An Assessment of Globalization in Vietnam under the BTA and WTO

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An Assessment of Globalization in Vietnam under the BTA and WTO

I. Introduction

This is the latest in a series of STAR-Vietnam reports on the economic impact of the US-VN BTA (in effect since December 11, 2001) and WTO accession (which occurred on January 1, 2007).[1] Past reports have mainly focused on the trade and foreign investment impacts of these agreements. The current report is more ambitious in attempting to provide a broad (non-rigorous) assessment of the benefits and costs of globalization in Vietnam under the two agreements. Past reports have mainly had good news to report—exports to the U.S. soaring after the BTA came into effect and foreign investment flooding into Vietnam in the year following its accession to the WTO. This report, coming in the immediate aftermath of the "global crisis," is obliged to weigh the negative consequences of globalization along with positive, since the U.S./European financial crisis of 2008 became a global economic crisis in 2009 impacting every country, including Vietnam, through the channels of globalization—trade and international finance. Concerns have therefore arisen as to the wisdom of an economic development strategy that relies heavily on international trade and investment. Whether those concerns are justified is an issue examined here.

The next chapter assesses trade integration, focusing on the trade impact of the BTA and WTO accession. It then analyzes the extent to which the acceleration and changing composition of trade have impacted the structure of the economy. It also takes a critical look at the oft-repeated recommendation that Vietnam take measures to raise value-added and move up the "value chain." Finally, it considers the implications of the

[1] Footnote on previous STAR reports.

global crisis for the outward-oriented industrialization strategy Vietnam has pursued the past 15 years.

Chapter III assesses the role of financial globalization in Vietnam, subject to severe limitations in the availability of data. Theory suggests that threshold conditions are required to benefit from financial globalization and minimize the macroeconomic risks that accompany international financial flows. Vietnam's brief currency crisis in the spring of 2008 is interpreted as just such a case of premature opening of the capital account. Threshold conditions are presumably less relevant to FDI than to other financial inflows and, indeed, FDI is commonly regarded as unconditionally beneficial. We argue, however, that there is a need for a critical assessment of the role of FDI, especially in light of its recent shift away from manufacturing and toward real estate and other non-tradable goods sectors.

Finally, in Chapter IV, a summary is provided of the main conclusions of this report. Inevitably, far more questions are raised than answered. The authors would like to put the blame on the lack of basic data on economic structure and the macro economy, but acknowledge that our own limitations of imagination and analysis no doubt contributed.

II. International Trade

A. The logic of the trade-growth nexus

Trade is often portrayed as an "engine" of growth in developing countries, but the metaphor is inapt as it implies that the direction of causality runs from trade (read exports) to GDP growth. For a small price-taking economy, like Vietnam's, it is more likely that growth is the engine of trade than the reverse. Even this notion fails logically, however, since the growth rate is not exogenously determined. Growth theory suggests that long-run growth is mainly the result of investment, since it is investment that expands production capacity and raises productivity, and hence drives economic growth. It is, therefore, more theoretically appealing to abandon the engine metaphor altogether and consider trade and growth as simultaneously determined by rate and efficiency of investment.

If the rate of investment determines the rate of real GDP growth and by extension the rate of growth of exports (and imports) then the next logical question is what determines the rate of investment and the rate of growth that a given rate of investment generates, in other words, the efficiency of investment. In basic terms, the rate of investment depends mainly on the rate of saving, since it is through saving that resources are made available for investment. The efficiency of investment, in turn, depends on a wide range of factors which together constitute the economic infrastructure broadly defined, including the physical infrastructure, the legal system, health and education institutions, the financial system and the government's overall policy framework.

Among the factors that determine the rate of saving and the efficiency of investment, one important one is a country's openness to trade. From trade theory we

know that a country can achieve a higher level of income from a given stock of resources if it specializes in the production of goods and services in which it has a comparative advantage. The trade gain comes from being able to separate the decision what to produce from the decision what to consume—a country can produce the bundle of goods that maximizes its income (subject to its resource constraint) and, through international trade, exchange it for an entirely different bundle of goods that satisfies its tastes and preferences. Since trade allows a country to achieve a higher level of income than would be possible otherwise, it expands the capacity of a country to save and invest and hence to grow. Through the reallocation of resources toward sectors in which a country as a comparative advantage, trade also enhances the efficiency of investment. In addition it should be noted that trade contributes to growth by allowing countries to upgrade technology by importing capital goods that embody technologies that are not available domestically and raises the level of competition, and hence the level of efficiency, of an economy.

It follows that although trade may not be a sufficient condition for growth (i.e. an engine), it is a necessary condition, at least for relatively small economies, like Vietnam, that possess a strong comparative advantage in a limited range of industries and hence a strong comparative disadvantage in a wide range of industries.[2]

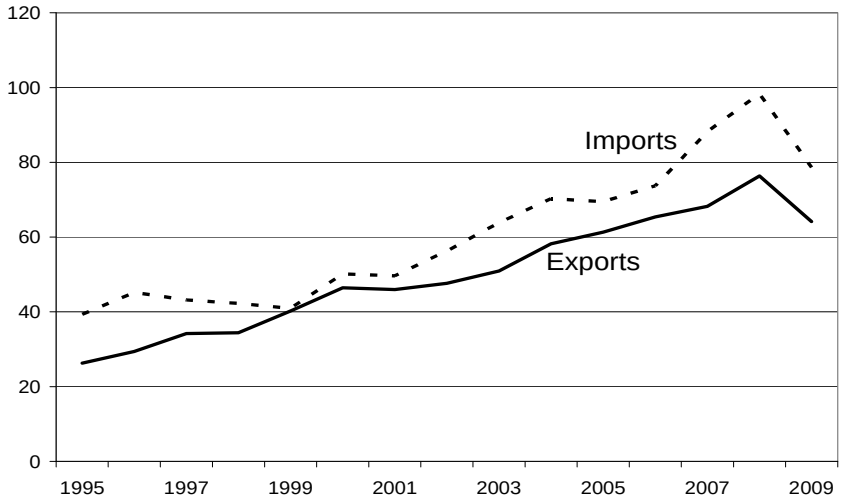
B. The Role of Trade in Vietnam's Economy

The importance of trade, as measured by the ratios of exports and imports to GDP, is shown in Figure 1. This measure grossly overstates the importance of exports and imports in the economy because a significant proportion of imported intermediate

[2] James Riedel, "Trade as the Engine of Growth in Developing Countries, Revisited", *Economic Journal*, Vol. 94, No. 373 (March 1984) 56-73.

products is re-exported as final goods from Vietnam.[3] Nonetheless, if the proportion of re-exported imports in total exports is roughly constant over time, then the trend indicating a growing importance of trade in the economy is valid.[4]

Figure 1: Exports and Imports as % of GDP



Source: GSO Vietnam

There is, however, reason to suspect that the share of imported inputs in exports is rising and hence that the growth of export value-added is lower than that of gross exports. This arises from the observation that the ratio of value-added to gross output in the enterprise survey data has steadily declined since the year 2000 in most manufacturing branches. There are, however, no available data by which to determine whether the decrease in value-added per unit output reflects an increasing share of domestically produced or imported intermediate goods. It is very likely that export value-added as a share of GDP has increased over time, though probably not as rapidly as the ratio of gross exports to GDP. It is apparent in Figure 1 that the importance of trade in Vietnam's

[3] There are no available data with which to measure the domestic value added of exports, but it is worth noting that the gross value of manufactured exports is 1.5 times greater than total value-added in the manufacturing sector; in clothing, exports are 16 times greater than domestic value-added

[4] Enterprise survey data indicate that the ratio of value-added to gross output declined by about 20 percent from 2000 to 2008.

economy was increasing before the BTA, but with implementation of the BTA the rate of increase in the export-GDP ratio accelerated.

WTO accession in 2007 does not appear to have led to acceleration in the export-orientation of the economy, nor should it have been expected to have such an effect since WTO accession did not increase Vietnam's access to world markets other than in the textile and garment sector in the U.S. The import-GDP ratio rose dramatically in 2007, but as will be explained below, the increase in the import-GDP ratio in 2007 had more to do with the overheating of the economy in 2007, resulting in part from the euphoria that accompanied WTO accession, than to any provisions in the agreement itself.

The global economic crisis that hit Vietnam and the rest of the world in late 2008 and 2009 dealt serious blow to Vietnam's growing trade orientation, but this reversal is unlikely to persist once the developed countries, which constitute Vietnam's principal export markets, recover from the global crisis, assuming Vietnam continues to pursue an outward-oriented development strategy (discussed below).

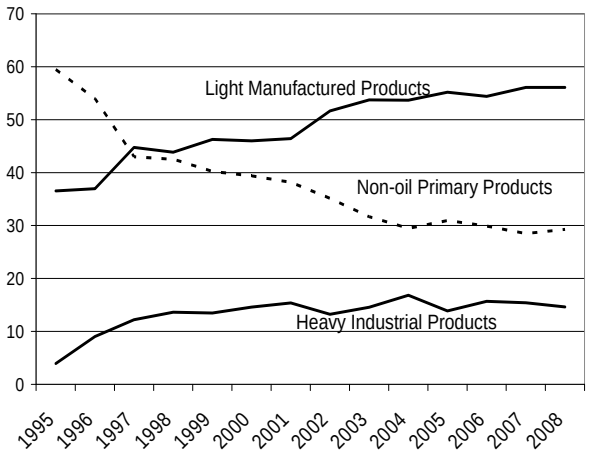
C. Export and Import Composition

As suggested above, an important source of the gains from trade comes from the changes that international integration allow in the structure of production in favor of industries and branches of industry in which the country has a comparative advantage, which in Vietnam's case is clearly relatively labor-intensive manufacturing. Before we examine structural changes in production, it is useful to consider changes in the commodity composition of exports and imports.

Vietnam is blessed with substantial endowment of oil and gas, which account for 20 to 25 percent of total exports depending mainly on the ups and downs in world oil

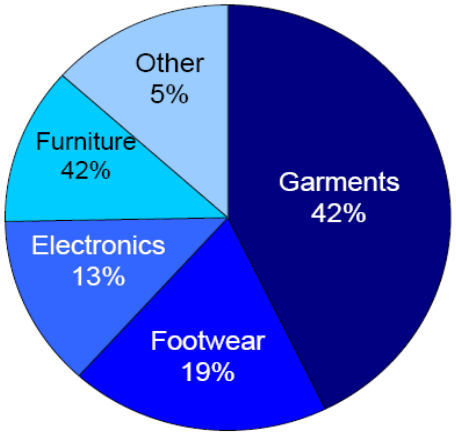
prices. Given that the basis of oil and gas exports is the country's natural endowment of these resources and not comparative advantage, it is useful to confine our examination of structural changes to non-oil exports. As Figure 2 indicates, the structure of non-oil exports has fundamentally changed over the past 15 years, with the role of primary products (mainly agricultural and aquatic products) trading places in terms of share of total non-oil exports with manufactured products. Moreover, within manufactured exports there has been a significant shift in the composition of exports from heavy capital-intensive products to light labor-intensive products, the main items of which, as Figure 3 indicates, being garments, footwear, furniture and recently electronic products.

