such a way that Taiwan’s dictatorship might be termed “benevolent”. The term benevolent may also be an appropriate descriptor given the comparatively low levels of income inequality and unemployment experienced by the population under dictatorship. Perhaps there is something to the claim that

strong autocratic rule can be a better way to achieve economic development, at least in an initial phase, than full-fledged democracy. Taiwan's experience may provide some preliminary evidence that would seem to support this claim. The tremendous economic success of the Chinese mainland stands as further evidence that authoritarian structures may be initially preferable to more democratic structures for the strict purpose of economic development, though a full discussion of this claim is beyond the scope of this paper.

As a corollary to the history of Taiwan's progression to democracy, countries in the middle stage of development may have difficulty implementing the policy changes required to transition to the next stage in their development in the absence of democratic structures. That is, if political reforms are not supported by an increasingly educated and economically empowered citizenry, the reforms may do more to undermine economic growth than to promote it. Under pressure from development and modernization, autocratic policy makers' comparative advantage in coercion may last only temporarily as the population becomes able to organize itself and pursue its own self-interest. This pressure may build up over time regardless of the degree of benevolence practiced by a country's dictators. There is some evidence for such a scenario in Taiwan, as "while economic liberalization had been announced as a policy goal since the early 1980s, it was democratic transition that gave impetus to this policy" [4: 200]. Democratic reforms may have contributed significantly to Taiwan's continued growth.

### *Structure of Business Enterprises*

Taiwan's political leadership in the 1950s, newly retreated from the Chinese mainland seems to have been aware that hyperinflation and corruption were principal candidates for its political defeat by Mainland communists. Taiwan's political leaders were loath to encourage a repetition of that scenario, and the government laid the groundwork for minimizing such a possibility through

economic conservatism [8: 27]. Although the government made use of industrial policy for development purposes, it did so principally through the means of taxation rather than highly distorting targeted lending [4: 200]. Moreover, the conservative Central Bank of the Republic of China (Taiwan) set limits on the use of credit policy in the bureaucrats' state budgeting, further restraining exorbitant lending practices. Taiwanese industrial policy was characterized by an overriding fiscal and financial conservatism which was "originally designed to prevent a replay of the disastrous hyperinflation and currency crisis of 1947-48" [4: 202]. As a result, large state-industrial clusters such as South Korea's *chaebol* and the *zaibatsu* of Japan never materialized in Taiwan. Instead, the focus on taxation and the practice of restrained lending, together with a high interest rate, created the conditions for an economic structure largely dominated by small and medium-sized enterprises (SMEs)<sup>6</sup>.

The severely restricted lending practices of the Central Bank of the Republic of China (Taiwan) functioned as a constraint on the expansionist tendencies of the island's central planners. The authoritarian government also imposed rigorous regulation on financial institutions, and as a result, private firms had an average debt-to-equity ratio of approximately 160 percent, significantly lower than firms in other developing countries such as South Korea [4: 201]. With limited leverage imposed by regulations, in addition to conservative lending practices and together with high interest rates, the size of Taiwanese firms became similarly limited and led to the predominance of SMEs in the Taiwanese economy. This pattern continues into the present day.

---

<sup>6</sup> In Taiwan, the criteria for identifying SMEs can be formulated in one of two ways. The first pertains to primary and secondary industry and requires that a given firm have either less than US\$2.3 million in capital or fewer than 200 employees. The second formulation is for tertiary industry and includes the requirement of either less than US\$2.9 million in preceding year revenue or fewer than 100 employees.



Similar to the statistics from the US, the UK, South Korea, and Japan, SMEs in Taiwan account for more than 95 percent of all non-agricultural businesses [6]. A more striking feature of the Taiwanese approach to SMEs is that loans in value of 25 percent of GDP are provided to them, close to double that of Singapore and nearly 5 times greater than those of the US. This high rate of loan provision indicates the high and continuing level of economic importance accorded to SMEs in Taiwan, since “the primary agent for development has always been SMEs of various sorts rather than national champions” [8: 36]. Taiwan also boasts an extensive network of SME incubation centres which foster over 1250 SMEs a year, roughly half of which are start-ups. High levels of SME loan provision are also found in other so-called Confucian societies, notably Mainland China (nearly 50 percent of GDP), Japan (approximately 30 percent of GDP), and South Korea (nearly 40 percent) providing some support for shared preferences among societies with Confucian roots [5: 85-87].

SMEs continue to be the primary source of employment for a vast majority of Taiwan’s inhabitants, though the functional relationship between SMEs and the larger Taiwanese firms has been changing in recent years, becoming arguably more intertwined. As the Taiwanese government liberalized trade regulations and encouraged its larger companies to become more export-oriented, the larger firms began to dominate the SMEs by exploiting economies of scale in production. This occurrence coincided with a sectoral shift towards Internet Technology (IT) products, and Taiwanese SMEs found themselves increasingly crowded out of the export market. As a result, the SMEs were forced to re-focus on supplying the domestic market, which they did by forming partnerships with the larger exporting firms as components and materials suppliers [25]. The orientation between the two have also flip-flopped: direct export sales, once dominated by SMEs in the late 1980s, are now dominated by the large-size businesses, though SMEs continue to provide employment for the vast majority of the workforce. In 2008, SMEs comprised 97.7 percent of all Taiwanese businesses and employed 76.58 percent of the workforce. The historical lending practices and regulatory system

imposed by the Taiwanese government are key factors which resulted in the business sector being largely dominated by SMEs. Consequently, SMEs remain the dominant means of employment on the island.

### *Export-Oriented Growth*

Beginning in the mid 1950s, Taiwan's authoritarian government began to orient its development strategy towards export-promotion of light industry. The economy was gradually and incrementally liberalized through a series of tax policy changes combined with high interest rates on bank deposits and low-cost export loans [14: 36]. In 1959 the foreign exchange system was also reformed [14: 30]. Private actors were encouraged to establish more factories and service establishments and to direct output to markets abroad. The government's list of allowable imports was significantly expanded and tariffs were reduced. Tax schemes beneficial to exporters were introduced and favourable loans were given to further promote exports, although the financially conservative leadership in Taiwan preferred the use of tax incentives rather than targeted lending to encourage exporting activities. These initiatives made it more profitable for businesses to sell their manufacturing goods abroad than at home, and "by the mid 1970s about two-thirds of the economy's output growth came from the expansion of exports" [14: 29]. The Taiwanese government also created export processing zones in the mid and late 1960s and late 1970s to attract international capital and to fast-track the switch to exports [14: 49-50]. International trade then grew steadily for a forty year period until the global financial crisis struck in 2007-08. The government's conservative financial approach together with its changes in policy in the 1950s, beginning with the agrarian land reform, were the crucial elements that laid the foundation for the growth in exports and facilitated Taiwan's entry into the world economy. The series of strategic policy moves described above led to Taiwan becoming one of the world's fastest-growing economies between 1965 and 1988, with an average annual growth rate of 9.0 percent of GDP [39: 50]. The transition to outward orientation, supported by a flexible SME-

dominated economic structure, has permitted Taiwan to access global demand for its products and is widely credited as being the main driver of modernization on the island [14: 4, 8: 28, 4: 199].

