China-Taiwan Economic Integration:

Deeper Interdependence amid Conflicts (1988-2008)? *

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Abstract

While China-Taiwan relations have struggled, on the economic side China has become the most important trade partner for Taiwan. The author first asks if the economic interdependence continues to grow deeper, and to what degree from a dual perspective of Taiwan and China. What is revealed is that China-Taiwan integration is an extreme case of *asymmetric interdependence*, with possible variation in terms of trends of trade and investment intensity at different phases of the study period (1988-2008). We then, from a political-economic perspective, explore how this puzzle of economic integration amid international conflicts came to be. The paper sets out a theoretical argument and cross-examines it with empirical evidence to solve the seeming paradox of economic links amid the political conflicts of Taiwan and China. Our finding shows that the theory and evidence generally agree, although not in all cases. According to the hypothesis, political leaders' accountability toward international economic interests usually affects the externality of political conflicts on trade and investment intensity. However, the evidence shows that the leaders' impact could be ignored to some degree depending on the timing factor. We conclude the paper with a discussion of implications focusing on the evolution of trade cycles and challenges faced by Taiwanese firms and government.

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1. Introduction

Observing the extraordinary growth potential of China, Taiwanese enterprises have been quietly building strong business links with China since the late 1980's. However, Taiwan's political regimes had not been willing to take an assertive attitude toward China-Taiwan economic integration until Ma Ying-Jeou came to power in 2008. In political terms, China-Taiwan relations have struggled, while on the economic side China has become the most important market for Taiwanese producers.

What makes the author curious is the seemingly paradoxical phenomenon of business thriving between two hostile political entities. In general, international conflicts tend to hamper business. But the case of China-Taiwan relations suggests something else: increasing economic links despite conflicts. This causes one to wonder how a rising giant like China has been able to open itself to trade and investment from a small country like Taiwan, which has simultaneously been far more restrictive with trade and investment from China.

Attempts to provide explanations concerning the development of cross-Strait relations have come from diversified fields. Some approach the question from disciplinary perspective such as international economy, international relations, and regional study, but some take a cross-disciplinary perspective—some with an emphasis on historical interpretation and others on the industrial level (Bush 2005, Liu et al 2006). The recent work of Rosen and Wang (2011), a detailed analysis on the implications of China-Taiwan economic liberalization, took a broad view on the impact of China-Taiwan relations for both the region and the U.S. Their study represents a sound empirical examination from a policy perspective, but has no theoretical development. On the other hand, research on the topic of international relations and international economy has been an attractive topic within the field of international relations (Knorr, 1975, Pape, 1988). Works on both theoretical development and empirical studies can be found without difficulty. On the discussion of the interaction between economic interdependence and political conflicts, Gowa's works give a good explanation of reasoning on international trade and political externalities (Gowa 1994, Gowa and Mansfield, 2004) and Morrow discusses how trade affects conflicts by arguing that international economic flows could reduce the risk of escalation of international conflict by increasing the range of costly signals of resolve in a crisis (Morrow 1999). Kastner's work aims to build a general theory arguing the importance of timing related to the effects of political conflicts on economic interdependence with an elaborated analysis across the Taiwan Strait. In addition, Petri's work (2006) is unique in using different

interdependence measures with secondary data. However, the focus of his study is on economic interdependence with an emphasis on East Asia.

This paper draws a theoretical interpretation based on Kastner's theory and adopts Petri's relative intensity measure in quantifying interdependence and empirical verification to solve the seeming paradox of economic links amid the political conflicts of Taiwan-China. The author first asks in section 2 if the economic interdependence continues to grow deeper and to what degree, which provides empirical evidence and acts as the platform of the analysis through this paper. Section 3 intends to interpret how this puzzle of economic integration amid international conflict came to be from a political-economic perspective. Here, the paper sets its own theoretical argument and cross-examines it with empirical evidence. Section 4 discusses the possible implications for Taiwanese firms, followed by some closing remarks.

2. Deeper economic integration?

In this section, the author adopts a macro analysis approach to explore the evolving China-Taiwan economic integration. He aims to examine the degree and pattern of economic integration by employing a relative measure of trade intensity and the same of FDI intensity with a dual perspective from both Taiwan's side and China's side.

2.1 Method

To verify if the trend of the economic integration is indeed increasing, this paper takes interdependence as the operating variable for the economic integration. Following the previous study, we define interdependence as a country's preference for trade and foreign direct investment (FDI) with the other partners (Petri 2006). In this paper, interdependence refers to Taiwan's preference for trade and FDI with China. From China's perspective, it refers to China's preference for the same with Taiwan. To assess the importance of each partner for the other, we use two measures for the interdependence variable: 1) the relative measure of trade intensity and, 2) the relative measure of FDI intensity. The relative measure of trade intensity is further divided into three types, total trade, export, and import.

For the trade data, based on those collected from various official sources such as Ministry of Finance (MOF) and Mainland Affairs Council (MAC) of Taiwan, the author calculates and prepares time series data of 1988-2008; for the FDI data, data was collected from Ministry of Commerce (MOC) of China, Ministry of Economic Affairs

(MOEA) of Taiwan and MAC[1].

2.2 Increasing Economic Interdependence?

We presented in this subsection the result of our empirical analysis for both trade and FDI across the Taiwan Straits to measure their intensity of economic interdependence, including total trade, export, and import. The aim is to trace the degree and possible pattern in the evolving process of China-Taiwan economic interdependence.

2.2.1 Evidence from Trade

Taiwan Perspective

Our empirical analysis shows that Taiwan's total trade with China has a sharp (roughly 20%) increase on relative trade intensity from around 6.8% (1988) to 26.7% (2008). This helps to create a much higher trade surplus of $59.7 billion[2] with China compared to Taiwan's total trade surplus of $14.8 billion[3] by the end of the study period, 1988 to 2008. The seemingly contradictory figures might cause one to wonder about the accuracy of the data. However, no doubt is necessary. What lies behind the figures is that Taiwan runs a large trade deficit with the rest of the world while enjoying a much larger trade surplus with China.

A closer look at the time series trend line reveals that the cross-straight trade intensity (from Taiwan's perspective) stagnates after 1995 and does not regain momentum until 2000, despite increases before 1995 and acceleration since the early

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[1] The dataset was chosen because of its accuracy and reliability. A word about the MOEA's data of Taiwan FDI to China: even though it is well documented, analyzed and popular among researchers and practitioners, this paper refrains from using the data of FDI toward mainland China because they are statistics of approved base. The ratio of realized amount of these approved FDI to China can vary from 20.77% to 116.87% according to MOA's report, which makes one somewhat doubtful about its accuracy in estimating the real utilized FDI values, especially for the statistics found in earlier years when FDIs to China were not encouraged by the Taiwan officials.

[2] The $ refers to $US if not otherwise indicated.

[3] MAC reported even higher figures of trade for 2010 with China, which accounted for Taiwan's 29.0% of trade—41.8% of exports, 14.9% of imports, with a trade surplus of $67.39 billion, while the total trade surplus of Taiwan with the world was a much lower figure of $14.8 billion.

years of the new century, with the intensity not waning until the global financial crisis in 2008 (see Figure 1).