Figure 2: The Composition of Non-Oil Exports: 1995-2008 (%)



Source: GSO Vietnam

Figure 3: The Composition of Manufactured Exports in 2009

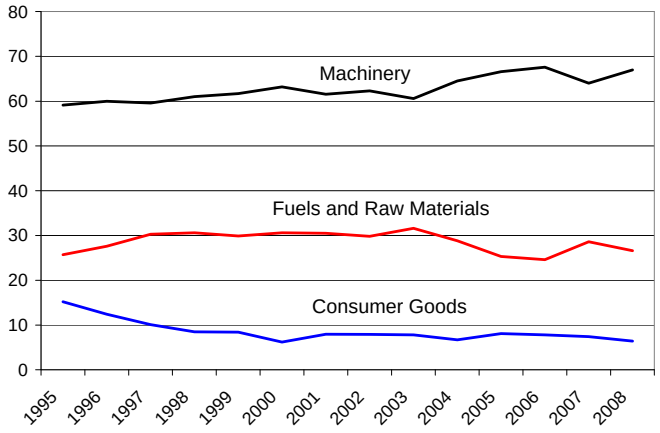


Source: Vietnam Customs Office

The composition of imports and the key import items are shown in Figures 4 and 5. International economic integration has raised importance of imports in the economy, but it has not changed significantly the overall composition imports, which was in the past and still is dominated by capital goods and industrial raw materials. Consumer

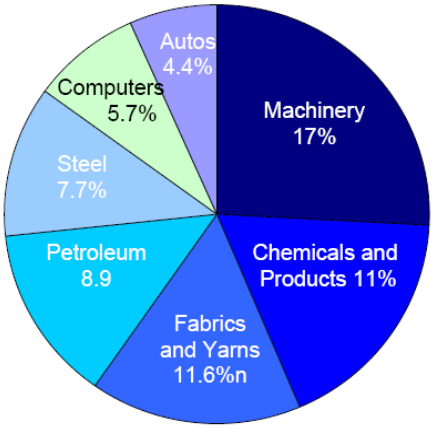
goods imports are a relatively small part of Vietnam's import bundle, although one important exception is automobile imports, which increased three-fold in three years from 2006 to 2009. In 2009 alone, auto imports rose 50 percent, reportedly spurred by macroeconomic stimulus measures, including a temporary reduction in the VAT tax and interest rate subsidies.[5]

Figure 4: The Composition of Imports: 1995 – 2008 (%)



Source: GSO Vietnam

Figure 5: Key Imports as % of Total: 2009



Source: Vietnam Customs Office

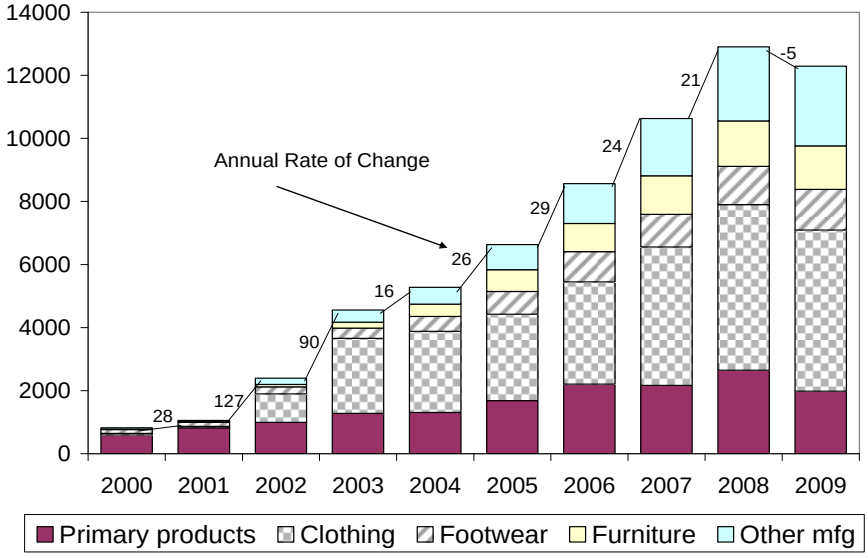
D. Bilateral Trade with the U.S.

As noted above, the main obligation of the U.S. under the BTA was to grant Vietnam NTR/MFN status upon entering the agreement. The effect of this was to lower the U.S. tariff rate on imports from Vietnam from an average of 40 percent to about 4 percent, with the largest tariff rate cuts falling on those products in which Vietnam possessed the strongest comparative advantage, labor-intensive light manufactures. The response in Vietnam to the opening of the U.S. market is indicated in Figure 6. In the first year of the BTA (2002), Vietnam's exports to the U.S. more than doubled in value, increasing 127 percent over the 2001 value. In the second year under the BTA, exports

[5] HSBC, *Vietnam Monitor*, Issue 27, 8 February 2010, p. 3.

almost doubled again (rising by 90 percent), making the U.S. Vietnam's single largest export destination.

Figure 6: Vietnam's Exports to the United States: 2000-2009 (USD millions)



Source: U.S. International Trade Commission, online database.

Figure 6 further indicates that the initial surge in exports to the U.S. was mainly in clothing, which increased by 1,800 percent in 2002 and 650 percent in the first six months of 2003 (compared to the same period of the previous year). The surge in clothing exports to the U.S. came to an end in June 2003 with the signing of the U.S.-Vietnam Textile Agreement, under which Vietnam was obliged implement export quotas to limit the annual growth of its textile and clothing exports to the U.S. to 7-8 percent thereafter. With Vietnam's accession to WTO and the passage of Permanent Normal Trade Relations, in January 2007, the U.S. eliminated quotas on Vietnam's textile and clothing exports, but replaced them with a rigorous trade monitoring mechanism that reportedly served to stifle the growth of clothing exports to the U.S. Nonetheless, in 2007 the growth rate of clothing exports to the U.S. jumped to 35 percent, more than three times faster than the average rate of the three previous years when the quotas were

in place. Subsequently, in 2008 and 2009, clothing exports to the U.S. slowed down, and indeed in 2009 recorded negative growth, but because of a collapse of demand consequent on the "great recession" that began in the U.S. in the fourth quarter of 2008 (discussed below).

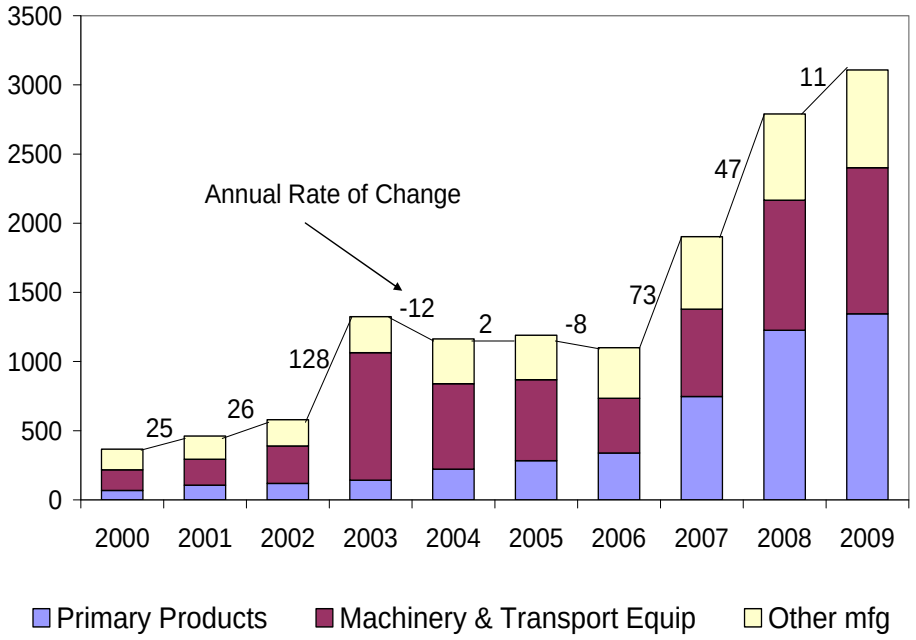
While clothing was a big part of the initial surge of exports to the U.S. following the BTA, what sustained rapid growth since 2003 was diversification of labor-intensive manufactured exports into furniture, footwear, travel goods, miscellaneous manufactures and more recently electronic products. Prior to the BTA about all that Vietnam could export to the U.S. was primary products (fish, coffee and petroleum). With the opening up of the market for manufactures under the BTA, the share of primary product exports decline dramatically, but their growth remained respectable and was sufficiently high in the case of fish and shrimp exports to attract anti-dumping action in the U.S. to limit export growth of these items.[6]

While the granting of NTR/MFN status to Vietnam led to a surge in Vietnam's exports to the U.S., no reciprocal surge in U.S. exports to Vietnam occurred with the signing of the agreement, since the U.S. already enjoyed MFN status in Vietnam prior to the agreement. As Figure 7 indicates, there was what appears to be a surge in U.S. exports to Vietnam in 2003, but the data indicate that the 128 percent increase in exports that year was mainly attributable of a one-off large sale of aircraft to Vietnam. Exceptionally strong growth in U.S. exports to Vietnam also occurred in 2007 (73 percent) and 2008 (47 percent), but on these occasions exports to Vietnam accelerated across the board, with primary product exports growing 120 percent and manufactures

[6] For detail of these actions see STAR/CIEM, "Assessment of the Five-Year Impact of the U.S.-Vietnam Bilateral Trade Agreement on Vietnam's Trade, Investment, and Economic Structure," 2007, The National Political Publisher: p.207.

growing 54 percent in 2007, imports of auto from the U.S. increasing five-fold in 2007. In 2008, U.S. exports to Vietnam also grew strongly (47 percent), but as in 2003 this was mainly due to a $1.2 billion export of aircraft to Vietnam.

Figure 7: U.S. Exports to Vietnam: 2000-2009 (USD millions)



Source: U.S. International Trade Commission, online database.

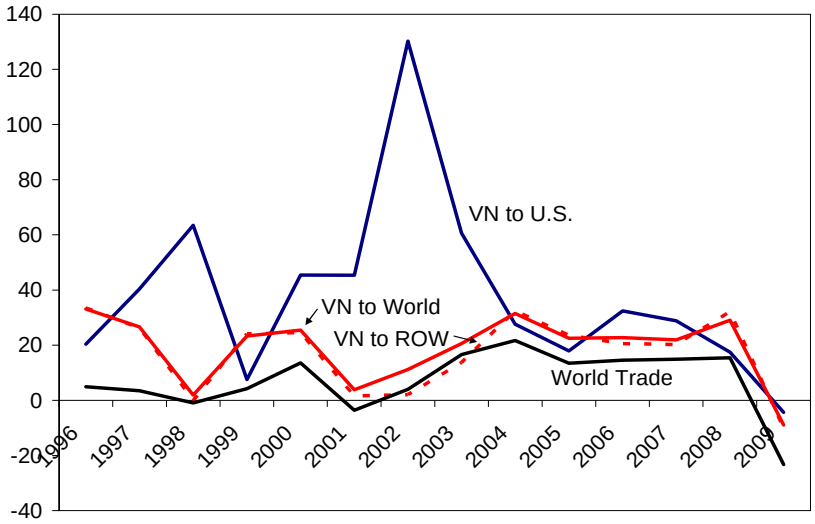
An interesting issue, given the focus on globalization under the BTA and WTO, is the extent to which the surge of exports to the U.S. in the first eighteen months under the BTA constituted an overall expansion of exports (export creation) or, alternatively, a diversion of exports from other markets (export diversion). In an earlier report, we offered evidence suggesting that most of the surge in exports in the first eighteen months under the BTA was export creation, with only a small amount of diversion in clothing exports from third markets to the U.S.[7] These findings were obtained by comparing

[7] See our earlier report "Update on Bilateral Trade in 2003 between Vietnam and the United States", 2004, The National Political Publisher

actual exports to the Rest-Of-the-World (ROW=World minus the U.S.) to our projection of exports to ROW based on the past trends. If actual exports to ROW were found to be equal to or greater than projected exports, then we concluded there was no export diversion. We found only a relatively small amount of export diversion in clothing exports and none in footwear and furniture.

The earlier finding that most of the post-BTA surge in exports to the U.S. constituted export creation is supported by the data on export growth rates to the U.S. and the ROW, presented in Figure 8. Interestingly, these data suggest a role for the U.S. as the export market of last resort. The U.S. role as the export destination of last resort shows up even before the BTA was implemented, namely during the Asian Financial crisis in 1998 when demand in two of Vietnam's principal export markets, Japan and the ASEAN countries, collapsed precipitously and Vietnam turned to the U.S. market, expanding its exports of primary products to the U.S. by 64 percent in 1998. The same phenomenon is observed in 2001 when as a result of a major slowdown in world trade growth of Vietnam's exports to ROW declined, while exports of primary products to the U.S. expanded more than 40 percent. The surge in manufactured exports resulting from the implementation of the BTA in 2002 had a significant positive impact on Vietnam's exports at a time when external demand in Asia, Europe and the U.S. was weak. In 2002, exports to ROW (all countries except the U.S.) grew only by 2 percent, while exports to all countries (including the U.S.) grew by 11 percent. In other words, Vietnam's export growth rate in 2002 was more than 5 times higher than it would have been had the BTA not come into effect in 2002. The role of the U.S. during the 2009 Great Recession is, however, another story altogether (discussed below).

Figure 8: Growth Rates of Vietnam's Exports to the U.S. and ROW and the Growth Rate of World Trade: 1997-2009 (percentages)



Source: GSO and WTO International Trade online database

E. Structural Change

We have observed a significant shift in the structure of exports over the past 10 years. But has this translated into shifts in the structure of GDP and the allocation of labor and capital across sectors, and within manufacturing, in favor Vietnam's comparative advantage in relatively labor-intensive products?

1. Structural Change in GDP

The shift in the composition of exports from agriculture to industry is also observed in the structure of aggregate GDP, as Table 1 indicates, but to a much smaller extent. Agriculture, forestry and fishing, together with mining and quarrying, saw a 8 percentage point decline in their share of GDP from 2000 to 2008, while manufacturing's share increased 7 percentage points. This suggests that the growth and diversification of

exports has had an impact on the production structure of the economy, but only to a relatively modest extent.

Table 1: The Structure GDP by Sector and Ownership: 2000 and 2008

	2000	2008
Structure of GDP (in 1994 prices) by Sector (%)		
Agriculture, Forestry & Fishing	23	18
Mining & Quarrying	7	4
Manufacturing	19	26
Other	51	52
Structure of GDP (in 1994 prices) by Ownership (%)		
State-Owned	41	38
Private Companies	8	12
Households and Cooperatives	41	36
Foreign Invested Enterprises	11	14

Source: GSO Vietnam

The shifts in the composition of exports and production have also been accompanied by shifts in the ownership structure of GDP, but again only marginally. During the period of BTA implementation and WTO accession, the share of the state-owned enterprises in GDP declined only 3 percentage points and that of private companies, which have been the driving force of export-oriented industrialization elsewhere in Asia, increased only by 4 percentage points of GDP.