Economic orientation towards exports has been instrumental in Taiwan's successful and continuing growth.

Taiwan's major trading partners today are the same as those in the 1990s and to a large extent the 1980s as well, though the composition of exports has changed markedly over the past thirty years [See Fig. 6]. Hong Kong, the United States and Japan have consistently accounted for a significant portion of Taiwan's exports and imports, although the entrance of Mainland China as a formal trading partner in 1997 has since been accounting for an increasingly large share of total trade. This trend towards increasing trade with the Chinese mainland is similar to evolutions in other developed areas of the world, and the Mainland is the number one destination for Taiwanese investment [26]. The prominence of the Chinese mainland as a prime export market for Taiwan has grown considerably from 0.5 percent in 1997 to a whopping 26.2 percent of the total in 2008. The proportion of Taiwanese exports to the US has followed the opposite trajectory, steadily decreasing over time from a high of 48.8 percent in 1984 to 12.0 percent in 2008. The percentage of exports destined for Hong Kong in 2008 stood at 12.8 percent, followed by Japan at 6.9 percent. Taiwan's exporters are increasingly focused on intra-regional trade within Asia in general, and with the Chinese mainland in particular. The degree to which this increased economic dependence on the Mainland might complicate political relations remains to be seen, though such dependence would likely be favourable for Mainland political ambitions.

Japan has consistently dominated Taiwan's percentage of total imports since 1965<sup>7</sup> and at 19.3 percent nearly doubles that of the US which stands at 10.9 percent. In between these is the

---

<sup>7</sup> Japan's dominance of Taiwanese imports may be at least partially explained by its colonial legacy.

newcomer of Mainland China, which in 2008 accounted for 13.1 percent of all imports, though the Chinese mainland's share of the total has been steadily increasing since formal trade relations began. South Korean imports trail behind at 5.5 percent [39: 227-230]. Similarly to exports, Taiwan's imports are increasingly dominated by countries in the South East Asia region, which has led some scholars to examine the contentious idea of decoupling from Western markets [11, 15].

## ***Resilience***

Over the course of its development, Taiwanese society has demonstrated the ability to adapt to changing economic and political conditions. The land reforms of the 1950s were key elements which allowed the economy to expand and lay the foundations for a burgeoning middle class. Later reforms were equally important in sustaining Taiwan's comparatively egalitarian development trajectory. Taiwan's SMEs were also instrumental in employing the vast majority of the Taiwanese workforce while at the same time providing a flexible economic structure able to adapt quickly to changing economic conditions. Larger firms and industrial conglomerates are not as well suited to dealing with economic change quickly or efficiently. The following section outlines significant macroeconomic disruptions and the ways in which Taiwan has successfully managed them.

### ***External Legitimacy Crisis – A Development Trigger***

In 1971, the People's Republic of China (Mainland China) was admitted to the United Nations. This event was followed by the US de-recognition of the Republic of China (Taiwan) government in 1979 as part of the so-called "one China" policy. This crisis of international or external legitimacy came as a serious blow to Taiwan's international presence and influence, as it effectively limited the island's participation in multilateral negotiations and prohibited involvement in international organizations that hold the status of nation-state as an admission requirement. In an environment

where the majority of formal linkages to the international diplomatic community had been severed, Taiwan needed to find another route to international legitimacy.

Taiwan's response to international exclusion was pragmatic: the leadership decided that self-help was the way forward. In general, "the external legitimacy crisis greatly impacted domestic politics and policies by reorienting the government toward economic development and political localization" [4: 50]. Rather than pursue the path of formal international political participation, a path that had become prohibitively difficult, Taiwan instead allocated its resources to a strategy of international economic participation. To illustrate the point, shortly following Mainland China's accession to the UN, the national leader at the time, Chiang Ching-kuo, implemented a series of ambitious infrastructural upgrades aimed expressly at facilitating export activities [4: 51]. Extensive bilateral or multilateral political cooperation is not necessarily a prerequisite for the maintenance of thriving trade relationships, as the Taiwan case demonstrates. This pragmatic approach to international relations is paralleled in contemporary policy, as Taiwan seeks "meaningful participation" in international organizations in which its full membership is precluded under the "one China policy".

### *1973 Oil Crisis*

In 1973, OPEC members successfully colluded on raising the international price of oil by collectively cutting production and thereby restricting supply. The substantially increased prices are widely credited with the triggering of a global energy crisis. However, Taiwan reacted quickly and pragmatically to the oil crisis, and suffered very little negative economic effects. While typical developed country governments might tend to lower interest rates during periods of economic downturn in order to induce consumption and to stimulate exports through the exchange rate mechanism, the Taiwanese Central Bank adopted a very different approach and nearly doubled the

interest rate from 8.0 in mid 1973 to 14.0 by January of 1974 [14: 52, 32]. Since a large majority of Taiwan's investment capital is supplied by the savings of Taiwanese households rather than from overseas capital markets, this interest rate strategy was implemented in order to channel inflationary spending [due to the sharp increase in oil prices] back into savings. This strategy helped to keep investment financing stable in the aftermath of the oil crisis and allowed Taiwan to continue on its trajectory of high economic growth.

### *1997 Asian Financial Crisis*

Taiwan fared well relative to many of its Asian neighbours in the aftermath of the Asian Financial Crisis. The extent of fluctuations in both the stock market and exchange rate were significantly smaller than those of most other Asian economies [29: 1, 30: 13]. Relatively low levels of external debt due to Taiwan's preference for domestic borrowing (similar to Japan) allowed the economy to avoid the negative Crisis-related impacts experienced by other more highly leveraged economies. Indeed, "without relying on external funds to accumulate capital, the economy did not suffer from an outward flow of capital and the stock and foreign exchange markets did not react with panic and result in market turbulence" [12]. As a result, GDP growth fell a modest 2 percent from 6.6 to 4.6, whereas other East Asian economies suffered higher GDP losses [29: 8]. The Asian Crisis also does not seem to have had any immediate effect on Taiwanese employment.