With its major partners, the U.S. and Japan, the trend in Figure 1 also shows that their relative trade intensity with Taiwan decreases over the years. The U.S. was its top trade partner in 1988 with a high trade intensity of 33.1% and Japan was second at 21.4%. As commerce increased across the Taiwan strait, Japan first lost its top-two trade partner position with Taiwan in year 2001 to China, followed by the U.S losing its top position to China in year 2002 and ceding its top-two position to back Japan in 2003. Moreover, the gap of trade intensity with Taiwan between China and the other two majors has been increasing sharply since then.

For exports, a similar pattern could be observed with China (Figure 2). The initial top market for Taiwan is the U.S. (38.7%) though it ends with a share of only 12%. In contrast, China accounts for only 9.2% of Taiwan's exports initially but ends with 39.0%. This sharp increase of the relative export trade intensity to China seems to mirror the sharp decrease of the U.S., while, for the years between 1994 and 2000, the export intensity to China and the U.S. intertwines closely as they compete for top market position for Taiwan. As for Japan, its market has not been easily accessed for Taiwan, relatively speaking. Although it was a bigger market (14.46%) for Taiwan compared to China before entering the1990s, its position has been surpassed by China since with a continuing moderate downtrend (6.87%, 2008). For Taiwan, Japan's critical role is in imports, which is what we will turn to next.

Regarding imports, Japan has long been the leading import partner for Taiwanese firms and still is, albeit the relative import intensity has decreased more than 10% from 29.9% to 19.3%. China's role as a supplier was not significant in the early years (3.9%, 2008), although it increases steadily throughout the 1990s. However, it gains momentum after 2000 and the high speed of intensity growth allows it to surpass the U.S. after year 2005 as the second leading supplier (13.7%, 2008) for Taiwan. Compared to China, as an import partner for Taiwan, the U.S. has been losing its position (from 26.1%, 1988 to 10.9%, 2008) in an almost constant downward trend (see Figure 3).

In summary, from Taiwan's perspective, the study of relative trade intensity indicates China has over the years grown to become the most important trade partner. In fact, since 2002 China has become Taiwan's largest trade partner, replacing the U.S. China ($132.5 billion in trade, 2008) alone accounts for more than the other two top trade partners, the U.S. ($57.1 billion) and Japan ($64.1 billion), combined ($121.2 billion, 2008). China is the leading export market for Taiwan and the most important

source of trade surplus ($59.7 billion, 2008), which helps to cover Taiwan's trade deficits with other nations of the world ($14.8 billion), including its largest import partner Japan (from -$6.1 billion, 1988, to -$29.0 billion, 2008).

The intensity for both exports and imports has been growing steadily, albeit stagnation of exports was observed in the second half of the 1990s. Moreover, the significant acceleration of all measures of intensities, including total trades, exports and imports, has no doubt indicated that between China and Taiwan, a strong trade interdependence has evolved.

China Perspective

The results from Taiwan's perspective provides strong evidence the flourishing trade activities across the Taiwan Strait. However, does it necessarily guarantee it is seen the same way from China's perspective? The absolute trade figures might show some increase, but how about the relative intensity of trade measures, i.e. China's trade interdependence with Taiwan. Our logical extension for further exploration is then to examine trade interdependence from China's perspective.

Observing the absolute figures, it was observed that Taiwan is China's 7th largest trade partner, 9th largest export market, and 5th largest import partner (2008). However, the importance of bilateral trade with Taiwan indicated by trade intensity measures is another story—that is, all measures have been decreasing or stagnant. Why would this be? The main reason is that China's exports have been evolving fast making it the largest exporting nation since 2009 (US $ 1.2 trillion), surpassing Germany. The astounding speed of China's export growth has made the increasing China-Taiwan trade appear relatively small, even though the absolute figure has been growing significantly.

For China, the relative intensity of trade with Taiwan follows a shallow incomplete inverse U trend, beginning with a low 2.7%, reaching the peak in 1996, and gradually losing momentum before reaching 4.7% in 2008 (See Figure 4). The trend of relative import intensity resembles the trade intensity but with a higher and bigger stance. Although, it also starts low initially (4.1%, 1988), the share of imports increases sharply before 1992 (13.0%) and continues at a moderate rate till 1997. It then decelerates from the next year and levels off in 2001 (10.5%), and decreasing again from 2003 to 2008 at a lower rate (7.8%). As for the relative export intensity, it never exceeds 3%. It is below 2% before 1995 (2.1%) and has fluctuated in the range of 2% and 3% since. The decrease from 1.2% (1990) to 0.4% (1991) and recovery in the following years is the only episode observed in this saturating trend line.

The three relative measures for the trend intensity of China reveal a totally different picture from those of Taiwan. Pairing each intensity trend line for Taiwan and China shows an almost identical pattern (See Figure 5, 6 and 7). However, the finding shows that Taiwan's rates are always higher than those of China by a good margin. The combined Taiwan-China's perspective indeed indicates Taiwan-China economic integration is of asymmetric interdependence. Moreover, Taiwan's measures have accelerated at a relatively high rate compared to China's since 2002, the year after both Taiwan's and China's accession to the TWO. If this is not, in fact, an overdependence of Taiwan on China, surely it is an extreme case of asymmetric interdependence.

2.2 Evidence from FDI

For the relative FDI intensity, the analysis focuses mainly on Taiwan's FDI in China. As for China's FDI in Taiwan, it was prohibited in our study period (1988-2008) and Taiwan has just lifted its ban, allowing for Chinese investment in manufacturing (64 sectors), service (117 sectors), and infrastructure (11 sectors) as of June, 2009. The list of sectors allowed has been growing. Moreover, statistics of MOEA shows that 166 cases with an aggregated amount of $ 160.99 million of inward investment from China are approved and the trend is going up with more small scale investments[4].

As for Taiwan's investment in China by 2008, it accounted for 55% of Taiwan's total accumulated Taiwan FDI cases approved by MOEA, Taiwan[5]. China's MOC reported that the aggregated Taiwan FDI investment amounting to 77, 506 cases and the realized amount was $US 47.6 billion by 2008. These figures are apparently underestimated because they did not count the investment flowing to China by way of Caribbean tax havens (and sometimes through Hong Kong and Singapore). Notwithstanding, compared to other figures such as the approved cases from MOEA,

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[4] See news manuscript of MOEA on the following web page, (http://www.moeaic.gov.tw/system_external/ctlr?PRO=NewsLoad&id=785).

[5] MOEA's report showed that up until 2010, approved Taiwan FDI in mainland China amounts to 38,685 cases and $US 97.32 billion. The approved cases are not necessarily realized, which suggests a high possibility of the figures being inflated in their representation of the realized cases. This is the reason, though many other papers used these figures, this paper chose to shun them for the analysis.

the author believes MOC's utilized investment figures provide better estimates in measuring the relative FDI intensity.

From Taiwan's perspective, the evolution of FDI in the mainland starts at $0.16 billion with a relative intensity of 14.7% (1989) and soon accelerates sharply staying at a plateau between 53% and 70% from 1992 to 1997 (see Figure 8). It then takes a step down to the next plateau of 40% to 54% between 1998 and 2005 (except the 31% in year 2000). However, the trend of FDI intensity keeps going down and ends at 33% the following year, decreasing further since then.