2. Structural Change in Manufacturing

Data indicating the contribution to GDP (value-added) of the individual branches of manufacturing are not published. In order to form a picture of the changing structure of manufacturing we must, therefore, rely on enterprise surveys data. The main problem with the enterprise survey data is that they cover only a portion of the manufacturing sector. Table 2 uses employment data published by the Government Statistical Office (GSO) for the economy as a whole and those published in the enterprise surveys to illustrate this problem. For example, total employment reported in the enterprise surveys

constituted only 18 percent of total employment reported by the GSO in 2008. Between 2000 and 2008, total employment according to the enterprise surveys grew 5 times faster than total employment in the economy as a whole.

In manufacturing the coverage of the enterprise surveys is much greater than in other sectors, but it still accounted for only 63 percent of total employment in 2008, up from 45 percent in 2000. It is unclear whether the rising proportion of employment as reported in the enterprise surveys indicates a shift in employment from the informal to the formal sector, which could be interpreted as a positive development, or whether it simply indicates greater coverage of the surveys. Relying on the enterprise survey data to get a picture of changing structure of manufacturing may, therefore, give a distorted picture, but unfortunately there is no alternative.

Table 2: Employment Data Reported by the GSO and the Enterprise surveys (Percentages)

	GSO			Enterprise surveys (ES)			Employment by Sector ES/GSO in percent	
	Share 2008	Change in Share From 2000	Annual Growth Rate 2000-08	Share 2008	Change in Share From 2000	Annual Growth Rate 2000-08	2000	2008
Total	100	0	2	100	0	10	9	18
Agriculture	53	-12	0	5	-3	4	1	2
Mining	1	0	7	2	-2	3	60	45
Manufacturing	14	5	7	48	3	11	45	63
Other	32	8	6	45	2	11	16	25

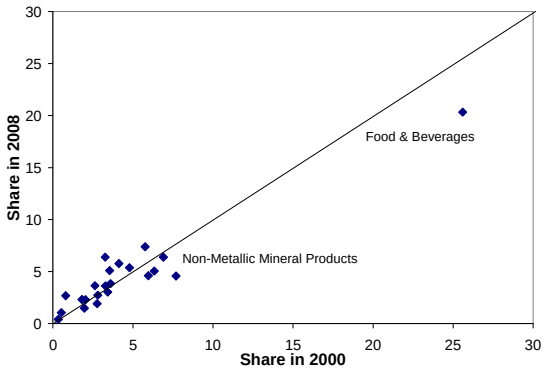
Source: GSO Vietnam

The structure of manufacturing value-added and employment and changes in the shares of twenty 2-digit ISIC branches are illustrated in Figures 6.A and 6.B. There is more uniformity and less change in the value-added shares of individual branches than in the employment shares. Food and beverages and non-metallic mineral products (e.g.

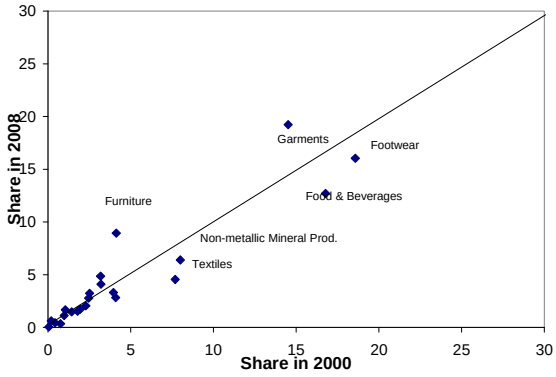
cement), which accounted for the largest share of manufacturing value-added, both saw their shares decline between 2000 and 2008. In terms of employment, footwear held the largest share in 2000, but was overtaken by garments in 2008. In terms of change in the shares of individual branches, garments and furniture, Vietnam's two leading exports, showed the greatest increase. Indeed, the three leading export industries, garments, footwear and furniture, together accounted for 50 percent of the increase in the number employment in manufacturing, according to the enterprise surveys, between 2000 and 2008.

Figure 9: Sector Shares in Manufacturing Value-Added and Employment in 2000 and 2008 (percentages)*

9.a: Value-Added



9.b: Employment



* Note: the diagonal line represents no change in share from 2000 to 2008.
Source: GSO Vietnam

The contributions of selected industries to output, employment and the stock of capital in manufacturing are indicated in Table 3. Vietnam's three leading export sectors account for less than 20 percent of manufacturing value-added and capital stock, but almost 45 percent of manufacturing employment. The share of the six leading import-competing sectors in manufacturing value-added and capital stock, on the other hand, are two to three times higher than their shares in employment. These observations simply

reflect the fact that Vietnam's export industries are more labor intensive than import competing sectors, as indeed one would expect based on Vietnam's comparative advantage in labor intensive goods. Indeed, as Table 3 indicates, the average capital-labor ratio in Vietnam's main export branches is about one-sixth the average capital-labor ratio of key import-competing branches.

Table 3: Shares in Manufacturing Value-added, Employment and Capital Stock and the Capital-Labor Ratio in Leading Export Sectors and Key Import-Competing Sectors: 2008

	2008 shares in Manufacturing			
	Value-Added (%)	Employment (%)	Capital (%)	Capital-Labor Ratio (VND Mill per worker)
Leading Export Sectors				
Manufacture of wearing apparel	7.4	19.2	4.2	34
Footwear, Luggage & Handbags	5.1	16.0	6.8	66
Furniture	6.4	8.9	5.0	86
Sum (average) of above	*18.8*	*44.2*	*15.9*	*(56)*
Selected Import-Competing Sectors				
Chemicals	4.6	2.8	4.1	223
Metals	3.0	1.5	4.5	458
Machinery & equipment	2.3	1.7	2.2	199
Non-metallic Mineral Products	4.6	6.4	14.6	355
Motor vehicles & transport equip.	10.0	4.4	8.9	318
Textiles	5.4	4.5	7.8	267
Sum (average) of above	*29.9*	*21.4*	*42.1*	*(306)*

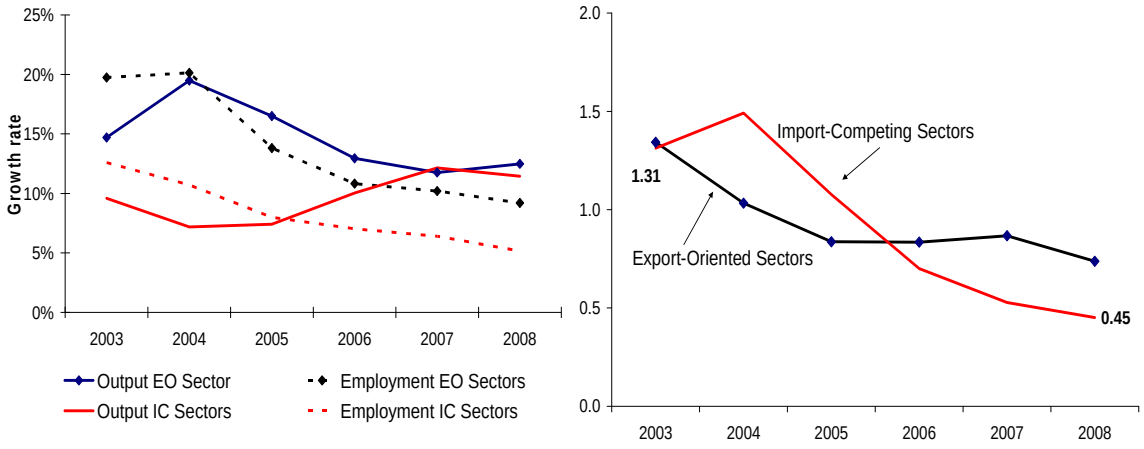
Source: GSO Vietnam

The importance of employment growth in Vietnam's economy justifies a closer look at the relation between changes in the structure of output (value-added) and employment in export and import-competing sectors. The labor-intensive export-oriented industrialization strategy that ignited sustained rapid growth in other East Asian countries appears to have gotten off track in recent years, according to the data presented in Figure 10, with value-added and employment growth falling in export-oriented sectors while

rising (and in the case of employment falling less rapidly) in import-competing sectors. These data suggest, as shown in Figure 11, that the employment generating impact of growth (employment elasticity as it is known) in both export-oriented and import-competing sectors has been diminishing, though much more rapidly in import-competing than in export-oriented sectors. This simply means that labor productivity has been growing in both sectors, but much more rapidly in import-competing sectors.

Figure 10: Growth rates of value-added and employment in export-oriented (EO) and import-competing (IC) sectors: 2003-2008

Figure 11: Employment Elasticities in EO and IC Sectors: 2003-2008



Source: GSO Vietnam

It is beyond the scope of this study to offer a rigorous explanation of the apparent shift in relative growth rates of output and employment in export-oriented and import-competing sectors, but it is interesting to ponder several hypotheses. One hypothesis would be that labor-intensive export-oriented industrialization has run its course in Vietnam and therefore the apparent shift signals the beginning of the end of surplus labor in Vietnam, as seems to have occurred in China in recent years. Unfortunately there is little evidence that supports this hypothesis. Indeed, what evidence there is argues against it. There is no evidence that the stream of unemployable young men from the

countryside into the cities is abating, nor is there evidence of acceleration in the growth of real wages. Indeed, a recent study indicates that since 2002 the growth of nominal and real wages has slowed down and the wage skill-premium has been declining.[8] A slowdown in nominal and real wage growth suggests a slowdown in labor demand growth, which points to a shift of incentives favoring import-competing and non-tradable goods sectors over labor-intensive export-oriented industries. Changes in incentives that might give rise to this outcome include (1) real appreciation of the exchange rate, (2) an increase in government spending, (3) increased government support for capital-intensive state-owned enterprises, (4) a real estate price bubble that pulls financial resources away from industry, (5) a shift in foreign direct investment away from manufacturing and into non-tradable goods, real estate, and heavy industry. As we document in the next chapter on capital flows, most, if not all, of these developments have indeed occurred in recent years.

To sum up, the data presented above clearly indicate that, while the structure of exports has changed significantly in the direction of more labor-intensive manufactured products, the structure of manufacturing value-added has not. This is confirmed by computing the average capital-labor ratio in manufacturing using value-added shares in 2000, and alternatively in 2008, as weights. By this measure, the average capital-labor ratio declined from VND 215 million per worker in 2000 to VND 206 million per worker in 2008, a reduction of four percent. Moreover, there is evidence that indicates that the impetus for structural change in the direction of Vietnam's comparative advantage in labor-intensive industry is waning.

[8] Diep N. Phan, "A Report on Vietnam's Labor Market," CIEM, Danida, 23 July 2009.

Many commentators on Vietnam's economic transition and development have interpreted the evidence summarized above as reason to move from an industrialization strategy based on comparative advantage to one that promotes "higher value-added" production and movement up the "value chain."[9] When the World Bank advises countries, like Vietnam, to "to move up the value chain through increased sophistication of production," as it did in its most recent *World Bank East Asia and Pacific Economic Update 2010*,[10] it sounds eerily reminiscent of the long ago discredited industrial policy of "picking winners." Ten years ago, the World Bank asked, "Will future growth be more labor-intensive?" and answered, "Vietnam clearly has a lot of untapped comparative advantage in labor-intensive exports." It also noted that "international experience shows that export-oriented industrialization is impossible without the emergence of a dynamic private sector."[11] What has changed over the past ten years? Our conclusion is: not enough. Growth and structural change have not yet eliminated surplus labor in Vietnam's economy and the domestic private corporate sector in manufacturing is still in the formative stage of development. In other words, Vietnam seems to have not yet exploited the all opportunities available to it in its current slice in the value chain, hence advocating measures to move to a higher slice when these are likely to conflict with the venerable principle of comparative advantage strikes us as a dubious proposition (see Box 1.).

[9] See, "World Bank tells Vietnam to move up value chain," 10 April 2010, www.Stockbiz.vn

[10] World Bank East Asia and Pacific Economic Update 2010, Volume 1, "Emerging Stronger from the Crisis, p. 22.

[11] World Bank, *Vietnam Development Report 2000: Attacking Poverty*, December 15, 1999.

Box 1: Increase Value-Added and Move up the Value-Chain! What?

A common refrain in analyses of Vietnam's export manufacturing sector is the need to increase value-added and move up the value-chain[a]. What does it mean when it is argued that Vietnam needs increase value-added, especially in production of manufactured exports like clothing? Presumably it means that Vietnam should produce domestically a larger proportion of the inputs (e.g., textile fabrics) that go into manufacturing the final products (e.g., clothing). Operationally, this means that Vietnam should invest more of its scarce capital in the production of intermediate goods and thereby necessarily less in producing and assembling final goods. To follow this strategy, however, is to defy the law of comparative advantage since, as the data presented above indicate, the capital intensity of intermediate goods is generally much higher than for the final products Vietnam exports. This is particularly the case in the textile and clothing sector where the capital-labor ratio in textile production, at VND 186 million per worker, is six times higher than in clothing production (VND 29 million per worker). Shifting investment from clothing to textile production may raise domestic value added in the textile and clothing sector, but likely would lower value-added in the economy as a whole, which is to say lower real GDP, since GDP is nothing other than the sum of domestic value-added across all sectors of the economy.