Additionally, since Taiwan's three largest export markets during the 1990s consisted of Japan, the US and Germany, export demand was relatively insulated from shocks due to the Asian Crisis. The US and Germany were not seriously exposed to the banking and financial issues in Asia during the 1997 crisis, and demand for Taiwanese products remained relatively high. Japan too, through its outward orientation and reliance on non-Asian markets (namely the US and Europe) for its exports in combination with its preference for domestic investment capital (in the form of domestic savings

largely from the household sector) was also able to emerge relatively unscathed from the Crisis. Taiwanese trade did temporarily suffer, but only mildly, as exports to Asian countries other than China fell, but not substantially. Total imports also suffered a mild reduction, but actually rose slightly from both Korea and Hong Kong [39: 229-30]. The structure of the Taiwanese economy, with investment financed through household and government savings, and exports largely oriented towards Western markets helped Taiwan to avoid many of the negative effects suffered by its East Asian neighbours.

Though the interest rate had fluctuated with a gradually decreasing trend over the decades following the 1973 Energy Crisis, the onset of the Asian Financial Crisis once again saw interest rates held steady and even marginally increased between 1997 and 1998. It is only after the end of the Asian Crisis that Taiwanese interest rates begin to plummet, falling from 5.0 at the end of 1998 to 1.375 as of mid 2010 [32]. The maintenance of a high interest rate regime may have assisted Taiwan in mitigating many of the potential damaging effects of the Asian Crisis by sustaining investment levels, which come predominantly from household and government savings. The Taiwanese economy emerged from the Asian Crisis virtually undiminished.

## ***Future Challenges***

Despite starting from a natural resource base that was poorer than most other developing countries, Taiwan has successfully developed and modernized its economy to near-Western levels in a relatively short period of time [14: 2]. The SME-dominated structure of the Taiwanese economy has resulted in considerable flexibility and adaptability to competitive pressures, and no shortage of ambition or hard work can be attributed to an economy in which GNP per capita (market valuation) has increased more than 89 times from US\$197 in 1952 to US\$17,576 in 2008 [39: 17]. Also guided

on a cultural level by Confucian preferences for social harmony, hard work, saving, and a reverence for learning, Taiwan has developed and modernized its society and economy to developed world levels. Forward-looking and financially conservative political elites, despite being autocratic initially, have crafted policies which, at least in the aggregate, have contributed positively to development outcomes. Confucian values, future –oriented political decision-making and a flexible economic structure have combined in complimentary and economically beneficial ways in Taiwan. However, several issues have appeared that may constrain the possibilities of future Taiwanese growth.

### *Affluence-Induced Complacency Hypothesis*

Although Taiwan has enjoyed an extensive period of successful development and has established itself as a globally competitive powerhouse, the country faces considerable future challenges in maintaining its historical rate of high growth. The number of new SME start-ups has been steadily decreasing since 2005 and the total number of SMEs in the economy has been declining since 2006 [28: 20]. While there are incentive structures and financing<sup>8</sup> in place to help SMEs, large enterprises retain some considerable advantages over smaller ones, particularly in the international IT market, an industry in which products are suitable for mass production and economies of scale become important. Economies of scale may pose problems to the 95 percent SME-dominated economy of Taiwan. Furthermore, as direct suppliers to larger Taiwanese companies, the SMEs are generally dependent on their larger counterparts for production orders. If market conditions deteriorate, larger firms can be expected to pass on risk to their suppliers, rather than absorb it themselves, and this adds to the volatility of SME operations and employment. Furthermore, the absolute number of SMEs has been dwindling, and perhaps as a result, Taiwan’s Global Competitiveness rating has begun to slip. Some scholars conclude from these trends that “whether due to globalization, the greater

---

<sup>8</sup> The Small and Medium-sized Business Association has a budget of roughly US \$240 million to support SMEs.



affluence of the society, or other factors, the new generation of Taiwanese seems to have less appetite to strike out on their own and start a new business” [25]. The apparent dwindling of entrepreneurial drive could have decidedly negative consequences for long term growth outlooks.

The long history of scholarship in comparative political culture studies has focused, among other things, on how economic development alters the attitudes of citizens [13, 27]. A general consensus from this scholarship is that “the more developed a society is, the less emphatic the achievement orientation of its population” [27: 346]. Taiwan’s current struggle with affluence-induced complacency, which may signify a relative decline of the Confucian value of hard work, seems to reflect this notion of changing attitudes and values. In Taiwan it may be the case that “affluence has reached a level where basic material needs such as food and shelter are taken for granted, and citizens now aspire to pursue non-material goals, such as inclusion, self-esteem, empowerment, and enjoyment” [27: 342]. Although certainly not antithetical to economic growth, a relative shift towards values such as enjoyment may nevertheless detract from an ethics of hard work. Such a relative shift, as observed in the apparent lessening of Taiwanese entrepreneurial spirit, may dampen future growth prospects.

### *2007-2008 Global Financial Crisis*

Although it is one of the smaller geographical areas of the world, Taiwan is currently the world’s 17<sup>th</sup> largest exporter [34]. However, dependence on exports makes the economy vulnerable to downturns in global demand. This vulnerability was demonstrated in 2001 when the United States and other major world economies experienced an economic slowdown. As a result of the sudden contraction in international markets, Taiwanese exports fell sharply. The decline in exports also led to record levels of unemployment (upwards of 5 percent) and Taiwan consequently suffered its first ever GDP loss of -2.1 percent [39: 17]. Taiwan’s dependence on foreign demand for its goods and

services is substantial, and the high sensitivity to international market fluctuations is cause for concern.

Further demonstrating the Taiwanese economy's reliance on international export markets, the recent Global Financial Crisis also caused a sharp downturn in both imports and exports [See Fig. 7]. Taiwan experienced a significant drop in GDP growth, from 5.7 percent to just 0.1 percent between 2007 and 2008, largely due to reduced overseas markets for its heavily export-oriented industries [39: 17]. Unemployment has also crept upwards of 5 percent again since the beginning of the Crisis.

The repercussions from the Global Financial Crisis took a serious toll on Taiwan's international trade, and 2007-2008 marked only the second time in which exports to all of Taiwan's major trade partners fell. The global nature of the Crisis has led to the question of whether international markets, particularly those in the West, will be able to recover to pre-Crisis levels of supply and demand. There is mounting speculation from some scholars that they may not [18]. If this is indeed the case, it could present a serious challenge to the export-oriented growth of Taiwan, as well as to other followers of the East Asian development model.