From China's perspective, Taiwan's FDI intensity reached its highest point of 11.4% in an earlier year (1993) and then continued to drop to just above 2.1% of late (2008), except for only one period of increase in 2001 and 2002, the initial years of their accession to WTO (See Figure 9). To explore the reason behind this decelerating (one fifth downsizing) force, we examine the total inward FDI toward China. As one might already expect, China enjoys an increasing growth trend of FDI with a strong force provided by the rush investors from all over the world. The amount of Inward FDI in China amounts to $US 95.25 billion in 2008[6] (MOC, China).

MOC's New Data

However, new data provided by the MOC in these two years suggests that the official figures published may seriously underestimate Taiwan's FDI value with China because they do not include a much larger amount of Taiwan FDIs coming through small countries such as Caribbean tax havens (MOC, 2009, 2010). According to MOC, its statistics ranked Taiwan the second largest investor next to Hong Kong for both 2009 and 2010 after counting the FDI via tax havens such as Virgin Islands and Cayman Islands. According to the same MOC reports, in 2009, Taiwan invested in China $6.56 billion and in 2010, $6.71 billion. However if FDIs via tax havens were not included, MOC reported a lower $1.88 billion and $2.48 billion respectively.

With MOC's new data, we performed a simulation analysis with different scenarios to estimate the possible FDI range in recent years. Taking into consideration indirect Taiwan FDI by way of tax havens, we have the estimated accumulated figures of Taiwan FDI from 1979 to 2008 ranging between $80.9 billion and $97.8 billion[7], which is about 1.7 to 2 times of the official figure ($ 47.6 billion) of TW FDI. This makes TW FDI accounts for 9.5% to 11.5% of total accumulated China FDI much higher than the

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6 The figure climbs up to $US 108.82 billion in 2010.

7 Based on the simulation of this study, the latest accumulated figure of Taiwan FDI (1979-2010) is estimated within the range of $94 - $120 billion.

officially reported 5.6%.

Taking a conservative scenario, we add to the result of FDI intensity the estimated average intensity of Taiwan FDI via tax havens. The study showed a different pattern from the previous Taiwan FDI intensity toward China. Looking first from China's perspective, the new Taiwan FDI intensity was plotted in a higher zone than the previously utilized FDI trend line and exhibited a see-saw pattern (See Figure 9). It is observed that, after including FDI via tax havens, Taiwanese FDI fluctuates in a narrow range at around the 10.5%.

From Taiwan's perspective, contrasting the decreasing utilized FDI trend, the estimated Taiwan FDI toward China was plotted in a much higher zone (See Figure 8) and, despite holding back for 2006 and 2007, it showed a trended up from 72% in 2003 to 130% in 2008. The estimated utilized figures are also much higher than the total approved FDI by Taiwan officials. This seemingly unreasonable fact suggests some Taiwanese firms have been channeling their investments to China without going through the regular official routes, an interesting phenomena deserving further study.

In short, Taiwan's FDI intensity to China seems to have been dropping since its peak in 2002 not counting what comes via the tax havens; however, the estimated figures of our simulation analysis reveal that it is in an upper zone and Taiwan FDI tends to keep its share above 10% of total China FDI though it may fluctuate up and down a bit. Moreover, its FDI intensity to China continues to be high and seems to dwarf investment in other countries, especially after the global financial crisis.

To summarize, our empirical study on the trade and FDI intensity across the Taiwan Strait leads us to conclude that the China-Taiwan economic integration behaves as an extreme case of asymmetric interdependence. For trade, China is Taiwan's number one partner, though the intensity is growing at a slower pace. For FDI, China continued to be the most attractive for Taiwanese firms. Indeed, a deeper China-Taiwan interdependence has evolved.

3. Economic Integration amid Political Conflicts

Paradox?

The empirical evidence of our study shows that despite the hostile political relations between Taiwan and China, economic links have not waned but accelerated, generally speaking. However, does not a preponderance of literature claim that political conflict has a negative effect on economic links? What has made this seeming paradox of deeper China-Taiwan economic integration amid the international conflicts possible?

A survey of the literature provides two explanations why the conflicts might negatively impact international economic integration (Kastner 2009). One is that conflict increases the concerns of states on the negative externalities arising from international economic integration (Gowa 1994, Parkins 1990, Gowa and Mansfield 1993). The other is that conflict increases uncertainty for firms engaging in trade and investment (Kastner, 2009).

The first explanation states that trade or investment involves risks of political security and externalities, which might cause political leaders to impose restrictions on those flows (Gowa 1994). The unpredictable actions of the conflicting political rivals create anxiety concerning the possibility of detrimental effects on the economic links. Specifically, a state might worry that trade can cause dependencies, increase the wealth of potential adversaries, improve an adversary's military capabilities, and influence the power of different domestic political groups. The high risk premium associated with market activities will thus contributes to lower volume and less business activity in a conflicting bilateral relationship (Morrow 1999, Kastner 2009).

For the second explanation, interstate conflicts over disparate political goals can harm international business activities, which might distort international economic flows in pursuing the optimum comparative advantage (Morrow 1999). When two states compete for their optimal goals, one state is not certain about the degree of commitment of the other. This lack of assurance might cause political leaders to signal a resolve to go for a war or apply economic sanctions. The anticipation of the possibility of these types of moves ultimately harms international business, causing firms to take actions to reduce risks and readjust the distribution of production factors. (Kastner 2009).

If we adopt these two theoretical explanations, the case of China-Taiwan economic integration is then a puzzle because it has been long been embedded in political conflict. One [obvious] source is the continuing issue of Taiwan's sovereignty, because it is a political goal worth competing for from the perspective of leaders on both sides of the Taiwan Strait.

Moreover, not to make the discussion more complicated, theoretical arguments also indicate that economic links can create dependencies and yield the less dependent state disproportionate bargaining power, making the paradox of the cross-strait relationship more complicated. In addition, our empirical evidence of cross-strait trade and FDIs shows that a deeper interdependence is evolving, not symmetrically but "asymmetrically", with Taiwan more dependent on China. If we have researchers (Hirschman 1945; Keohane and Nye 1989; McLaren 1997) arguing economic links can create dependencies, then considering China as Taiwan's top export market (39% of

total export and 25% of Taiwan GDP) and the most important trade surplus source, they would certainly not hesitate to conclude China would have more clout and Taiwan would be more vulnerable to economic sanctions. How then can we explain this paradox of seemingly contradictory theories?

Theoretical Interpretation: Leadership for internationalist economic interests

Existing literature tells us that the effects of conflict on economic activities appear to vary substantially across cases. Extending from this, Kastner suggests bringing in the "timing" (of the international economic policy) factor into the analysis (2009) and postulates the following hypothesis "All else equal, the negative effects of international conflict on international economic integration are less severe to the extent that leaders in the countries enmeshed in conflict are accountable to internationalist economic interests."

Applying this to the China-Taiwan relationship, one might say when the leaders of both sides are relatively accountable to internationalist economic interests; the degree of conflict will have less impact on the economic integration. On the contrary, when the leaders across the Taiwan Strait are not highly accountable to internationalist economic interests, the level of conflict would have greater effects on the economic trade and FDI (Kastner 2009, Rogowski 1989, Frieden & Rogowski 1996). That is to say that "the strength of internationalist economic interests" is a critical factor in the formation of cross-strait policy for both China and Taiwan, which in turns effects the ups and downs of Taiwan-China economic integration[8].