The concept of "moving up the value-chain" is even more opaque. Possibly what those who advocate this strategy mean is raising the quality of goods produced for export. Higher quality products generally sell for higher prices than lower quality ones, so it sounds like a viable strategy to increase domestic value-added. However, the iron law of economics is that nothing comes without a cost. Raising the quality of goods produced is not exempt from this law, since raising quality requires investment of scarce capital resources. Thus, the strategy of "moving up the value-chain" also confronts the law of comparative advantage. It is, therefore, not self-evident that GDP (i.e., aggregate value-added) would be raised by producing more high-quality and fewer low-quality products. It depends on which kind of product best fits Vietnam's comparative advantage. Eventually, as capital becomes more abundant relative to labor, production will shift to more capital-intensive and higher quality products, but as a result of market incentives, especially rising real wages, not government intervention. Advocating higher value-added and moving up the value-chain, in short, lacks any theoretical foundation. It sounds good, but so what?

Notes

a. See, for example, a recent EU report, "Economic Integration and Vietnam's Development," December 2009, p. 11).

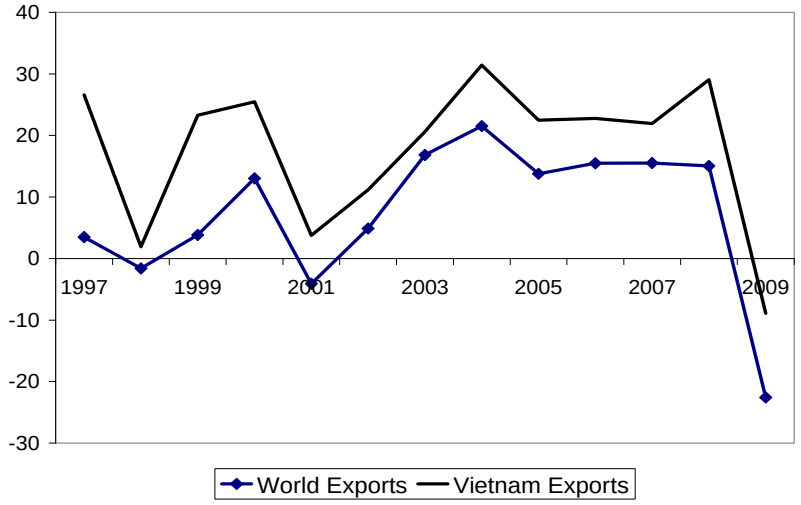
F. Trade Impact of the Global Crisis and Its Implications

The positive relation between openness to trade and growth has a solid theoretical foundation and the experience of Vietnam, described above, offers strong empirical support for it. However the channel that transmits the forces that raise growth also transmits forces that lower growth when world markets weaken and decline precipitously, as they did in late 2008 and 2009. The fact is that the more open an economy is to trade the faster it can grow when world demand is expanding, but when there is a collapse in world demand the more open an economy is the more exposed it is to negative external shocks. What then does this imply about the appropriateness of a development strategy that has openness to trade as a cornerstone, as Vietnam's growth strategy has had the past twenty years?

1. The relationship between world demand and export growth in Vietnam

If we use the rate of growth of world trade as a measure of world market conditions, we find it bears a close relationship to the growth of total exports of Vietnam, as Figure 12 indicates. Indeed the correlation coefficient between annual growth rates of world trade and the growth rates of Vietnam's total exports is very high (0.88) and the variability of growth of the two indexes (measured by their standard deviation) is almost the same (11.4 versus 11.6). However, since the growth Vietnam's exports is two and half time higher than the growth of world trade (17.8 versus 7.3 percent), the coefficient of variation (the ratio of the standard deviation to the mean) of Vietnam's export growth rate is much lower than for the growth of world trade (0.65 versus 1.56), suggesting that Vietnam's export growth is significantly less volatile than world trade.

Figure 12: Growth rates of World Trade and Vietnam's Total Exports: 1997-2009 (Percentages)



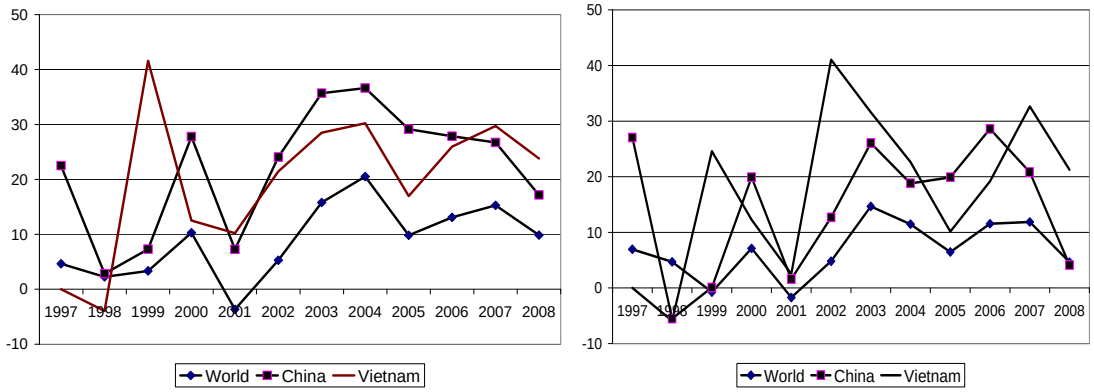
	World	Vietnam
Mean	7.3	17.8
Standard Deviation	11.4	11.6
Coefficient of Variation	1.56	0.65

Source:

Since different commodity categories exhibit different levels of growth and volatility, it is useful to disaggregate. Figures 13.a and 13.b present a similar analysis for total manufactured exports and clothing, Vietnam' most important manufactured export, comparing export growth rates for Vietnam to those of China and the world as a whole. Comparing world trade in manufactures to total world exports, it is found that the former grew faster than the later, with a mean growth of 8.9 percent versus 7.3 and a coefficient of variation of 0.7 versus 1.5. The mean rate of growth of Vietnam's exports of manufactures, as Figure 13.a and the accompanying table show, was also somewhat higher and much less volatile than the growth of its total exports. These observations simply illustrate the well-known fact that the growth of trade in primary products is on average lower and much more volatile than the growth of manufactured exports, which is

a basis for the common recommendation for developing countries to diversify out of primary products and into manufactures.

Figure 13.a and 13.b: Export Growth Rates (%) for the World, China and VietnamFigure 13.a: Manufactures Figure 13.b: Clothing



Export Growth Rates 1997 to 2008	World		China		Vietnam	
	Manuf.	Clothing	Manuf.	Clothing	Manuf.	Clothing
Mean	8.9	6.8	22.1	14.5	21.5	19.3
Standard Deviation	6.5	4.8	10.7	11.2	11.7	13.1
Coefficient of Variation	0.7	0.7	0.5	0.8	0.5	0.7
Correlation w/ World			0.85	0.78	0.47	0.40
Correlation w/ China					0.39	0.47

Source: WTO, International Trade online database. [12]

The growth of manufactures exports for China and Vietnam is, not surprisingly, higher than for world trade in manufactures, which reflects the fact that export-oriented industrialization in densely populated countries at the initial stage of industrialization typically produces exceptionally high rates of growth of manufactured exports. Not only are the mean growth rates of manufactured exports higher than that for world trade in manufactures, the standard deviation of growth rates of manufactures in China and Vietnam are also higher than for world trade, revealing that the coefficient of variation (mean adjusted standard deviation) is broadly the same across countries.

[12] As of 6 August 2010, WTO has yet to update its database to 2009.

It is worth noting that while annual growth rates of Vietnam's total exports are highly correlated with those for total world trade, the growth of Vietnam's manufactured exports is not highly correlated with world trade in manufactures (a correlation of coefficient of 0.47), which indicates that the growth of primary product exports is much more dependent of world market conditions, especially world prices, than is the growth of manufactured exports. Interestingly, the growth of Vietnam's manufactured exports is also not highly correlated with China's, which also suggests that world market conditions play a relatively small role in determining the growth of manufactured exports for individual countries, for if world market conditions were dominant one would expect a close correlation in the export growth rate of developing countries specialized in similar products, such as China and Vietnam.

It is interesting that the growth of China's manufactured exports is more highly correlated with the world market than Vietnam's. At first blush this might seem surprising, but in fact there is a plausible explanation. Because China's exports of manufactures are 40 times larger than Vietnam's ($1,330 billion versus 32 billion), China no doubt faces more price-inelastic demand for its exports in world markets than does Vietnam, which means that fluctuations in world income exert a stronger influence on China than Vietnam.[13] Finally, it should be noted that the relationships between growth of world trade and growth of exports from China and Vietnam for manufactures that have just been described apply equally to exports of clothing. Even in the export of clothing, Vietnam's single largest export, it enjoys the advantage of greater independence from the

[13] The much-used Armington trade model establishes a negative relation between market share and the price elasticity of demand (γ).

vagaries of the world market by virtue of being a relatively small player in the large world market.

2. Impact of the Great Recession of 2009

In order to better understand the impact of the Great Global Recession and consequent Great Trade Collapse of 2008-09 it is necessary to examine higher-frequency data. Figures 14.a and 14.b present the monthly year-on-year (YOY) growth rates of Vietnam's exports to the world (Figure 14.a) and to the U.S. (Figure 14.b). These two Figures indicate that the impact of the global recession on exports to the world and to the U.S. was similar. Growth rates of exports to the world and to the U.S. for primary products, total manufactures and clothing took a steep nosedive in January 2009, falling from an average monthly rate of about 20 percent in 2008 into the negative territory for most of 2009, partial recovery only coming in early 2010. In this instance, the U.S. market was not a market of last resort as in earlier recession because the recession was global, meaning there was no market unaffected to which exports could be diverted.

Figures 14.a and 14.b: Growth Rates of Exports to the World and the U.S. Monthly (yoy)

Figure 14.a: Exports to the World

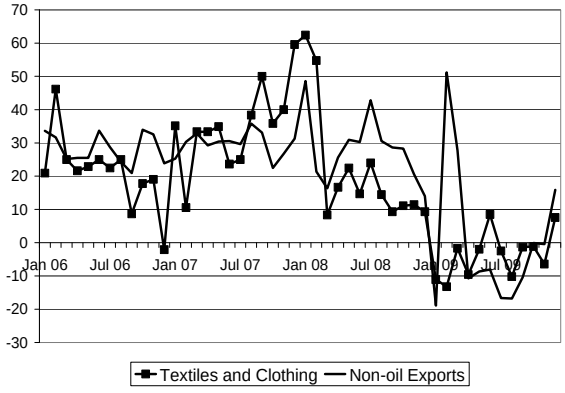
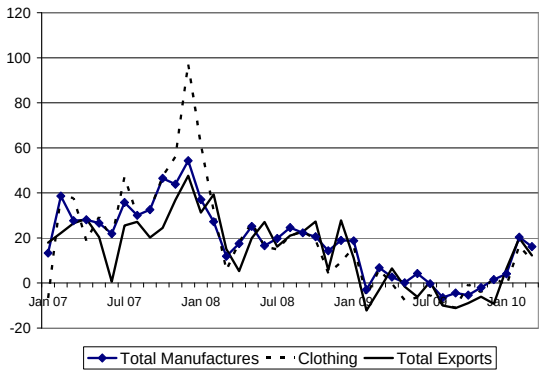


Figure 14.b: Exports to the U.S.



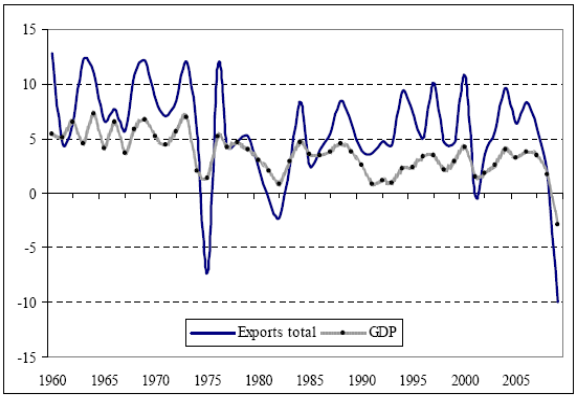
Source:

The collapse in the growth of exports in Vietnam, shared by countries around the world, in many cases even more strongly than in Vietnam, was a product of the most

severe decline in trade in recorded history, surpassing even the Great Depression. The relationship between export volatility and real income (GDP) volatility is illustrated in Figures 15.a and 15.b for the world and Vietnam, respectively. Export growth for the world and for Vietnam is on average higher than real income growth. In Vietnam total exports growth was 2.5 times higher than real GDP (19 percent versus 7 percent), but the standard deviation of export growth was 10 times that of real GDP and hence coefficient of variation for export growth was about 4 times higher than for real GDP growth. It is worth noting that the correlation coefficient between export growth and real GDP growth is only about 0.4, which belies the notion that trade was the engine of growth in Vietnam—important no doubt, but not the engine.