Both Taiwan's growth model and the East Asian development strategy in general rely on international markets to drive their economies' export-oriented growth. Taiwan, Japan, South Korea, Singapore, and Hong Kong (SAR) have historically relied mainly on the U.S. and Europe to generate demand for their products and in so doing, allowed them to run large and expanding current account surpluses. The explosive emergence of China into the international market has resulted not only in strong competitive pressures for Taiwanese exporters, but also has increased the global supply of manufactured goods significantly. China too has relied on the US and European markets to absorb its export goods. A recent question that has been raised in response to the meteoric rise of China as a global exporter as well as in response to the Global Financial Crisis is whether or not international

markets are able to continue absorbing East Asian exports [19]. It could be very problematic for Taiwan if international markets are not able to rebound, *ceteris paribus*.

Historically, the United States has been treated as the so-called “importer of last resort”. As the largest debtor nation in the world, the US has been a huge absorber of trade goods and has done so by running a massive current account deficit. A potential problem for Taiwan is the currently strong political pressure in the United States towards deficit reduction and deleveraging as a part of its plan to rebalance its trade deficit and mounting debt obligations. The Global Financial Crisis “spelled the end of the ability of the US to run large and rising trade deficits” [19]. In other words, the US may no longer be willing or able to provide reliable demand for East Asian production.

Outward orientation works well as a development strategy in an environment of high international demand, when “small” open economies can rely on “large” open economies to generate virtually limitless demand for products. If international demand becomes constrained however, as it has in the wake of the Global Financial Crisis, the result may be overcapacity in production which in turn can lead to falling prices and slower growth. The combination of a global demand slump, a deleveraging US, and Chinese overcapacity in production may present a new, significant and protracted challenge to Taiwan’s economic growth in the coming years.

### *Cross-Strait Relations*

In addition to the challenging economic climate resulting from the Global Financial Crisis, Taiwan is also faced with the need to continually manage the tumultuous relationship with its gigantic neighbour across the Taiwan Strait. The Taiwanese economy is well developed after more than a half century of rapid international expansion and steady growth, and its social structure has remained

comparatively egalitarian<sup>9</sup>, even while under constant military threat from the Mainland.

Unemployment, though higher than in the past, is still relatively low compared to most countries in the world, and democracy has also taken root. Furthermore, economic ties between Taiwan and the Chinese mainland have been steadily increasing since the establishment of formal trade relations in April 1997, culminating in the conclusion of the Economic Cooperation Framework Agreement, signed in June 2010 [9: 191]. Given the constraint imposed by diplomatic isolation following the Mainland's accession to the United Nations and the further isolation experienced as a result of the "one China" policy, Taiwan has persevered and progressed remarkably well. However, while there is also evidence of marginally tighter political ties, including "the launch of regular flights between China and Taiwan and significant increases in the numbers of Chinese tourists visiting the island" [9: Ibid.], serious geopolitical issues remain. Mainland China's recent foreign policy focus on "territorial integrity", a core national interest that includes Taiwan, as well as near-continuous threats of military action should Taiwan declare *de jure* independence have sent clear political signals regarding the Mainland's normative prescriptions for the future of Taiwan [1: 277]. While the Chinese mainland remains the number one destination for Taiwanese investment, "it would be illusory to believe that enhanced commercial integration could somehow resolve this political-military problem" [1: 278]. Nevertheless, a closer economic relationship with the Mainland is likely to be a defining characteristic of Taiwan's future, especially when the relationship contributes to a Taiwanese growth rate of 10.47 percent, as it appears to have done in 2010 [26]. Taiwan appears to be aligning its economic future towards the Chinese mainland, but it remains to be seen whether economic cooperation will lead to other forms of cooperation.

---

<sup>9</sup> Taiwan was ranked the 13<sup>th</sup> most egalitarian area of the world by the Legatum Prosperity Index 2010.

The notion of reunification with the Chinese mainland has been one of the most contentious issues throughout Taiwan's development and "continued intimidation on the part of the Mainland has made it difficult for people at all levels of Taiwanese society to trust China's leaders" [4: 286]. The two neighbours are still technically at war, as "Taiwan's prosperity and democracy evidently created a strong support for the status quo of "diplomatic limbo" because of the incalculable consequences of pursuing either independence or unification" [4: 146]. The delicacy of the situation was made clear in 1996 when Mainland China enacted a series of missile tests and other military exercises in the Taiwan Strait, prompting the US to dispatch two aircraft carriers to monitor the situation [4: 246]. Given the tense cross-Strait political relationship and Mainland China's increasingly dominant position in Taiwanese trade, how bilateral relations are managed will be of crucial importance in determining future development outcomes in Taiwan.

## ***Concluding Remarks***

Taiwan has successfully managed over sixty years of consistent growth and development, and has done so starting from an exceptionally poor natural resource base, almost total diplomatic isolation from formal international relations, and the near perpetual threat of war with Mainland China. During the early development phase, the boost acquired through the infrastructural endowment of Japanese occupation coupled with American aid helped the island economy hit the ground running, and laid the foundation for further growth. The agrarian land reforms of the 1950s created an initial state of relative equity and income equality among the population, allowing the government to pursue its development strategies relatively uninhibited by civil unrest. The overarching fiscal and monetary conservatism of the Taiwanese autocracy led to a perhaps unexpectedly dynamic economic structure composed predominantly of SMEs, a structure which would ease the economy-wide transition from import substitution-based development to export

orientation, as well as the more recent transition from manufacturing towards an economy increasingly dominated by high-tech goods and services. Throughout all the phases of Taiwan's development, the Confucian preferences for hard work, social harmony, and a reverence for learning seem to have guided political elites, entrepreneurs, and households alike towards ever greater levels of material well-being while at the same time preserving social equality to a degree that any developing country would find desirable. However, it remains to be seen whether Taiwanese political and economic flexibility will be able to fully withstand the negative economic impacts of the Global Financial Crisis on international demand, particularly in a society in which hard work is increasingly taking on a secondary role to postmodern values such as enjoyment. It is also uncertain how well the Taiwanese political leadership will be able to navigate the delicate political relationship with an increasingly assertive Mainland.

Financial conservatism and a flexible economic structure are unlikely to assist in resolving the historical political issues with the Chinese mainland. Furthermore, the apparent decline in the Confucian virtue of hard work may signal future difficulties in maintaining the vibrant entrepreneurship and productivity that helped drive previous phases of Taiwan's development. A high proportion of SMEs in the economy provides flexibility in adapting to changing economic conditions, but structure alone is insufficient to sustain high growth levels, especially if the numbers of SMEs are in decline.