Taiwan's cross-strait policy and economic activities

To cross-examine the theoretical interpretations above, we focus on the evolving process of the cross-strait economic policy in Taiwan in our study period.

Observing this evolving process in 1990s, we see then-President Lee Teng-Hui taking up the policy of "don't haste, be patient" in 1996 and imposing restrictions on business links with China. His preference for a restrictive policy toward China did not change significantly until the next president Chen Shui-Bian came to power in May 2000. To verify the impact of Lee's leadership accountability on the economic activities across the Taiwan Strait, this paper cross-checked it with our empirical study on China-Taiwan

[8] Kastner (2009) believes the precondition for this hypothesis of leadership accountability of internationalist economic interests to be true and that the security externalities of cross-strait economic interdependence are positive for China.

interdependence. The result shows that during Lee's last term (1996-2000), the relative intensity measures of trade and export became stagnant (23.4-24.0% and 38.2-40.9% respectively) and the import intensity increased slightly (from 4.7% to 6.1%) from Taiwan's perspective. As for FDI, the intensity entered a free fall from 61.6% (1996) to 31.2% (2000)[9]. The evidence of Lee's case confirms Kastner's hypothesis by showing that Lee's less accountable for cross-strait economic interests policy did in fact suppress investment to mainland China and deterred deeper cross-strait economic integration[10].

Moreover, Lee's successor, the Chen administration, gave rise to an even more interesting case. Contrary to the public expectation, Chen did not continue Lee's policy but replaced it with the "proactive opening and effective management" policy in October, 2001. He also further relaxed restrictions on FDI to China in the year that followed. To be sure, many firms did not miss the opportunity and acted fast. Our empirical result verified the effects of accountability for cross-strait interests in Chen's policy by showing that the intensity of FDI to China jumped to 54.1% in 2002, a nearly 23% jump from the Presidential election year, 2000.

After 2002, Chen abandoned his policy after 2002 and shifted his attention to strengthening his supporting groups in preparation for the 2004 Presidential election. From 2006, he shifted the cross-strait policy from "proactive opening and effective management" to "proactive management and effective opening". Thus, the emphasis of his economic policy toward China became more one of management than liberalization.

Our empirical study shows that the intensity of FDI to China did slip down, dropping to 33.2% (2006) and 21.5% (2007), while staying high (around 46-48%) from 2003 to 2005). If we include those FDI by way of tax havens, the trend line of intensity would be raised to a higher zone. In addition, all of the three trade-related measures picked up momentum and shot up since 2001 (40.9%, 23.8% and 6.1% for trade, export and import respectively) and the reached its peak before the global financial crisis (87.6%, 40.7% and 13.6%).

Chen's case showed mixed results for the validity of Kastner's hypothesis. Chen's policy was pro-liberalization through at least mid 2002, which matches well with

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[9] As stated in the empirical study, the figures of Taiwan FDI to China are calculated based on official data from China's MOC. Although MOC did not include those via tax havens, its data revealed the downsizing trend of Taiwanese firms during the period.

[10] Lee's policy set a capital ceiling for each investment and overall capital of a listed firm. Those who violated the "don't haste, be patient" policy were subjected to a fine (up to $US 650,000) with possibility of a jail term (max. 5-year).

the empirical evidence. A blend of open and protective policies exited subsequently, and Chen's administration was certainly not highly accountable to cross-strait economic interests in his later years, which confirms Chen's concerns shifting more toward his main supporting group—mainly those not benefiting from the cross-strait links. However, our empirical study shows that the economic interdependence continues to grow despite the cross-strait conflicts. In this regard, we conclude that Chen's case is not consistent with Kastner's hypotheses.

4. China-Taiwan Integration in a Global Context: A Focus on Taiwanese Firms

For our discussion, we examine the evolution of Taiwan-China trade cycles in a larger global context aided with sector analysis. We conclude with the changing roles of and possible uncertainties faced by Taiwanese firms in the development of China's global links.

From Triad to Quartet: Evolution of Trade Cycles

A brief recap of the empirical study of Taiwan's trade intensity indicates the growing trend line with China is mirroring decreasing ones with its major partners the U.S. and Japan (though to different degree respectively.) In addition, China replaced the U.S. and Japan as Taiwan's most important trade and export partner while Japan still occupies the number one import position. On the other hand, data from Chinese Customs showed that the U.S. has become China's top export destination followed by Hong Kong, Japan and Korea while Japan, Taiwan and Korea become its top import partners.

Juxtaposing China-Taiwan business links with those of Japan and the U.S., we can observe China-Taiwan economic integration in a broader, albeit partial, world context (Figure 10). These suggest a trade cycle model has been evolving from Taiwan's perspective[11]. The first stage is a Triad Trade Cycle. Taiwan imported from Japan, processed in Taiwan and then exported to the U.S. It then migrated to the second stage, which this work calls Quartet Trade Cycle. In this stage, Taiwanese firms import from Japan, design in Taiwan, process in China, and then export to the U.S. For the coming third stage, we foresee Taiwan will continue to import from Japan, design in

[11] The discussion on the evolution of Taiwan's trade cycle suggests that a restructuring of the international division of labor and a shifting on the position of in the global production network has been emerging in a bigger global context.

Taiwan, then process *and* sell in China while continuing to export to the U.S. Surely, like other model, it simplifies reality to some extent; however, this broader picture indicates a deeper Taiwan-China interdependence possibly derived from a new international division of labor system with China playing the role of assembler in the global manufacturing network and Taiwan producing high-value intermediate goods.

To explore further, we did a cross-sector analysis on major export items. Year 2010 data shows that electrical machinery (HS 85) and optical equipment (HS 90) occupied more than half (55%) of the exports from Taiwan to China (see figure major trade items)[12]. Adding the other three top-5 trade items: plastics, mechanical appliances, and organic chemicals (HS 39, 84, 29), the ratio climbs to 80%. The same top 5 export items occupied less than half of that ratio (37.5%) in 2005 and an even less (14.6%) in 2000. In fact, tracking back to 1990, we found that 5 of the top-10 items (HS 64, 59, 55, 60, 48, which are mainly textile related, or shoes and paper sectors) were no longer on the list of 2010. These changes in the outbound trade flows to China certainly indicate Taiwan's exports have gone through an evolving structural change.

A further analysis of China's 5 major import partners of across all sectors reveals that Japan, EU 27, ASEANs 10, South Korea, and Taiwan were the top 5 inbound trade partners in 2010. Specifically, Taiwanese firms compete fiercely with its counterparts in South Korea and Japan in all the first 4 major import sectors (HS 85, 90, 39, and 29). For each individual sector, Taiwan competes with ASEANs 10, South Korea, and Japan in the electrical machinery sector (HS 85); South Korea, Japan, and EU 27 in the optical equipment sector (HS 90); South Korea, Japan, and ASEANs 10 and EU 27 in the plastics (HS 39) and organic chemicals sector (HS 84). Taking into consideration that Japanese firms have a long history as the major suppliers of production equipment and core parts and articles for Taiwanese firms, this gives the role of main export rival in these four major sectors to South Korea. This discussion should put Taiwanese firms on the alert that even in their major export sectors to China, the most vital importer of their products, they are not irreplaceable.