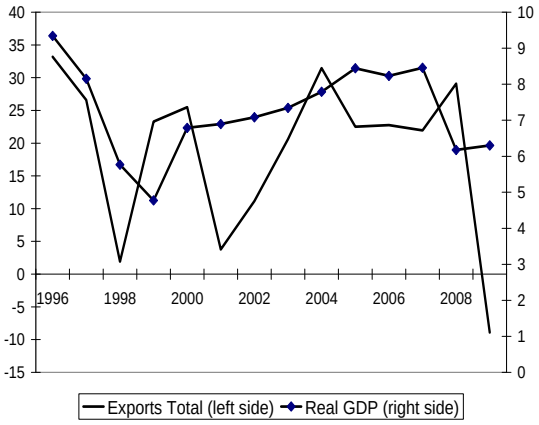
Figures 15.a and 15.b: Growth Rates of Total Exports and Real GDP for the World and Vietnam: 1996-2009 (percentages)

Figure 15.a: World



Source: WTO, International Trade Statistics and 2009 forecasts.

Figure 15.b: Vietnam



Source: WTO and GSO

The observation that the volatility of exports is greater than for real GDP indicates that production for the home market is more stable than production for export. On the other hand, the theory of comparative advantage and the empirical observation that production for export has grown much faster than production for domestic consumption suggests that the return on resources invested in export production is likely substantially

higher than in production for domestic consumption. This raises the interesting question of whether Vietnam's production portfolio is optimally allocated between high-return, high-risk tradables and lower-return, lower-risk non-tradables. Given the high priority in Vietnam for rapid growth in income and employment, the optimal share of export production in the economy's production portfolio is likely to be substantial even though it is subject to the vagaries of the world market.[14]

3. Implications of the global crisis for Vietnam's growth strategy[15]

Many have interpreted the recent collapse of world trade as a pretext for reconsidering, if not abandoning, an outward-oriented growth strategy. Dire pronouncements in the wake of economic crises about the wisdom of an outward-oriented development strategy are common; indeed such pronouncements accompanied every crisis in recent decades. Nobel Laureate Arthur W. Lewis pronounced the end of "trade as an engine of growth" after developed countries went into recession following the quadrupling of oil prices in the early 1970s.[16] The debt crisis of the 1980s spawned apocalyptic pronouncements that capital flows to developing countries would never recover; the 1997 Asian Financial Crisis, likewise, was heralded as "the moment when a particular paradigm or growth model has come to an end."[17] So too in the wake of the

[14] See Luisito Bertinelli and Andreas Heinen, "Export Diversification and Price Uncertainty in Developing Countries: A Portfolio Approach," unpublished manuscript http://ssrn.com/abstract=1327928. January 2009.

[15] This section draws on James Riedel, "The Global Economic Crisis and Its Long-run Implications for Vietnam," UNDP, September 2009.

[16] W. Arthur Lewis, "The slowing down of the engine of growth," *American Economic Review*, vol. 70, no. 4, September 1980, pp. 49-54. Critiqued by James Riedel, "Trade as the Engine of Growth in Developing Countries, Revisited," *The Economic Journal*, vol. 94, no. 373, March 1984, pp. 56-73.

[17] This quote is attributed to Professor Victor Bulmer-Thomas, the head of London University's Institute of Latin American Studies, by Stephen Fidler, "Asia gets a lesson in Latin economics," *Financial Times* (London), December 6, 1997, p. 20.

2008-09 global economic crisis it has been argued that "if globalization is to survive, it will need a new intellectual consensus to underpin it.[18] It is, therefore, useful to consider whether Vietnam should continue to embrace globalization as a foundation of its development strategy or find an alternative strategy that relies less on trade openness.

Whether Vietnam should continue to embrace or instead retreat from globalization depends on two fundamental issues. First, it depends on whether the developed countries, which constitute Vietnam's main export market, will make a rapid and sustainable recovery from the "Great Recession." Second, it depends on whether there is a viable alternative to a globalization-based strategy, for if there is not then it matters not whether the recovery in developed countries is rapid or prolonged. In that case, Vietnam will just have to do the best it can in a slow-growing world economy.

The consensus view on recovery in advanced countries as reflected in the IMF's most recent projections is presented in Figure 10. These projections maintain the view expressed a year ago in the depth of the recession of a V-shaped recovery—an abrupt decline and rapid recovery of aggregate demand and imports. If these projections are borne out then there is little need for developing countries, such as Vietnam, to retreat from an outward-oriented growth strategy. There are, however, factors at play that may undermine a V-shaped recovery, in particular rising fiscal deficits and growing debt in the advanced countries that have resulted from their bailouts and stimulus packages implemented to get themselves out of the Great Recession. If as a result of the massive increase in public debt, the credit worthiness of sovereign borrowers in the developed world weakens, these countries could be forced to raise taxes significantly and/or deflate

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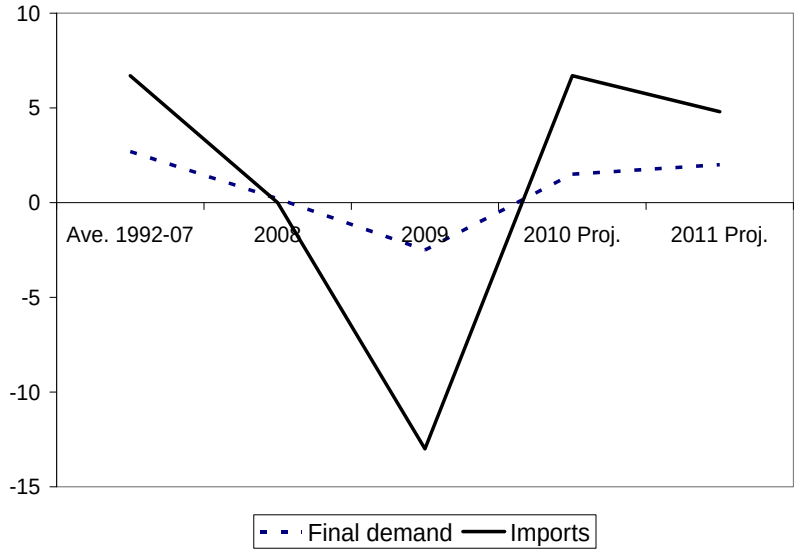
[18] Dani Rodrik, "Death of Globalization Consensus," *Korean Times*, July 15, 2008.

their currencies, neither of which bodes well for recovery. If recovery in the advanced countries is prolonged, no doubt developing countries will eventually begin to reconsider the outward-oriented development strategy. The question is, however, whether there are viable alternatives to this strategy that has worked so well in so many developing countries in past decades.

Figure 10: IMF World Economic Outlook (April 2010) Projections of the Growth of Final Demand and Imports in Advanced Countries (Percentages)



Source: IMF, Global Economic Outlook, 2010.

Two approaches have been suggested for dealing with a prolonged recession in the advanced countries that constitute the main export market for developing countries, including Vietnam. One is for developing countries to rely more on regional trade and less on trade with developed countries. The other is for developing countries to rely more on domestic demand and less on external demand (exports) to drive economic growth. Each of these approaches offers a mechanism for de-coupling developing countries' economies from the advanced countries as a way of attaining sustainable growth independently. The question is whether either of these two approaches is viable?

The prospect for decoupling through greater reliance on intra-regional trade would seem to be promising, especially for Vietnam, because intra-Asian trade has grown more rapidly than world trade. A recent study by the Asian Development Bank argues, however, that the growth of intra-Asian trade is more the result of the internationalization of supply chains than increasing consumer demand in East Asia.[19] Although 40 percent of Asia's exports are shipped to countries within the region, final demand within the regional absorbs only 22 percent of Asia's exports, with 78 percent of final products going to the U.S., Europe and Japan.[20] Since much of the intra-regional trade in Asia is in intermediate goods, a large proportion of which will ultimately be re-exported as final products destined for the U.S., Europe and Japan, the collapse in demand in developed countries will likely depress intra-regional trade as much as it would exports to the developed countries directly. The reality is that the greatest demand for the products in which developing countries like Vietnam have a comparative advantage is in the developed countries.

[19] Juthathip Jongwanich, William E. James, Peter Minor and Alexander Greenbaum, "Trade Structure and the Transmission of Economic Distress in High Income OECD Countries to Developing Asia," Working Paper No. 161, May 2009.

[20] Holland, "You can't have decoupling in an age of globalization," South China Morning Post, June 26, 2009.

Box 2: Global Supply Chains and the Impact of Global Demand Shocks on LDC Exports

It has been argued that an increasing reliance on imported intermediate inputs in the production of final goods for export, variously referred to in the recent literature on international trade as "slicing of the value-chain," "international production fragmentation," "vertical specialization," "outsourcing," and "global production sharing", is a new phenomenon that has become the defining characteristic of international trade the past two decades.[a] It has further been argued that this new mode of international trade has served to make exports of developing countries more vulnerable to fluctuation in demand in the developed countries.[b] Indeed, the collapse of trade during the current global crisis, it has been suggested, is the result of a "systematic over-shooting" due to the globalization of supply chains.[c]

Two observations on this emerging consensus view: First, heavy reliance on imported intermediate inputs is not a new phenomenon. It was essential to the success of the two pioneers of export-oriented industrialization in the 1960s and 1970s, Hong Kong and Taiwan. Neither economy was competitive in the market for relatively capital-intensive intermediate goods used to produce the final goods they exported in rapidly growing volumes to the developed countries.[d] Reliance on imported inputs was essential to their price competitiveness and hence to their success in export markets. They were, in other words, "slicing the value chain" long before the concept of the value chain was ever invented.

Second, it has been demonstrated that Hong Kong, the largest exporter of labor-intensive manufactures at the time, was able to sail though the 1975 recession in developed countries, the most severe recession in the post-WWII period prior to the current Great Recession, unscathed principally by virtue of being a price-taker in world trade.[e]

Clearly, Hong Kong's experience in the mid 1970s was not shared by developing countries during the recent Great Recession, even though the shares of their exports in the world market were likely significantly smaller than Hong Kong's in the mid 1970s. So it does appear that something has changed to make LDCs more vulnerable to fluctuation in demand in developed countries.

Box 2. Global Supply Chains and the Impact of Global Demand Shocks on LDC Exports. (Cont.)

What has perhaps changed, we submit, is not that the role of imported intermediate goods in the production of manufactured exports is any greater today than it was in Hong Kong and Taiwan when they pioneered the export-oriented industrialization strategy. What is new, in other words, is not the "slicing of the value chain" per se, but perhaps how and by whom the value-chain is sliced. In the early days, international buyers and multinational corporations played a smaller role than they do currently in linking and coordinating exporters and importers of goods at different stages of production across countries. It seems plausible that the centralization of decision-making on production up and down the value chain by multinational corporations and large international buyer/retailers, and the interlocking contracts that result from the process may serve to limit the flexibility of LDC exporters, like Vietnam, to adjust the product composition and market of destination of their exports when world market conditions change. In this way, the modern way of slicing the value chain may indeed render LDCs more vulnerable to vagaries of world demand than they were in the past. At present, however, this is hypothesis that has yet to be tested. Even if it is valid, it would have little significance for Vietnam's development strategy, since "global production sharing" has proved to be a viable business model that is likely to endure. For Vietnam, therefore, it is a fact of life, for better or worse.

Notes:

a. Slicing the value chain involves more than increasing the share of imported intermediates in producing final goods for export, it also involves importing and re-exporting intermediate goods all along the value chain and thus has spread international production sharing across a larger number of countries. See, Prema-chandra Athukorala, "Global Production Sharing and the Measurement of Price Elasticities in International Trade," RSPAS, ANU, unpublished, 31 August 2009, and Paul Krugman, "Trade and Wages: Reconsidered," Brookings Paper in Economic Activity, No. 1, 2008.
b. Hubert Escaith, Nannette Lindenberg and Sebastien Miroudot, "Interntional Supply Chains and Trade Elasticity in Times of Global Crisis," Staff Working Paper ERSD-2010-08, WTO, 1 February 2010.
c. K. Tanaka, "Trade Collapse and international supply chains: Evidence from Japan," VoxEU.org. May 2009; K-M. Yi, "The collapse of global trade: The role of vertical specialization," in R. Baldwin and S. Evenett (eds.), *The collapse of global trade, murky protectionism, and the crisis: Recommendations for the G20,* VoxEU publications.
d. James Riedel, "A Balanced Growth Version of the Linkage Hypothesis", *Quarterly Journal of Economics*, Vol. 90, May 1976, 319-322. James Riedel, "Factor Proportions, Linkages and the Open Developing Economy", *Review of Economics and Statistics*, Vol. 57, November 1975, 487-494.
e. James Riedel, "Demand for LDC Exports of Manufactures: Estimates from Hong Kong", *Economic Journal*, 98, No. 389, (March 1988), 138-148.