In the short term, there is reason for considerable optimism regarding Taiwan's growth, as the factors that have been central to success thus far remain in good working order and the potential negative effects of the dangers listed above may take time to manifest themselves. Pursuing tighter economic ties with the Mainland also appears to be a growth-enhancing strategy, especially given the potential decline of Western export markets. However, as we have attempted to demonstrate in this paper, shifting values and an apparent decline in work ethic combined with a resurgent Mainland

China and the simultaneous reduction of export markets may suggest that there is some cause for concern in regards to medium and long-term growth prospects. Irrespective of how economic conditions play out, it appears evident that the economic development of Taiwan is becoming increasingly vulnerable to the economic conditions of the global economy, while at the same time becoming even more closely tied to the economic conditions in the Chinese mainland. The developed world would do well to pay more attention to the world's 4<sup>th</sup> largest holder of foreign currency reserves, 17<sup>th</sup> largest exporter, and 17<sup>th</sup> largest investor as it re-orientes its economy away from the West towards the Chinese mainland.

***Acknowledgement***

The authors would like to thank Monica Elena Vlaicu for valuable comments and contribution.

## List of References

1. Berger, S., & Lester, R. (Eds.). (2005). *Global Taiwan: Building Competitive Strengths in a New International Economy*. Armonk: M.E. Sharpe.
2. Bureau of Labor Statistics. (2010). News Release – International Comparisons of Manufacturing Productivity and Unit Labor Cost Trends 2009. U.S. Department of Labor [www.bls.gov/news.release/pdf/prod4.pdf](http://www.bls.gov/news.release/pdf/prod4.pdf) [accessed January 23, 2011]
3. China Labour Bulletin. (2009). Going It Alone: The Workers' Movement in China (2007-2008). Hong Kong: China Labour Bulletin [www.china-labour.org.hk/en/files/share/File/research\\_reports/workers\\_movement\\_07-08\\_print\\_final.pdf](http://www.china-labour.org.hk/en/files/share/File/research_reports/workers_movement_07-08_print_final.pdf) [accessed December 6, 2010]
4. Chow, P. (2002). *Taiwan's Modernization in Global Perspective*. London: Greenwood Publishing Group.
5. Consultative Group to Assist the Poor. (2010). Financial Access 2010 - The State of Financial Inclusion Through the Crisis. Washington D.C.: The World Bank Group
6. Council for Economic Planning and Development. (2010). The Effects of Taiwan's Measures to Help Small and Medium-sized Enterprises Cope with the Recent Financial Crisis. Current Economic Situation and Issue Analysis [www.cepd.gov.tw/encontent/m1.aspx?sNo=0013713](http://www.cepd.gov.tw/encontent/m1.aspx?sNo=0013713) [accessed December 6, 2010 ]
7. Education. (2009). Government Information Office - Republic of China (Taiwan) [www.gio.gov.tw/taiwan-website/5-gp/glance/ch9.htm](http://www.gio.gov.tw/taiwan-website/5-gp/glance/ch9.htm) [accessed November 17, 2010]
8. Edmonds, R. L., & Goldstein, S. (Eds.). (2001). *Taiwan in the Twentieth Century: A Retrospective View* (The China Quarterly Special Issues No. 1): Cambridge University Press.
9. Fell, D. J. (2010). Taiwan's Democracy: Towards a Liberal Democracy or Authoritarianism? *Journal of Current Chinese Affairs*, 39(2), 187-201.
10. Gregor, J. A. (1981). Confucianism and the Political Thought of Sun Yat-Sen. *Philosophy East and West*, 31(1), 55-70.
11. Hayami, Y., & Godo, Y. (2004). The Three Agricultural Problems in the Disequilibrium of World Agriculture *Journal of Agriculture and Development*, 1(1), 3-16.
12. He, D., Cheung, L., & Chang, J. (2007). Sense and Nonsense on Asia's Export Dependency and the Decoupling Thesis. *Working Paper* (Vol. 03): Hong Kong Monetary Authority.
13. Hsu, C. M. (2001). How Could Taiwan Have been Insulated from the 1997 Financial Crisis? *NPF Research Report*, National Policy Foundation.
14. Inglehart, R. (1990). *Culture Shift in Advanced Industrial Society*. Princeton: Princeton University Press.
15. Lau, L. J. (1990). *Models of Development – A Comparative Study of Economic Growth in South Korea and Taiwan*. San Francisco: ICS Press.
16. Legatum Prosperity Index 2010 : Taiwan. (2010). London: Legatum Institute [www.prosperity.com/country.aspx?id=TW](http://www.prosperity.com/country.aspx?id=TW) [accessed November 28, 2010].
17. Liang, Y. (2010). Interdependency, Decoupling, and Dependency - Asian Economic Development in the Age of Global Financialization. *International Journal of Political Economy*, 39(1), 28-53.
18. Lin, C.-H. (2007). Education Expansion, Educational Inequality, and Income Inequality: Evidence from Taiwan, 1976–2003. *Social Indicators Research*, 80(3), 601-615.
19. Luo, X., & Zhu, N. (2008). Rising Inequality in China: A Race to the Top. *Policy Research Working Paper Series*. Washington D.C. : The World Bank.
20. Nationalist gold stabilized Taiwan after civil war. (2011, 4 April). Watch China Times. [www.wantchinatimes.com/news-subclass-cnt.aspx?cid=1501&MainCatID=&id=20110404000009](http://www.wantchinatimes.com/news-subclass-cnt.aspx?cid=1501&MainCatID=&id=20110404000009) [accessed May 24, 2011]