Changing Role and Uncertainties of Taiwan Firms

Finally, what has driven cross-strait interdependence in the last two decades surely not only involved the policies of the leaders and political conflicts. Among other factors, the changing role of Taiwanese firms in the evolution of China's global links is

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[12] Trade data are based on the news report of Cross-Trade Trend Analysis of Dec. 2010, 2005, 2000 and 1990 released by the Bureau of Foreign Trade, Taiwan; FDI data, MOEA.

certainly one important element. If we take a developmental perspective of China's global links to the global market system, one can divide it into at least three stages, each with a different reform focus: trade, capital and institution[13]. In each stage, the role of Taiwanese firms changes respectively.

In the first stage (trade linkage focus 1978 – 1980s), since the trade linkage is the main focus in China, a series of opening policies were implemented and different economic zones were set up to promote a value-added type of export[14]. Facing the tide of globalization, inflation and the cost-rising domestic pressure such as inflation, environmental protection, pay-raises, and currency appreciation, Taiwanese firms started to look for opportunities for investment overseas (Chang, 2007). With Taiwan's close historic and language ties to mainland China, small and medium Taiwanese enterprises (SOEs), found especially in the labor intensive sectors and light industries, moved its export-oriented economy experience to China. They shifted the productivity and export network along with their capital and human resources to China. Taiwanese firms had a role in pushing China's export oriented economic growth.

In the second stage—FDI linkage focus (1990s)—came with the south investigation tour of Deng Xiaoping in 1992 and its opening effects. The reform of the exchange rate system in 1994 boosted investment. At this stage, through trading off its domestic market, China aimed to obtain, foreign technology and capital. The major FDI players from Taiwan were found especially in the IT sectors. The nature of capital and technology intensive sectors made China a global factory of IT products.

In the third stage—institution linkage focus (2001~)—China became the 143rd member of the World Trade Organization on Nov. 11, 2001. Since then, China planned

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[13] This analysis adopted the concept of dividing the globalization development in China into three stages from a conference talk by Tain-jy Chen in 2007.

[14] In the first stage (trade linkage focus) China opened its coastal area to promote trade. The related policies included the following.

1979.7 Open Door Policy: Guandong and Fujian

1980.5 Special Economic Zone: Shenzhen, Zhuhai, Shantou, Amoi

1984.5 14 Coastal Harbor Cities Open

1984.9 External-oriented development strategy endorsed officially;
Power decentralization (of trade and hard currency control) to local governments and firms.

1990.4 Special Economic Technological Development Zone(such as Shanghai Pudong)

to further open its markets to meet the higher standard of the agreement with the WTO. It had to not only lower tariffs for manufactured goods and agricultural products, but it also needed to gradually open its service sectors such as finance, insurance, retail, and wholesale. To cope with these challenges, the Chinese government started to pursue a "build the nation with technology" policy. The focus became "quality" and "accumulating foreign reserves through exports" was no longer the main goal. It emphasized upgrading technology and industry and encouraged state owned enterprises (SOEs) to take aggressive steps toward outward FDIs. The purpose was to access and utilize global resources, upgrade technology and promote economic growth.

At this late stage of global institution link, Taiwanese firms have had a more limited role to play because of the worsening business environment and their limited involvement in global capital inflow. Not only SMEs but also firms in the high-tech sectors face fierce competition from global players of Japan, Korea, and others as observed in our empirical evidence. The prospect of gradually being marginalized is also made greater by the possibility that SOEs have been expanding their scale and upgrading their capabilities through outward FDIs.

Uncertainties for Taiwan

What then are the prospects for Taiwan in this economic integration amid political conflict? We discuss the implications of our study from the view point of China-Taiwan bilateral relations and the impact on domestic Taiwan. First, across the strait, the asymmetric interdependence is not a temporal phenomenon but is structural in nature. We know that the higher the trade/FDI intensity, the deeper the asymmetric interdependence and the higher the associated degree of influence from China we can expect. For trade, the relative competitiveness of investment led exports in China may be decreasing. For investment, as the scale of FDI got larger, the profit margins became lower after 2000, and a low 3-4% is not abnormal even for big IT firms because these OEM or ODM firms had cost-down pressures placed on them by the global giants. However, the dream to have a bigger and more successful in presence in China's market—the so-called China dream—will prevent retreat for many Taiwanese firms. Secondly, for domestic Taiwan, more increasing investment in China, the business model of orders to Taiwan, and production in China will continue. Regarding the industrial structure, as the international division of labor shifts, the trend of shifting toward processed materials, intermediate goods, parts, and components is to continue. For the global market, as product lines continue to be passed over to the other side of the Taiwan Strait, the global market share derived from direct export to the end market

can be expected to decrease. The reverse imports of low-cost-products made by Taiwanese firms in China may cause industry substitution issues and impede industry upgrade desires in domestic Taiwan.

Above all, what does the China-Taiwan economic interdependence imply for Taiwan? Is it a “fatal attraction” or shared prosperity? If one take of the relationship is a zero-sum game, then the asymmetric interdependence is then an excessive dependence. A long list of negative externalities is not difficult to come up with. Among them, a real threat is the transplantation of home country’s Industries and related service industries. Another is a catastrophic “siphoning” effect of capital and knowledge-intensive Industries[15], which is said to bring a hollowing out of capital, manpower, and market, as well as technology. However, if one is optimistic about the prospect of economic integration, opportunities can be seen and peace and prosperity can be expected in this win-win relation. The China dream can be made possible because of the scale and scope of the economic potential that can be imagined in the emerging Chinese market. It represents a possibility of breaking away from the fate of being forever OEM or ODM and getting on the path toward OBM. Thus for many Taiwanese firms with the China dream, it is a path to becoming a global player.

Be it a threat or shared prosperity, the author is not in a position to make a judgment. However, as Milton Friedman has said, ‘*there's no such thing as a free lunch.*' If Taiwan wants to secure against vulnerability and possible threats, the prerequisite for shared prosperity should not be forgotten. If the choice is to stay on the same boat, Taiwan needs to ensure non-substitutable contributions to key sectors in China. To maintain its global positioning, Taiwanese firms can work on vertical integration and/or new frontiers, with endeavors in technology (industry) upgrading and (global) brand creation. The key for the competition is to become an R&D hub and to establish itself as irreplaceable in the global production network/global innovation network. These are important tasks entailing further thought in the discussion of policy formation for Taiwan. Another critical topic not to be forgotten is the possibility of Taiwan being excluded from the China+ FTA as well as the ongoing development of the Economic Cooperation Framework Agreement (ECFA) between Taiwan and China. These are surely critical issues to be pondered in future studies.

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[15] A good example of the hollowing-out argument could be found in Chen, Tain-Jy (2003) “Will Taiwan be Marginalized by China?” Asian Economic Papers 2:2, pp. 97. However, an opposing view can also be found in other works.