The other potential mechanism for decoupling is by producing more for domestic consumption and less for export. In fact, this is a normal, market-driven outcome of industrialization that has occurred in every country that has enjoyed a period sustained rapid growth. As per capita income rises with growing productivity in the industrial sector, spending patterns shift in favor of non-tradable goods (health, education, government services, massages, etc.), raising the relative prices of non-tradable goods and services and pulling a growing share of labor and capital from the production of tradable to non-tradables. The rise in the relative price of non-tradables causes a secular real exchange rate appreciation (the Balassa-Samuelson effect) and leads to lower growth rates, higher domestic consumption rates, lower saving and investment rates, and less reliance on exports as a source of aggregate demand—i.e gradual decoupling.[21]

The long-run process of shifting the structure of production from tradable to non-tradables is one that China has just begun, but it is not one that is appropriate for Vietnam at its earlier stage of development. In terms of per capita income, China is about 15 years ahead of Vietnam.[22] China is far more industrialized and its industrial base is more diversified than Vietnam's. China is far less dependent on trade, with an export-GDP ratio half that of Vietnam. Household and corporate saving rates in China are almost double those in Vietnam, which implies that a rebalancing between consumption and saving is more compelling and likely to have more favorable outcomes in China than in Vietnam. The "middle class" plays a larger role in China's economy and its real income

[21] Empirical evidence is provided in William D. Nordhaus, "Baumol's Diseases: A Macroeconomic Perspective," *The B.E. Journal of Macroeconomics*, Vol. 6, Issue. 1, Article 9, 2008. .(www.bepress.com/bejm/vol8/iis1/art9)

[22] At a 7 percent per annum rate of growth of per capita income, it will take Vietnam 15 years to reach China's current per capita income ($2200). ADB, Key Indicators 2007 (http://www.adb.org/statistics)

is growing more rapidly than in Vietnam, which suggests that resources released from the tradable goods sector as a result of a real appreciation can be more readily absorbed in the non-tradable sector at a lower adjustment cost than would likely be the case in Vietnam.

The foregoing argues that there is no viable way to de-couple Vietnam's economy from the developed countries. Whether developed counties recover rapidly or slowly is, therefore, broadly irrelevant for Vietnam's development strategy, albeit it is of major importance for Vietnam's prospects for economic growth. Since Vietnam can do little or nothing to change the world economic environment, it must concentrate on making its own economy as efficient as it can be. This is, of course, good advice even when the world economy is booming, but it is especially important when the world economy is weak, as it is currently.

III. Capital Flows

A. The Logic of Financial Globalization

Economic theory argues that financial globalization contributes to higher growth rates in developing countries by providing financing for investment, transferring technology and facilitating international risk sharing. It has also been suggested that financial globalization may contribute to stability by allowing countries to diversify away from country-specific risk. The empirical evidence on the relation between financial integration and growth and stability, unfortunately, does not lend much support to the theory. A recent IMF study concludes that "the vast empirical literature provides little robust evidence of a causal relationship between financial integration and growth. Moreover, we find that, among developing countries, the volatility of consumption growth relative to income growth appears to be positively associated with financial integration, the opposite of what canonical theoretical models would predict."[23] The currency and financial crises that accompanied capital account liberalization in a number of developing countries over the past two decades suggest that financial globalization can be a risky business.

An interesting question is why the logic of trade integration receives widespread empirical support, while the logic of financial integration does not. The answer lies in the different nature of current account and capital account transactions. Current account transactions--buying and selling goods and services across borders—are concluded within a short span of time, while in the capital account transactions—borrowing and lending across borders—extend into the future. Since the future is uncertain, financial

[23] M. Ayuhan Kose, Eswar Prasad,, Kenneth Rogoff, and Shang-Jin Wei, "Financial Globalization: A Reappraisal," IMF Working Paper (WP/06/189)., p. 8.

transactions carry risks that do not accompany current account transactions. In order to maximize the benefits of financial globalization countries must be able to manage these risks otherwise they face the possibility of a financial crisis with deleterious economic and social consequences.

The need to manage risks associated with international financial flows has led to the suggestion that certain threshold conditions are required in order for a country to benefit from financial integration. As the IMF study notes, "There is plenty of evidence that premature opening of the capital account without having in place a well-developed and well-supervised financial sectors, good institutions, and sound macroeconomic policies can hurt a country by making the structure of inflows unfavorable and by making the country vulnerable to sudden stops or reversals of flows."[24] Indeed, we argue below that the mini macroeconomic crisis that erupted in Vietnam in the spring of 2008 was just such an instance of premature financial integration.

Finally, it is worth noting that the costs and benefits of financial integration vary for different types of flows. While there is little robust evidence of positive growth effects of capital flows in aggregate, there is evidence of strong growth effects from FDI, which often brings with it technology and managerial know-how and tends to be more stable less likely than other capital flows to experience sudden stops or reversals. Not all FDI flows, however, are created equal. FDI in manufacturing has been found to have strong growth effects, while FDI in primary (natural resources) and tertiary (services and non-tradables) sectors appear to be less growth enhancing.[25] There is a general

[24] IMF, op. cit., p. 35.

[25] Jon D. Haveman, Vivian Lei and Janet S. Netz. "International Integration and Growth: A Survey and Empirical Investigation," *Review of Development Economics*, Vol. 5, No. 2 (June), pp 289-211.

consensus in the literature that debt flows, including portfolio bond flows and commercial bank loans, carry the greatest risks to countries opening up to financial integration. The threshold conditions are therefore especially important in countries that borrow in international financial markets.

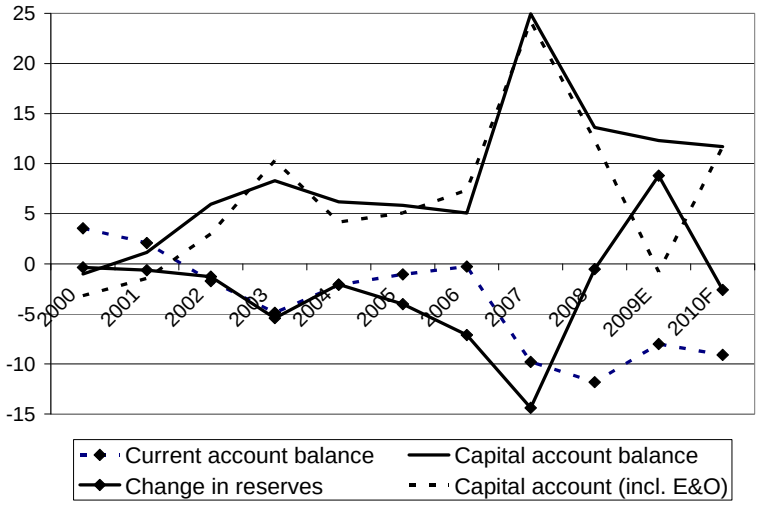
B. Capital Flows and the Balance of Payments

For an overview of capital flows one normally looks to the balance of payments. In the case of Vietnam, the data on capital flows in the balance of payments are scant. Indeed, the government does not itself publish balance of payments data, but instead gives the data, such as they are, to the IMF to publish. The balance of payments data presented below are taken from the IMF's *International Financial Statistics*, in which the data for most lines in the capital account (or as the IMF prefers to call it, the financial account) are missing. Nonetheless, it is possible to get a broad picture of international financial flows in Vietnam over recent years.

Figure 17 presents the balances of the main accounts, expressed as percentages of GDP, which following balance of payments accounting principles sum to zero. The data suggest two turning points, one in 2002-03, after the BTA came into effect, and the other in 2007, the year Vietnam acceded to the WTO. A marked increase in the net inflows of foreign capital dates from 2002, after which the flow was maintained at a level equivalent to about 5 percent of GDP until 2007, when net inflows jumped five-fold to a staggering 25 percent of GDP. The following year, 2008, net inflows dropped back down to a level of about 10 percent of GDP where they appear to have stabilized, subject to the following caveat. The "errors and omissions" line of the balance of payments represents unrecorded transactions in the current and/or capital accounts. Usually it is thought that

errors and omissions arise mainly in the capital account, where data collection is more difficult. If that is the case in Vietnam, then the capital account balance should be combined with errors and omissions to provide a more accurate picture of net capital inflows. As Figure 17 indicates, in most years this adjustment is of minor significance, but in one year, 2009, errors and omissions were enormous, amounting to a negative 13 percent of GDP. If errors and omissions are interpreted as unreported capital account transactions, then instead of a net inflow at a level of 12 percent of GDP in 2009 Vietnam experience a net outflow of about one percent of GDP.

Figure 17: The Balance of Payments 2000-2010 as % of GDP



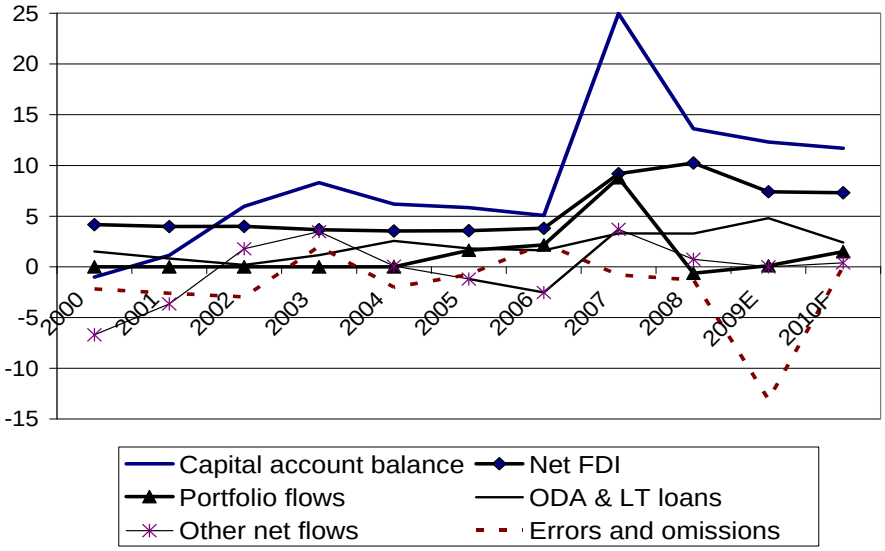
Source: IMF, International Financial Statistics, online database

Figure 17 also illustrates the counterpart of net capital inflows, the current account balance and the change in official foreign reserves (negative values indicating increases). Net capital inflows have financed both deficits on current account and (until 2008) increases in the central banks foreign reserves. In 2008, the entire net inflow went to financing the current account deficit (i.e., no increase in reserves). In 2009, when the adjusted capital account balance was close to zero, the current account deficit was entirely financed by drawing down official reserves. Capital flows to Vietnam clearly

reveal the fickle nature of international finance. In 2006 and 2007, foreign investors invaded Vietnam with capital; in 2008 and 2009 they retreated, forcing the central bank to selloff the much of reserves that capital flows had financed two years earlier.

All that is available in the *International Financial Statistics* database on the composition of capital flows to Vietnam (only four lines) in presented in Figure 18. Foreign direct investment constitutes the single largest capital inflow, rising dramatically (doubling) with Vietnam's accession to WTO in 2007 and then falling off somewhat during the Great Recession of 2009-10. Portfolio flows into Vietnam's nascent equity and bond markets were negligible before 2005, then soared in 2006 and 2007, but then collapsed during Vietnam's mini currency crisis in May 2008 (discussed below). ODA and long-term loans (mainly ODA) increased steadily as a percent of GDP, peaking during the 2009 recession. "Other flows," sometimes referred to in World Bank and IMF publications as "short-term flows," are identified in the *International Financial Statistics* database as "change in banks external liabilities." As Figure 18 indicates, the average balance on bank's external liabilities is zero, with alternating periods of net inflows and outflows. Finally, there is the errors and omissions mystery of 2009, which seems to indicate capital flight, perhaps to gold or dollars, onshore and offshore, but the data are not available to analyze this or any of the other hypotheses that have been suggested.