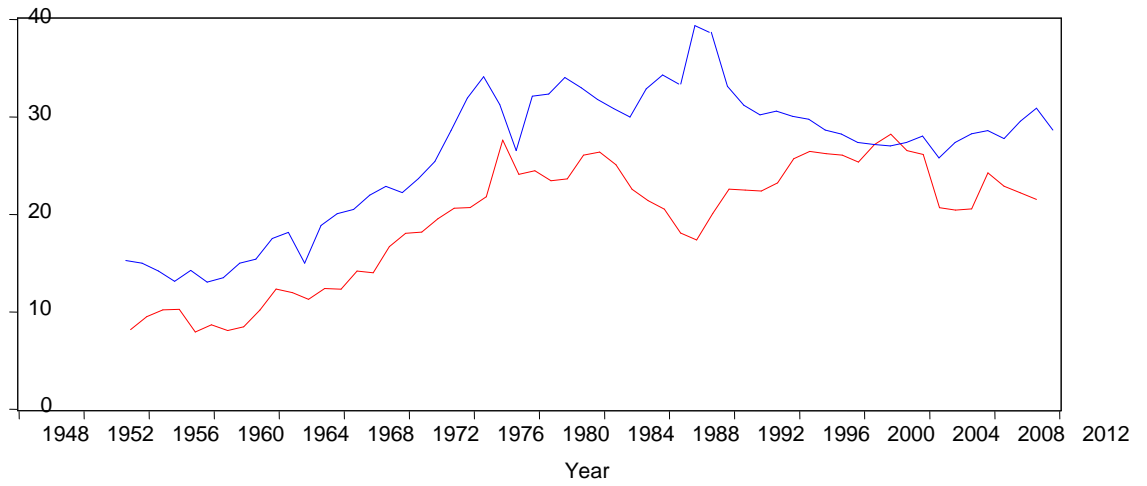
21. Pettis, M. ( 2009). IMF Warns about Surplus Countries and Global Imbalances. China Financial Markets <http://mpettis.com/2009/10/the-imf-warns-about-surplus-countries-and-global-imbances/> [accessed January 12, 2011].
22. Pettis, M.( 2010). How Can China Reduce its Reliance on Net Exports?. Carnegie Endowment for International Peace. Conference, July 12, 2010. [www.carnegieendowment.org/events/?fa=eventDetail&id=2945](http://www.carnegieendowment.org/events/?fa=eventDetail&id=2945), [accessed January 12, 2011].
23. Rodrik, D. (1995). Trade Strategy, Investment, and Exports: Another Look at East Asia. *NBER Working Papers*: National Bureau of Economic Research, Inc.
24. Shambaugh, D. (Ed.). (1997). *Contemporary Taiwan - Studies on Contemporary China*. Oxford: Clarendon Paperbacks.
25. Taiwan economic growth at 23-year high in 2010. (2011, 31 January). *Agence France-Presse* [www.google.com/hostednews/afp/article/ALeqM5i0byCijyyi2EsPm7OkCgHfRI2txw?docId=CN.G.cf327f3b10d421439a898050376b7c26.f1](http://www.google.com/hostednews/afp/article/ALeqM5i0byCijyyi2EsPm7OkCgHfRI2txw?docId=CN.G.cf327f3b10d421439a898050376b7c26.f1) [accessed February 3, 2011].
26. The Economist. *X not V*. (2010, 13 November).
27. Tu, W.-M. (1989). The Rise of Industrial East Asia: The Role of Confucian Values. *The Copenhagen Journal of Asian Studies*, 4, 81-97.
28. Tzeng, P. (2009). The Lost paradigm: Taiwan's SME Sector. *Publications* (Vol. 39). Taipei: American Chamber of Commerce in Taipei
29. Wang, Z. (2007). Postmodern Values in Seven Confucian Societies: Political Consequences of Changing World Views. *Japanese Journal of Political Science*, 8(3), 341-359.
30. White Paper on SMEs in Taiwan 2009. *Small and Medium Enterprise Administration, Ministry of Economic Affairs*.
31. Yang, Y.-H. (1998). Coping with Asian financial crisis: The Taiwan experience. *Seoul Journal of Economics*, 11(4), 423-446.
32. Yu, T.-s., & Xu, D. (Eds.). (2001). *From Crisis to Recovery - East Asia Rising Again?* Singapore: World Scientific Publishing Co. Pte. Ltd.
33. Zhang, W.-B. (1999). Confucianism and Industrialization. *Ritsumeikan Center for Asia Pacific Studies*, 2, 133-162.

## Statistics

1. Central Bank Interest Rates 1961-2010.
2. Central Intelligence Agency (CIA) World Fact book: [www.cia.gov/library/publications/the-world-factbook/fields/2129.html](http://www.cia.gov/library/publications/the-world-factbook/fields/2129.html) [accessed November 3, 2010].
3. CIA World Fact book on Taiwan: [www.cia.gov/library/publications/the-world-factbook/geos/tw.html](http://www.cia.gov/library/publications/the-world-factbook/geos/tw.html) [accessed on November 3, 2010].
4. Export and Import Statistical Databank. (2011). *Taiwan Economic Data Center*.
5. Heston, A., Summers, R. & Aten, B. (2009). Penn World Table Version 6.3. *Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania*.
6. Monetary Statistics. (2010). Central Bank of the Republic of China (Taiwan). Data available online at: [www.cbc.gov.tw/ct.asp?xItem=30010&CtNode=517&mp=2](http://www.cbc.gov.tw/ct.asp?xItem=30010&CtNode=517&mp=2). [accessed December 1, 2010].
7. National Statistics. *Republic of China*. Available online at: <http://61.60.106.82/pxweb/Dialog/statfile1L.asp> [accessed December 2, 2010].
8. Taiwan Statistical Data Book 2009. *Council for Economic Planning and Development*. Available for download online at: <http://www.cepd.gov.tw/encontent/m1.aspx?sNo=0001453>. [accessed October 25, 2010].
9. World Income Inequality Database *United Nations University*

**Fig1 - Gross Savings and Investment as Share of GNP**

— Gross Savings — Investment

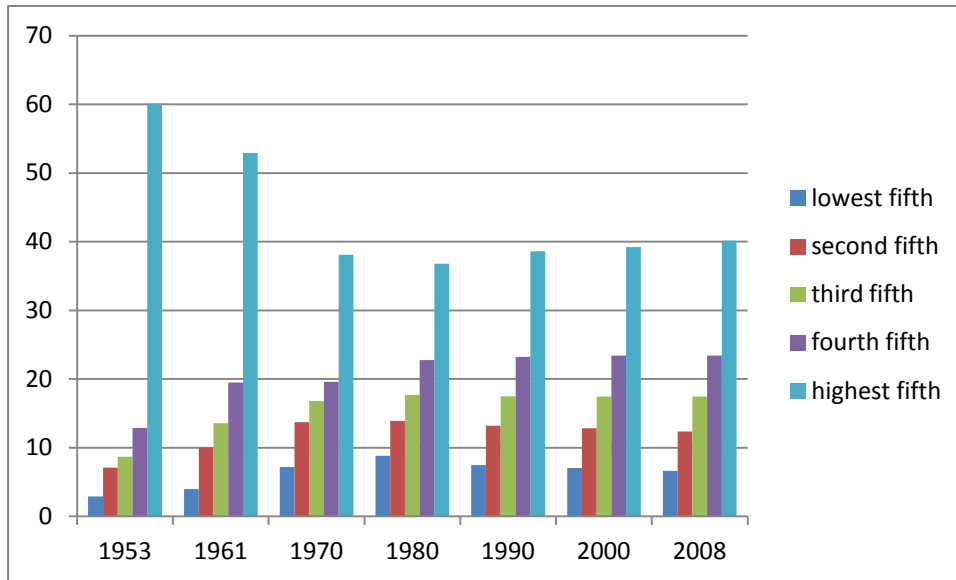


**Data Source:** Taiwan Statistical Data Book 2009, *Council for Economic Planning and Development*.

Figure generated by the authors using IHS EViews.