Fig. 1 **Trade Intensity of Taiwan with Major Partners (1988-2008)**

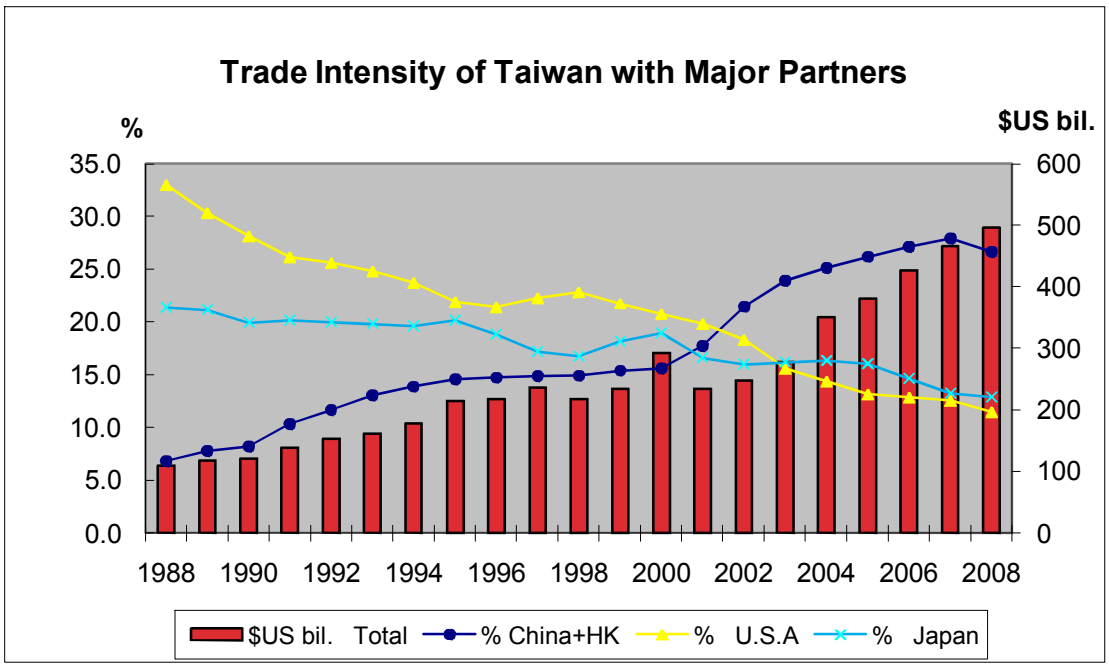


Fig. 2 **Export Intensity of Taiwan with Major Partners (1988-2008)**

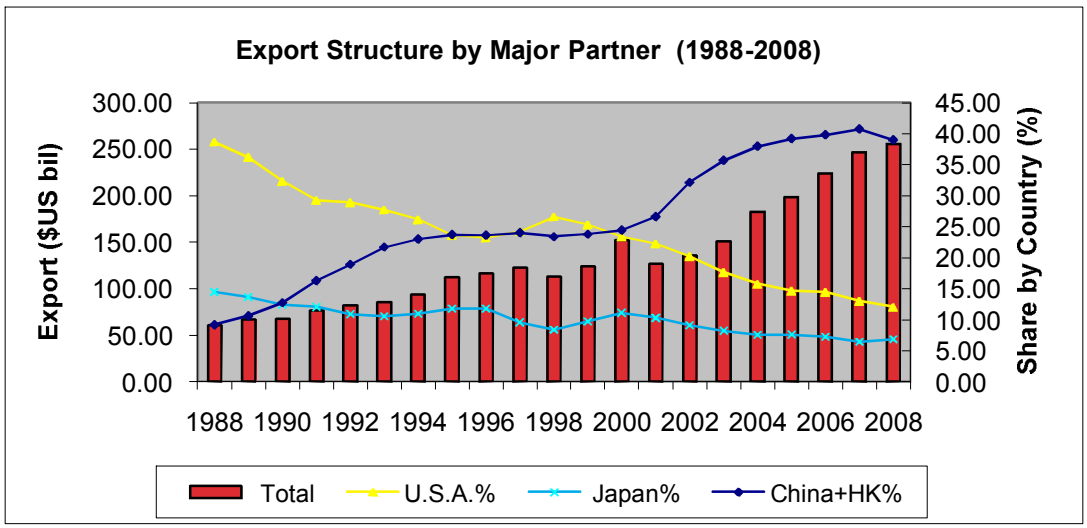


Fig. 3 **Import Intensity of Taiwan with Major Partners (1988-2008)**

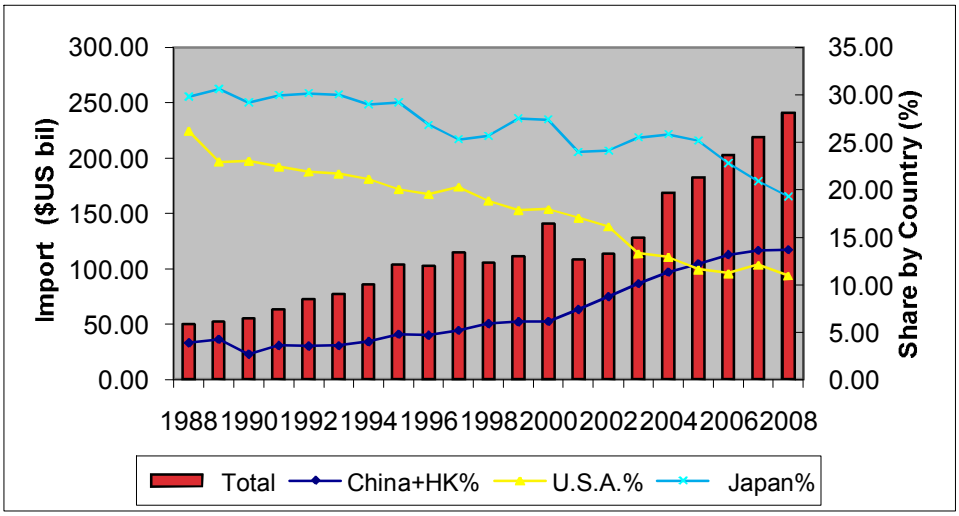


Fig. 4 **China's Trade Dependence on Taiwan - Decreasing**

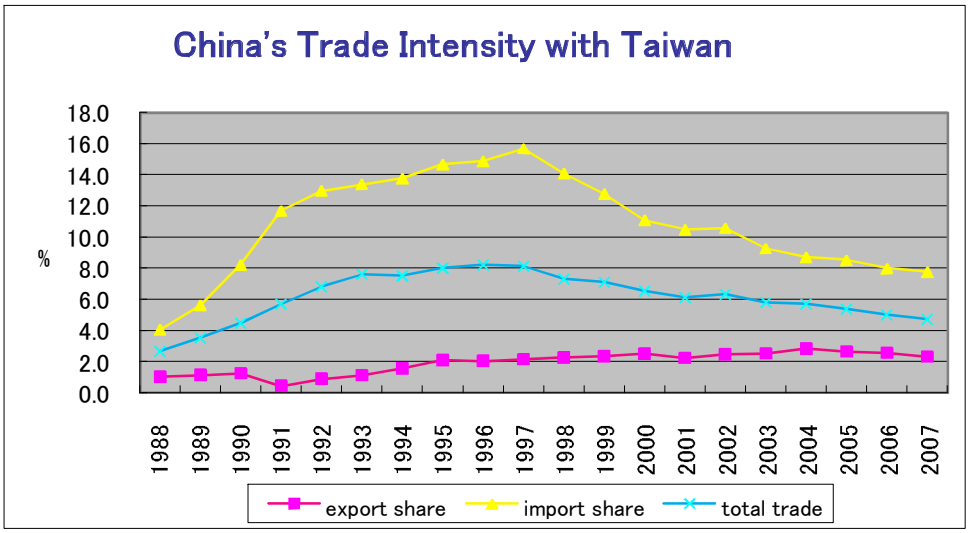