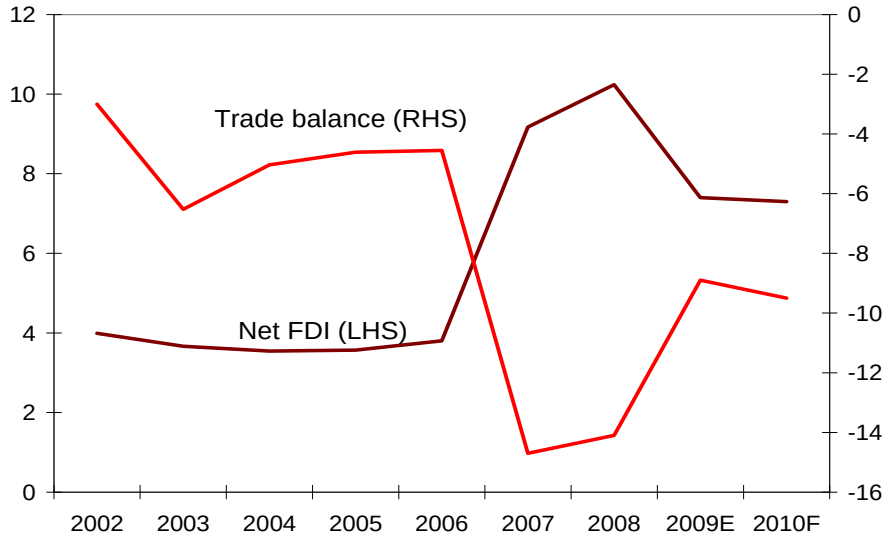
Figure 18: Components of the Capital Account as % of GDP: 2000-2009



Source: IMF, International Financial Statistics, online database.

According to the asset market approach to balance of payments analysis, the structure of the balance of payments is determined by international financial flows. If the market expects a higher return in country X, capital flows into X raising the capital account balance and causing X's currency to appreciate, which in turn causes a fall in the trade and current account balances, other things equal, such that overall balance is achieved with a higher capital account balance and a lower current account balance. The assumptions of the theory do not, however, accord well with the situation in Vietnam, where capital flows are regulated, the currency is heavily managed and is non-convertible. Nonetheless, as Figure 19 indicates, there appears to be a close negative relationship, especially in recent years between, FDI inflows and the trade balance. Since FDI flows are exogenous to Vietnam, the data suggest that FDI inflows have had a significant impact on the trade balance.

Figure 19: FDI and the Trade Balance as % of GDP: 2000-2009



Source: IMF, International Financial Statistic, online database

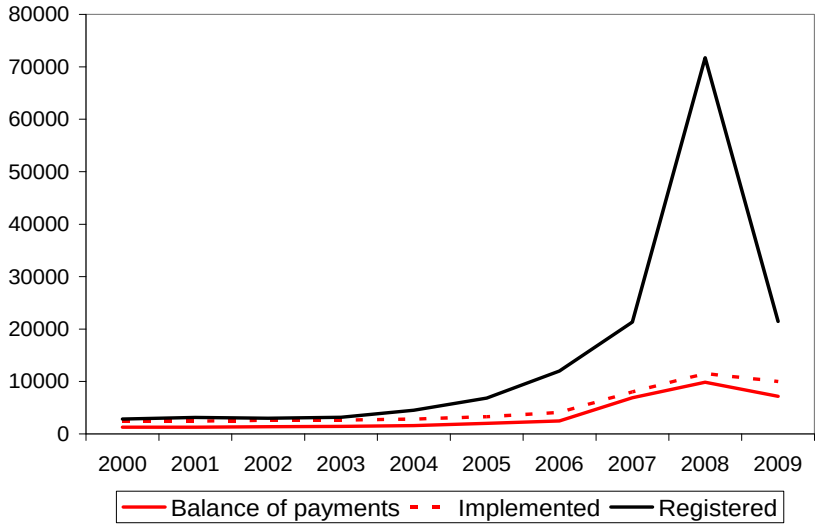
C. The Role of FDI

FDI is routinely cited as a leading indicator of the success of the government's economic policy in spite of the fact that the data on FDI are incomplete and misleading. In order to get a license, foreign investors must declare how much they plan to invest, which is reported as registered capital. The actual implementation of their investment plans is carried out, if at all, subsequently over a number years and, as seen in the data presented in Figure 20, typically falls far short of the amount registered. Indeed the gap between registered and implemented FDI has been growing wider in recent years.

As Figure 20 suggests, FDI flows reported in the balance of payments and published in the IMF's *International Financial Statistics* closely match the government statistics on implemented FDI. This would seem reasonable were it not the case, as reported in the press, that a significant share of direct investment by foreigners in

Vietnam is raised in the domestic capital market.[26] The balance of payment figures should report only the foreign capital inflow associated if FDI, while the government statistics on implemented FDI presumably should report both the foreign capital inflow and the capital that is raised domestically. It would appear, therefore, that either the balance of payments data overstates the net inflow or of FDI or the government statistics understate the amount of FDI implemented. Since the IMF gets its data from the government, and since the information on domestic financing of foreign-invested projects is limited, it seems likely the IMF balance of payments figures overstate the inflow of foreign capital associated with FDI in Vietnam.

Figure 20: Foreign Direct Investment in Vietnam: 2000-2009 (USD millions)



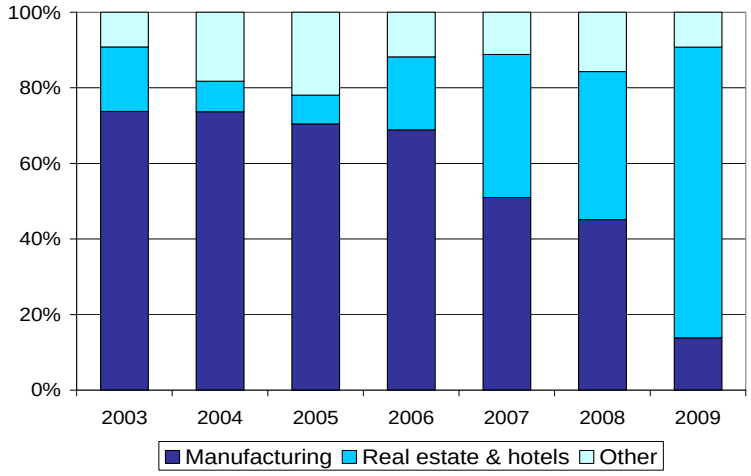
Source: IMF, IFS and GSO, online databases

No matter how skeptically one looks at the data, it is clear that FDI flows to Vietnam increased significantly upon Vietnam accession to the WTO in 2007. The 2007 surge in foreign direct and indirect investment was lured by and contributed to a bubble

[26] "Controls needed for FDI projects using domestic capital," Vietnamnet.vn, 17 May 2020. Deputy Minister for Construction, Nguyen Tran Nam, suggested that as much as 70 to 80 percent of implemented foreign investment is financed domestically.

in asset prices—equities, bonds and real estate. Not surprisingly, as Figure 21 shows, the surge in FDI in 2007 and continuing in 2008 appears to have been associated with a major shift in the destination of foreign investment away from the manufacturing sector and into real estate and hotels. We say "appears" because the only data available on the sector destination of FDI is for registered investment, which as already noted is not closely related to the actual amounts of FDI implemented.

Figure 21: Registered FDI by Sector of Destination: 2003-2009



Source: GSO

Indicators of the role of FDI in Vietnam's economy are presented in Table 4. By 2008, FDI accounted for 14 percent of GDP, 31 percent of gross investment, 43 percent of industrial output and 55 percent of exports. The component of the economy in which FDI's contribution is disproportionately low, albeit rising, is employment. If FDI is a fair measure of a country's success, then Vietnam has much to be proud of since FDI has come to play a large and growing role in the economy. An important question that has yet to be addressed in Vietnam is the extent to which FDI serves to ameliorate biases and weaknesses in the economy rather than to correct them. In the case of China, for example, it has been argued persuasively that FDI in labor-intensive industry was driven

in large part by biases in the financial system that limited the role of domestic investment in labor-intensive export-oriented activities and thereby created a large demand for equity financing via FDI.[27] The relatively small contribution of private companies in Vietnam's the manufacturing sector suggests that similar biases may exist in Vietnam as well.

Table 4: The contribution of FDI (percentages)

	2000	2002	2004	2006	2008
GDP	11	11	12	13	14
Gross investment	18	17	14	16	31
Employment, total	1	1	2	3	4
Employment, non-ag	3	4	6	7	8
Industrial output	41	42	44	44	43
Exports, total	47	47	55	58	55
Exports, non-oil	na	na	na	46	47
Imports	28	34	35	37	38

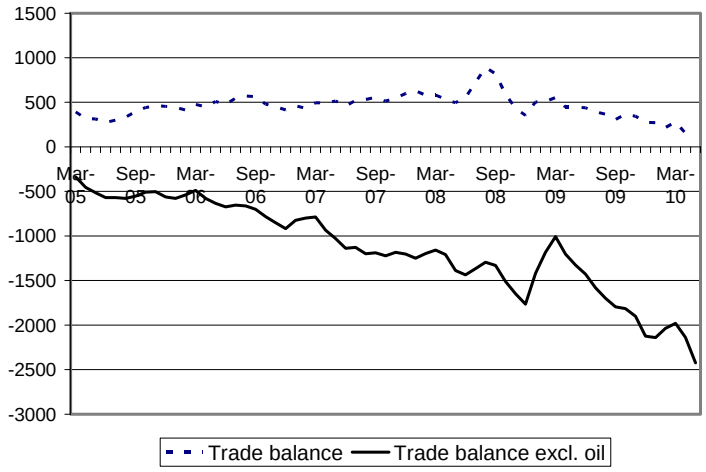
Source: GSO

What is especially disquieting about FDI in recent years is evidence that it is increasingly being directed into the real estate sector in which the potential for employment creation and long-term productivity gains are relatively modest. If it is true, as reported in the press, that significant proportion of foreign investment in real estate is financed domestically then the potential for crowding out domestic investment by absorbing scarce financial capital is all the greater. Moreover, since FDI in real estate and other non-tradable goods likely absorbs much more for foreign exchange—to import construction and building materials—than it generates, contributing to Vietnam's large trade deficit and potentially crowding private companies out the foreign exchange

[27] Yasheng Huang, "Why More May Be Actually Less: Financial Biases and Labor-Intensive FDI in China," MIT, undated.

market. Indeed, as Figure 22 indicates, the balance between non-oil exports and imports of foreign-invested firms has declined significantly in recent years.

Figure 22: The Trade Balance (TB) of Foreign-Invested Firms (USD millions)



Source: GSO

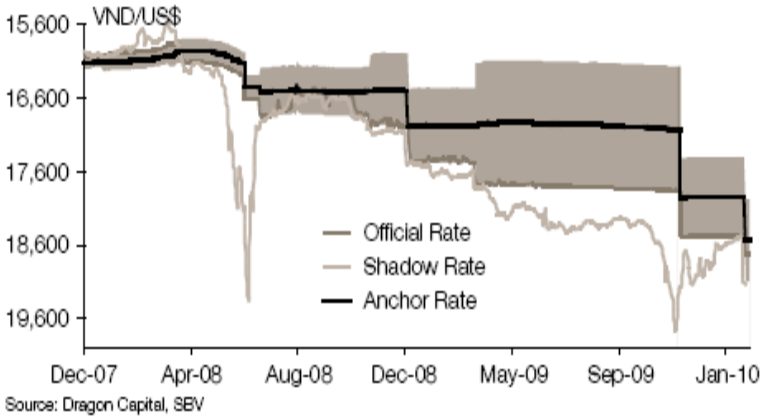
D. Capital Inflows and Vietnam's Mini-Crisis of 2008

In May 2008, Vietnam experienced a brief currency crisis, when the dong fell against the dollar in the parallel exchange market by about 25 percent in the course of a couple of weeks. Several months earlier, as Figure 23 illustrates, the dong was trading at a premium against the dollar in the gold shops. Mounting pressure on the dong to appreciate against the dollar in late 2007 and early 2008 was viewed with pride in Vietnam and as a great profit opportunity by foreign investment banks and hedge fund managers. With the interest rate on sovereign debt at around 8 percent and pressure mounting on the currency to appreciate, carry traders rushed in to buy up about half the outstanding stock of government debt.[28] Not only foreign investors, but the IMF too was

[28] Investment banks lured foreign investors into Vietnam's fledgling bond market with promises that "International investors can lock in a USD [interest rate] spread of close to 600 bps (6 percentage points), in a currency which is obviously on an appreciating track." Dragon Capital, *Vietnam Focus*, February/March 2008.

caught up in the euphoria, writing in late 2007 that "Vietnam's balance of payments is basically sound" and arguing that "This is a propitious time for a move toward a more flexible exchange rate regime."[29] Warnings about the dangers of premature opening of the capital account, published in IMF research papers (cited above), appear to have gone unheeded by the IMF on the ground in Vietnam.

Figure 23: The dong-dollar Exchange Rate: December 2007-March 20010



The discordance between investors' expectations and deteriorating macroeconomic fundamentals became too blatant to ignore in March and April of 2008 when the data revealed that monthly inflation (annualized) had reached 30 percent and that the monthly trade deficit (as a percent of GDP) had also risen to about 30 percent (see Figures 24.a and 24.b). It then dawned on foreign bond holders that eventually interest rates would have to rise (and the price of their bonds would fall) and the currency would depreciate, not appreciate as anticipated. There then ensued a rush to liquidate and repatriate foreign bond holdings, which was stymied by the absence of a liquid secondary bond market and the non-convertibility of the currency. As a consequence, foreign

[29] IMF, Vietnam: Staff Report for the 2007 Article IV Consultation, August 28, 2007, p.14.

investors were forced to sell their holdings at a massive discount to domestic commercial bank, ending their flirtation with Vietnam fledgling bond market.