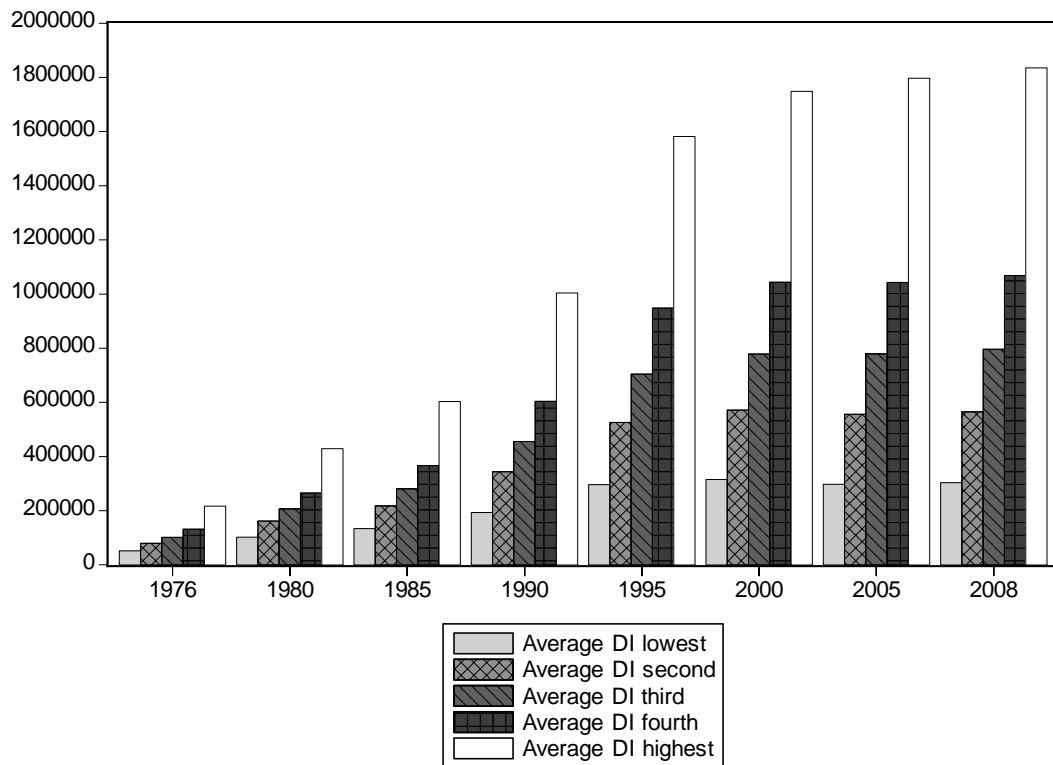
**Fig2 - Income Distribution among Taiwanese Households 1953-2008**

Percent

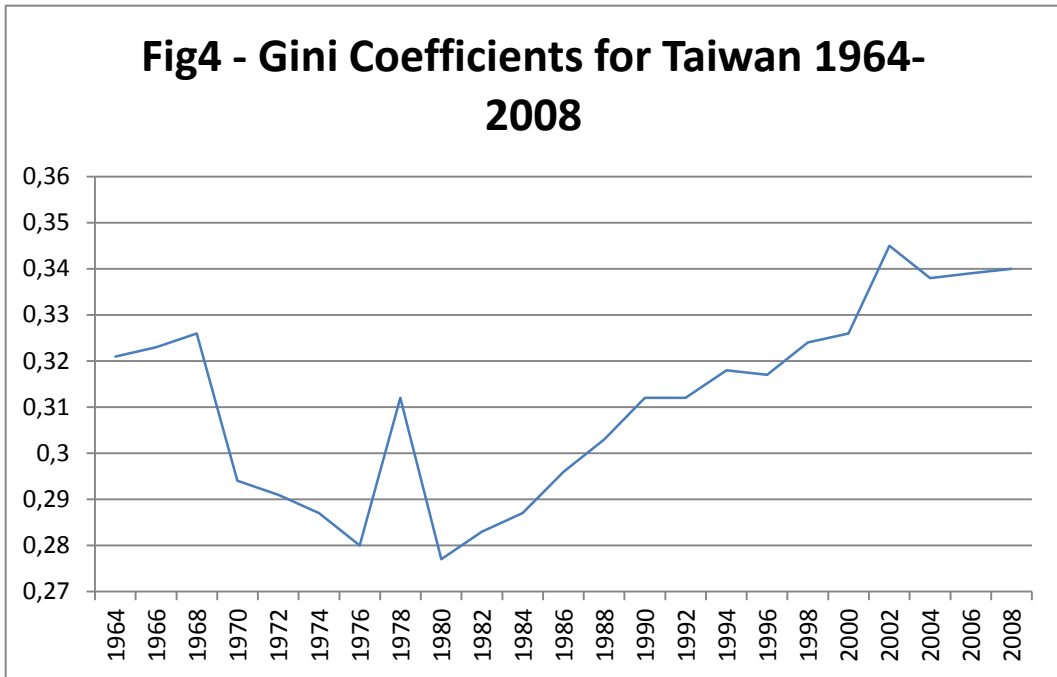


**Data Source:** Data for 1953 and 1961 from Kowie Chang “An Estimate of Taiwan Personal Income Distributed in 1953” *Journal of Social Science* 7 (1956), pp.60. Data for 1970-2008 from Taiwan Statistical Data Book 2009. Figure generated by the authors using Microsoft Excel.