Fig. 5　Asymmetric Trade Interdependence: Taiwan More Dependent on China

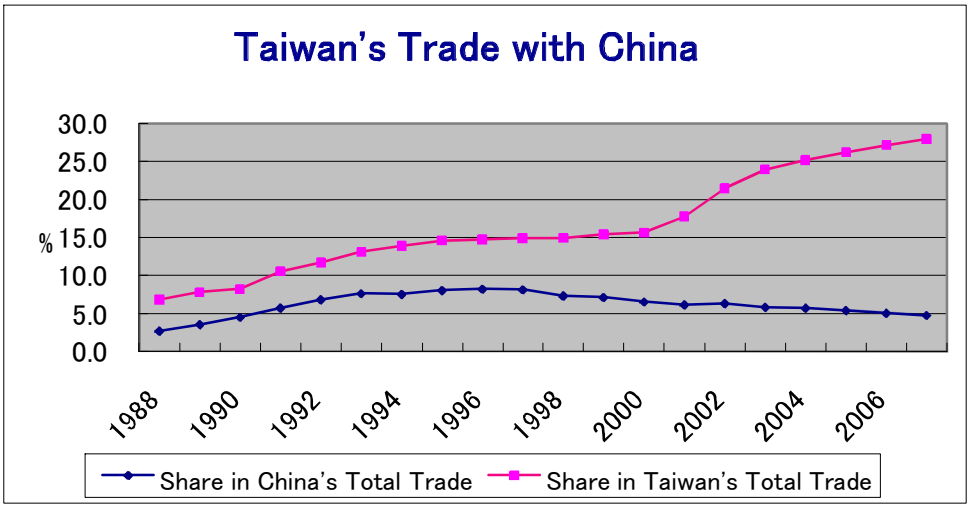


Fig. 6 Taiwan's Export Intensity Increasing while China's Import Intensity Decreasing

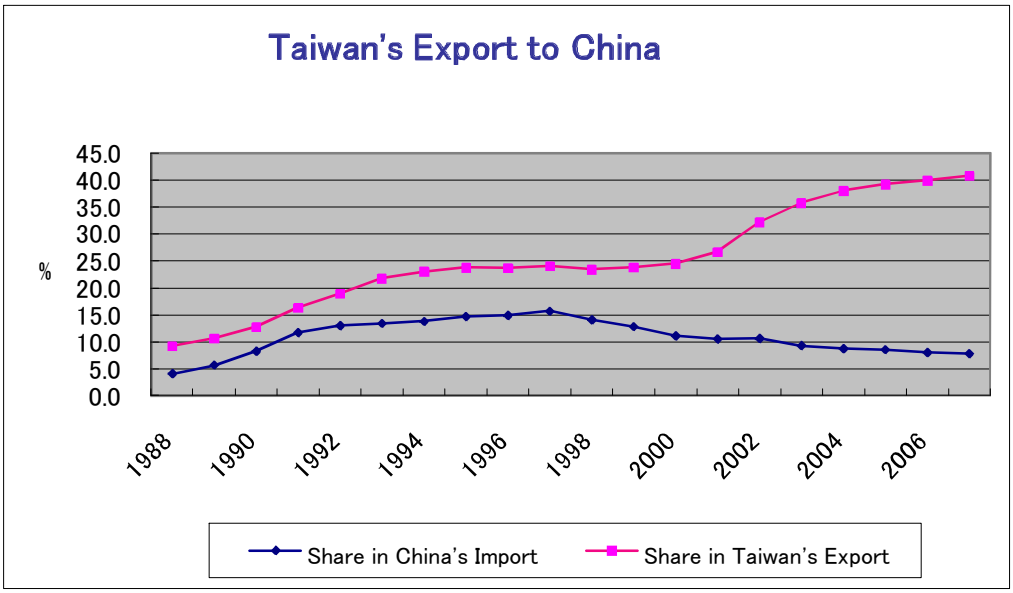


Fig. 7 **Taiwan's Import Intensity Increasing vs. China's Export Intensity Stagnant**

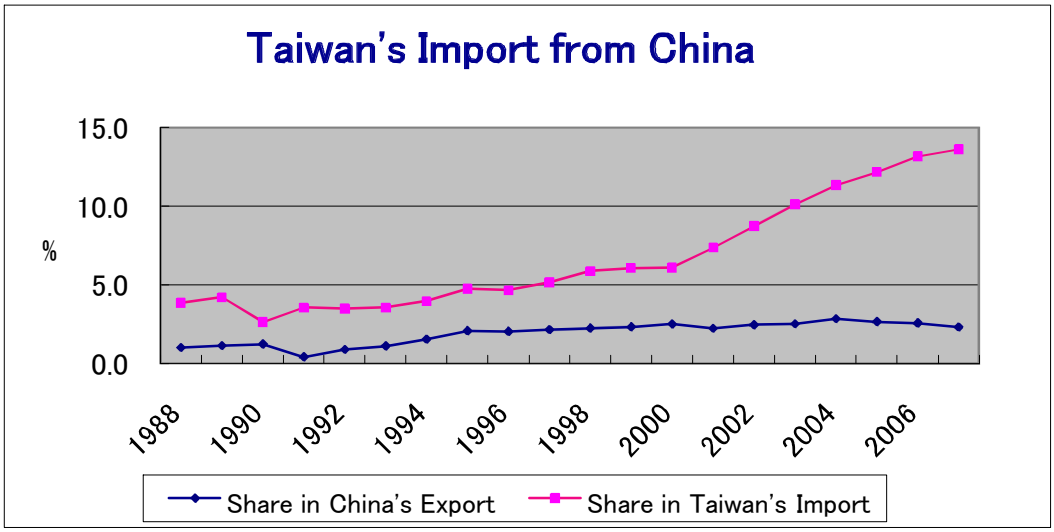
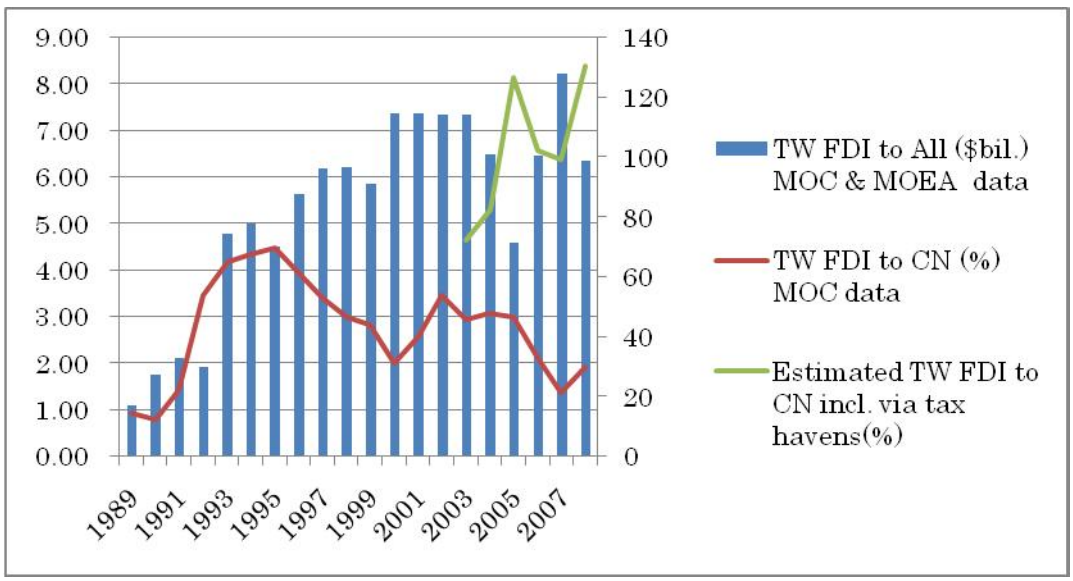


Fig. 8 **Taiwan Perspective: FDI Intensity to China – Decreasing**



Source: provided by author based on data from MAC and MOEA, Taiwan; "China Statistical Yearbook", PRC; and MOC, PRC.

Fig. 9 **China Perspective: FDI Intensity to China, Decelerating**

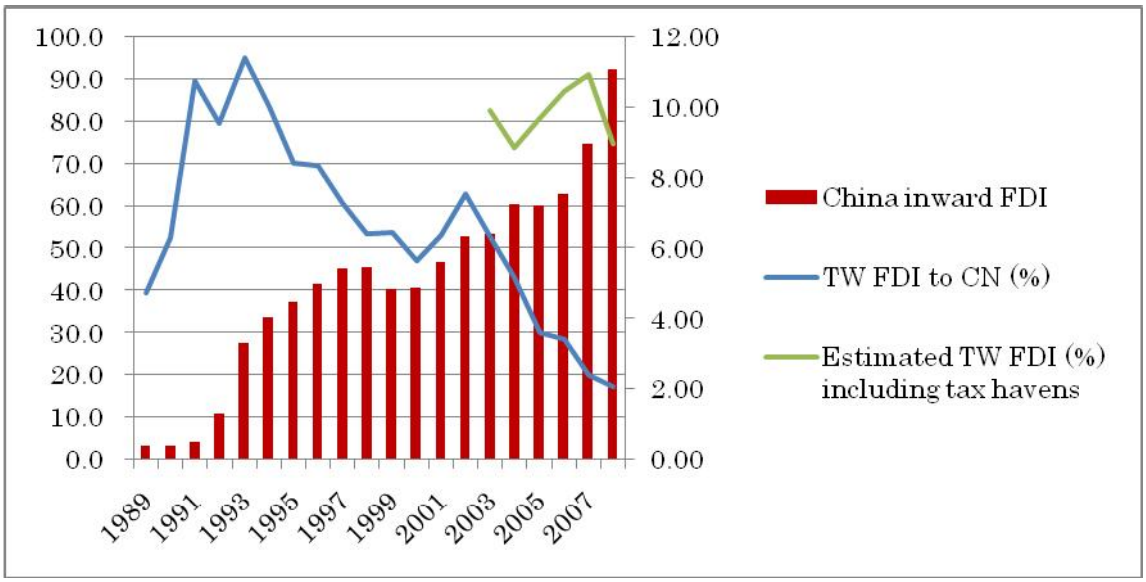
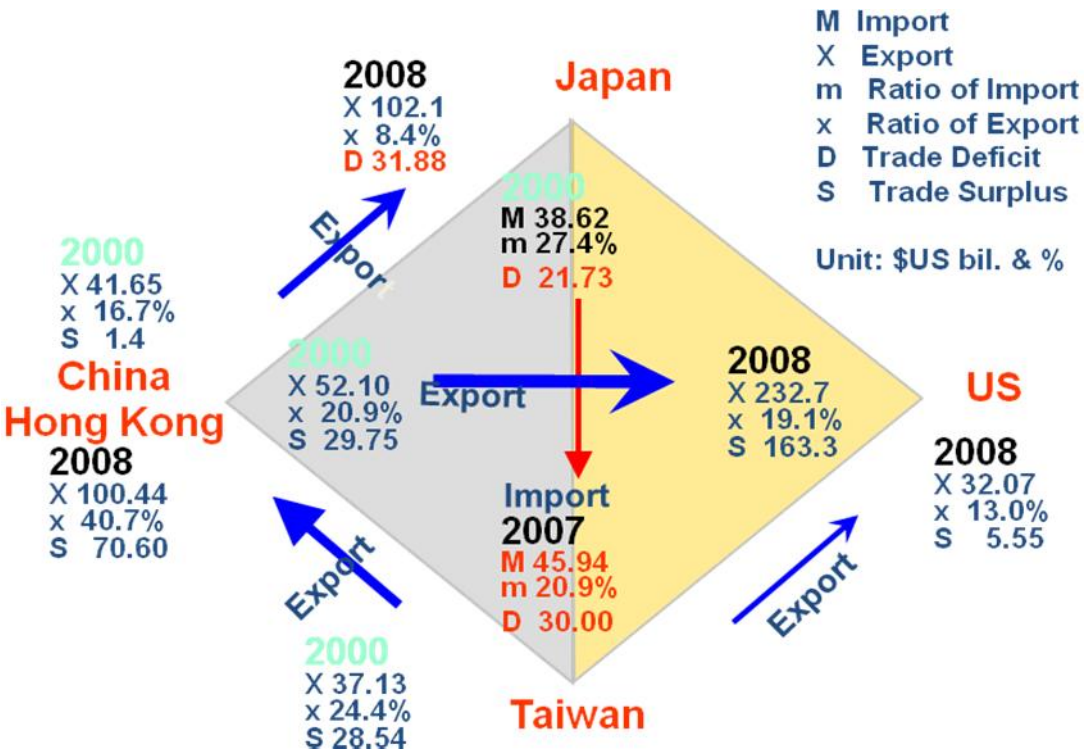


Fig. 10 **From Triad to Quartet: Taiwan's Perspective**



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Appendix: Measures of Interdependence

The measures and explanations below are cited from “Is East Asia Becoming More Interdependent? by Petri (2006).

Three different measures of interdependence are typically used in the literature. Let *xij* represent exports from country *i* to country *j*, and the subscript * (in place of *i* or *j*) represent summation across all *i* or *j*. Thus *xi** represents the total exports for country *i*, *x*j* the total imports of country *j*, and *x*** total world trade. In this notation, the three commonly used measures of interdependence are defined as follows:

(a) The absolute measure of trade intensity deflates a particular bilateral (or intraregional) trade flow with overall world trade.

$$A = xij / x^{**}$$

(b) The relative measure of trade intensity deflates the absolute measure with either the share of the exporting country on world exports, or the share of the importing country in world imports.

$$B = A/(xi^* / x^{**}) = xij / xi^* \text{ or } B' = xij / x^*j$$

(c) The double-relative measure of trade intensity (sometimes called the gravity measure) deflates the absolute measure *both* with the worldwide export share of the exporting country and the worldwide import share of the importing country.

$$C = A/(BB') = xijx^{**} / xi^*x^*j$$