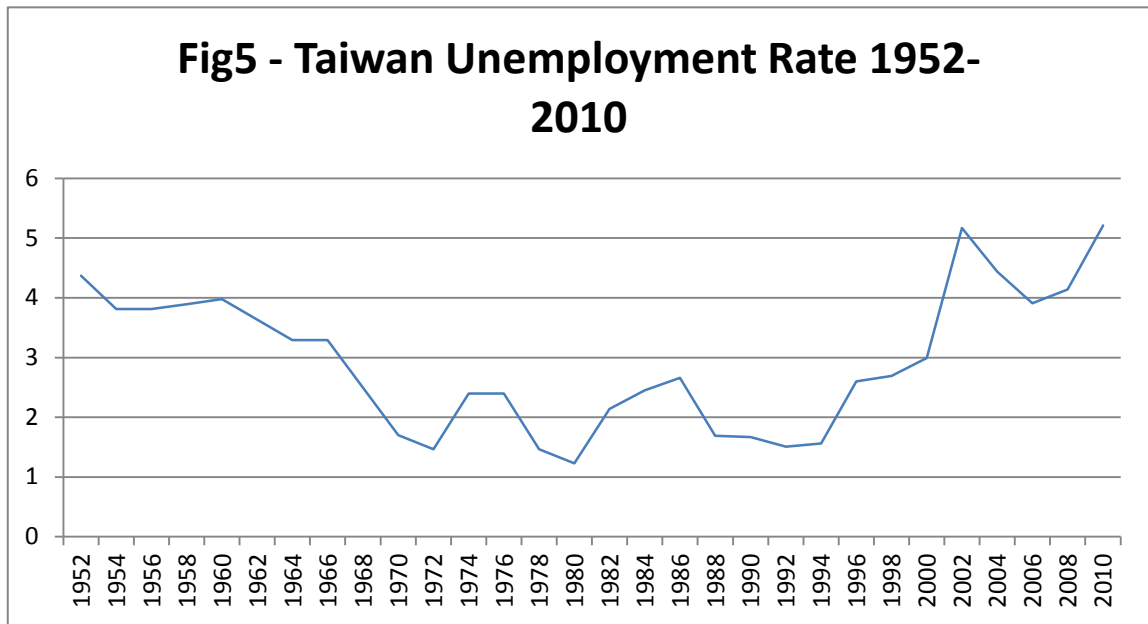
**Fig3 - Income Distribution among Taiwanese Households, 1976 – 2008**



**Data Source:** Family Expenditure and Income Database, National Statistics. *Republic of China*. Figure generated by the authors using PASW Statistics 17.



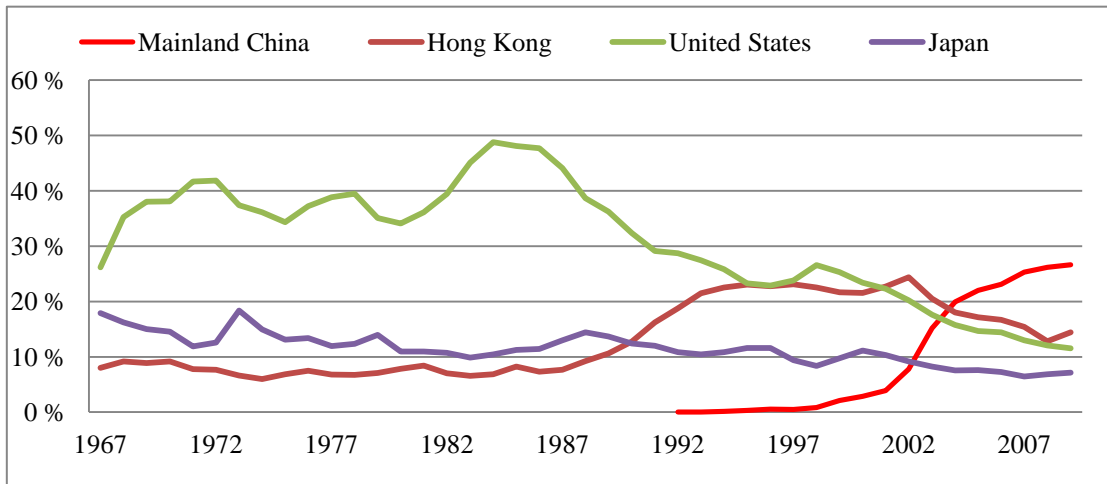
**Data Source:** *The 2000 Survey Report on Family Income and Expenditures in the Taiwan Area, Republic of China* (in Chinese). Taipei: Directorate-General of Budget, Accounting and Statistics, Executive Yuan, Republic of China. Figure generated by the authors using Microsoft Excel.



**Data Source:** Taiwan Statistical Data Book 2009, *Council for Economic Planning and Development*.

Figure generated by the authors using Microsoft Excel.

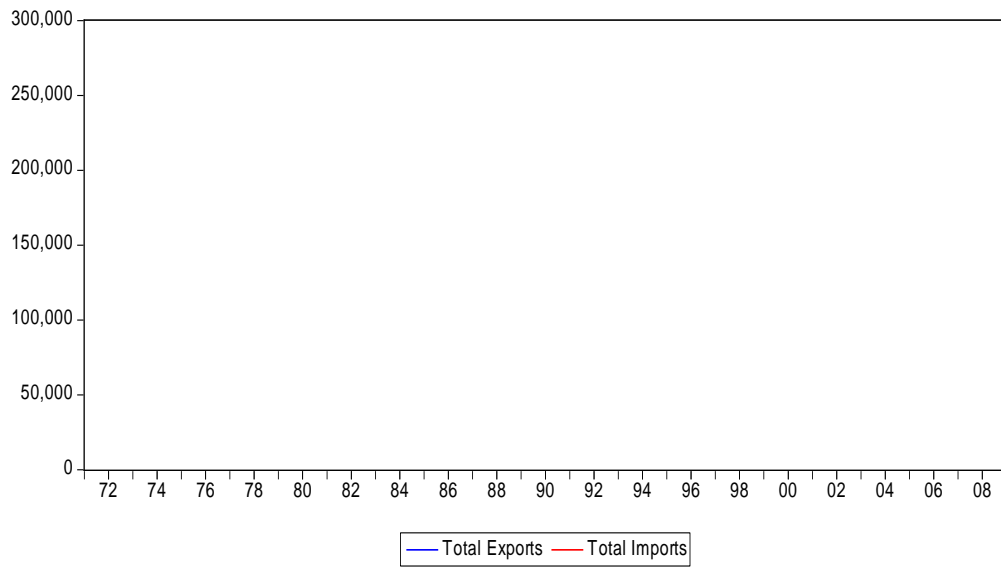
**Fig6 - Top Four Taiwanese Export Destinations (as percentage of total exports)**



**Data Source:** Export and Import Statistical Databank, *Taiwan Economic Data Center*. Figure generated by the authors using Microsoft Excel.



**Fig7 - Taiwan Total Imports/Exports 1970-2009**



**Data Source:** Taiwan Statistical Database, *Council for Economic Planning and Development*.

Figure generated by the authors using IHS EViews.