Figure 24.a: Trade Balance

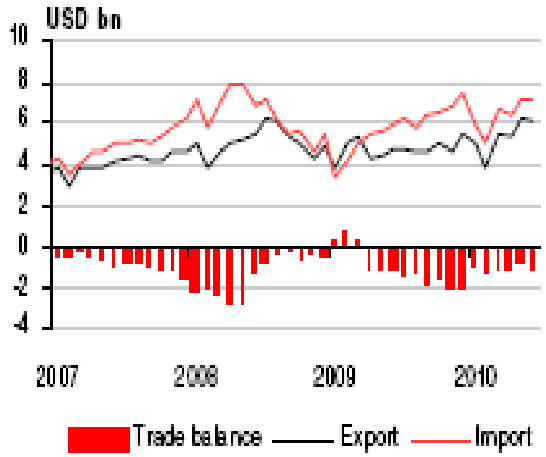


Figure 24.b Inflation Rate

Source: HSBC, Vietnam Monitor (Issue 29), 12 July 2010

It would be wrong to blame foreign investors for the currency crisis and economic downturn that ensured, since the fundamental source of the imbalance was the year and half-long domestic consumption and investment spending boom in both the public and private sectors which generated large trade and current account deficits in 2007 and early 2008 that foreign capital inflows financed. As shown in the national income accounts and balance of payments data, presented in Table 5, the domestic saving rate (gross domestic saving as a percent of GDP) fell 5 percentage points of GDP in 2007, while at the same time the gross domestic investment rate rose 5 percentage points of GDP. As a result, the national financial balance went from a zero balance in 2006 to a deficit of 10 percent of GDP in 2007. Foreign capital inflows in 2007 were, however, more than double the amount required to finance the current account deficit, the excess having been

bought up by the central bank (SBV) and held as foreign reserves in order to prevent a large nominal appreciation of the currency.

Table 5: The National Income Accounts and the Balance of Payment: 2005-09
(Percent of GDP)

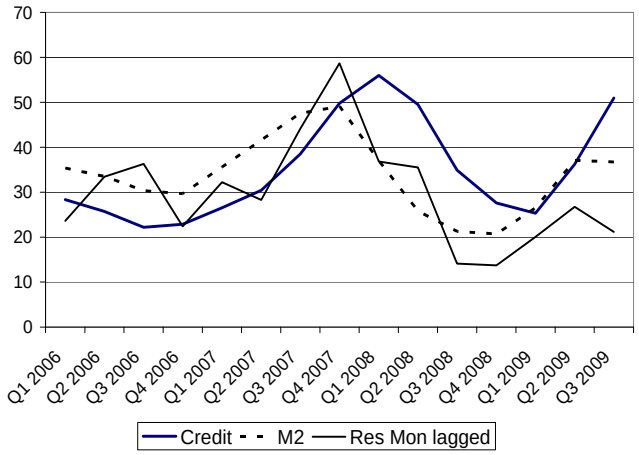
	2005	2006	2007	2008	2009
National Income Accounts					
Gross domestic saving	**35**	**37**	**32**	**30**	**25**
Private	27	28	26	26	23
Public	8	9	6	4	2
Gross domestic investment	**36**	**37**	**42**	**42**	**33**
Private	24	26	30	33	24
Public	12	10	11	9	9
Saving-investment balance	**-1**	**0**	**-10**	**-12**	**-8**
Private	3	2	-4	-7	-1
Public	-4	-2	-6	-5	-7
Balance of Payments					
Current account balance	**-1.1**	**-0.3**	**-9.8**	**-11.8**	**-8.0**
Capital account balance	**5.8**	**5.1**	**25.0**	**13.6**	**12.3**
Net FDI	3.6	3.8	9.2	10.2	7.4
Net portfolio flows	1.6	2.2	8.8	-0.6	0.1
ODA & other LT flows	1.8	1.6	3.3	3.3	4.8
Other net	-1.2	-2.5	3.7	0.7	0.0
Errors and Omissions	**-0.7**	**2.3**	**-0.8**	**-1.3**	**-13.1**
Change in reserves	**-4.0**	**-7.1**	**-14.4**	**-0.5**	**8.8**

Source: IMF, International Financial Statistic, IMF: Vietnam: Article IV Consultations: Staff Report, April 2009.

The increase in foreign reserves, equivalent to 14 percent of GDP in 2007, constituted a massive monetary expansion, fueling consumption and investment spending, the trade deficit and inflation, which was already on the rise as a result of the worldwide boom in commodity prices in 2007. The SBV took measures to sterilize the monetization of its foreign reserves purchases in 2007 by compelling commercial banks to buy SBV sterilization bonds and raising commercial bank reserve requirements. While these measures worked to some extent tighten money and credit growth in 2007, they appear to have lost traction by the end of 2007, with credit growth continuing to rise in early 2008 in spite of a sharp contraction in the central bank's balance sheet, as Figure 25

illustrates. The rapid growth of credit in the second half of 2007 throughout the first half of 2008 has been attributed to failure of the SBV to implement an effective sterilization policy, though the evidence in support of this thesis is far from conclusive. What is clear, however, is that Vietnam's financial system and regulatory regime were not prepared for the volume of foreign capital that flooded into Vietnam following its accession to the WTO in January 2007.

Figure 25: Year-on-year quarterly growth rates of reserve money, M2 and credit: 2006-09 (percentages)



Source: IMF, International Financial Statistics, online database

The run on the currency in the parallel exchange market in May 2008 impelled the government to take action to contain the crisis, which it did by raising interest rates 50 percent (from 8 to 12 percent), using administrative measures to control credit growth, vowing to cut government spending and clamping down on the unofficial parallel market. As Figures 23 and 24 (above) suggest, these measures were successful in lowering the trade deficit and inflation rate and bringing the currency back into the legal trading band. They did, however, come at a cost of about 2 percentage points of real GDP growth for several quarters, which could be considered a reasonable price to pay for learning a very

important lesson about the fallibility of international investment bankers and the need for financial sector development as a precondition for financial globalization.

E. Capital Inflows and the Global Crisis of 2009

The U.S. financial crisis that spawned the Great Recession of 2009 dealt a severe blow to Vietnam's exports, as documented above. It is not clear, however, that it had a significant impact on capital flows to Vietnam. U.S. financial crisis in 2008 and the Great Recession of 2009 did, of course, lead to a substantial decline in international financial flows globally and in Asia. As Table 6 indicates, Vietnam's neighbors in Southeast Asia experienced significant net capital outflows in both 2008 and 2009. China, too, had a modest net outflow in 2008, but capital inflows surged again in 2009. In the case of Vietnam, net inflows declined in 2008 to $12 billion (about 14 percent of GDP), but from an unprecedented and unsustainable all-time high level of $18 billion (25 percent of GDP) in 2007. The capital account balance in 2009 was undiminished at $12 billion, but given that errors and omissions reached a negative $13 billion, it is difficult to put much faith in the capital account figures for 2009.

Table 6: Capital Flows in Selected Asian Countries (US$ billions)

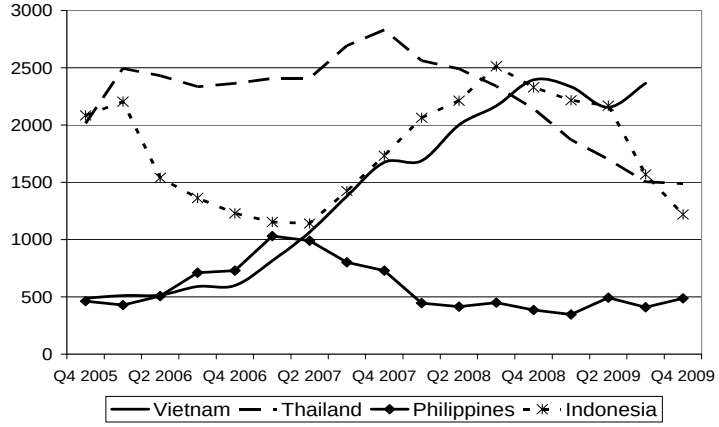
	China	SE Asia*	Vietnam
2007	90	1	18
2008	-7	-34	12
2009	167	-20	12

*Sum of figures for Indonesia, Malaysia, Philippines and Thailand
Source: China and SE Asia, World Bank *East Asia and Packific Economic Update 2010*; Vietnam, IMF, *International Financial Statistics*, online database

In most other Southeast Asian countries, FDI inflows declined in 2009 as was the case in Vietnam, as Figure 26 indicates. At $7.2 billion (7.4 percent of GDP) in 2009,

FDI Inflows were higher than any year other than 2008. Whatever the impact of the Global Recession had on FDI inflows to Vietnam it cannot be considered great, again subject to the errors and omissions caveat.

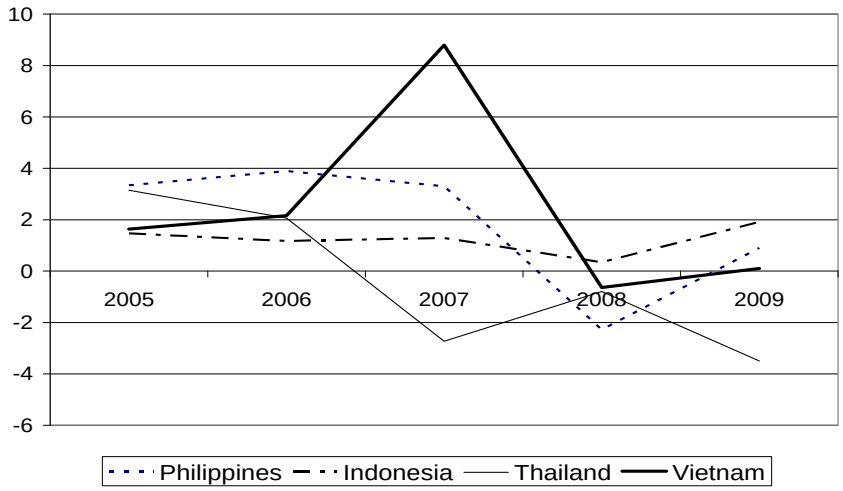
Figure 26: FDI Inflows to Selected Southeast Asian Countries (US$ millions)



Soure: IMF, International Financial Statistics, online database

Net Portfolio flows to other Southeast Asian countries declined in 2008, as they did in Vietnam, but (with the exception of Thailand, which experienced severe political unrest in recent years) began to recover in 2009, as Figure 27 indicates. In Vietnam, where portfolio flows as a percent of GDP were at levels unmatched in other countries, there is no evidence of a return of portfolio investment. This too cannot be attributed to the global financial crisis but instead to the currency crisis that erupted prior to the global crisis in early 2008.

Figure 27: Foreign flows into Sovereign Debt Markets (as % of GDP)



V. Summary of main conclusions

A. The dearth of data

This study attempts to provide an assessment of benefits and costs of globalization in Vietnam under the BTA and WTO. The data available for this purpose are barely adequate. The lack of up-to-date, comprehensive and reliable statistics on the economic structure and the macro economy make the job of an economic analyst difficult, but that is hardly significant compared to the difficulties it creates for policy makers and market participants in Vietnam. Information is a public good and as such depends critically on the public sector to supply the data needed to assess the strengths and weaknesses of the economy, to formulate good policy and to make wise investment decisions. No report on Vietnam's economy should fail to stress the critical importance of more and better economic data.

B. The role of trade

Theory and empirical evidence argue unambiguously that trade is important for growth, especially in counties like Vietnam that are at the early stage of industrialization.

The opening up of Vietnam's economy and the improved access to world markets that resulted from the BTA and WTO accession have no doubt been an important source of growth in Vietnam. The BTA in particular, by opening the U.S. market, had a major impact on the growth and structure of Vietnam's exports, allowing Vietnam to more fully exploit is strong comparative advantage in labor intensive manufactured exports.

C. Structural change

Over the past 10 years, the structure of exports has changed significantly, with a decline in the share of primary products and increase in the share of manufactures, and within manufactures from heavy capital-intensive goods to light labor-intensive goods. When we look at structure of manufacturing output/value-added, however, we find that the increase in the share of relatively labor-intensive branches has been modest. The weighted average capital-labor ratio in manufacturing declined only four percent over the period 2000-2008. That changes in the structure of exports have not been matched by comparable changes in the structure of manufacturing value-added reflects the fact that domestic value-added of labor-intensive manufactured exports is but a fraction of total manufacturing value-added—what fraction is unknown, perhaps no more than about 20 percent.

D. Raising value-added and moving up the value chain

It is commonplace in Vietnam to advocate policies to promote higher-value-added exports and movement up the "value chain." As to how this can be achieved, the World Bank suggests that "countries must invest more and with greater efficiency in physical and human capital, foster substantially more innovative activity, and encourage

entrepreneurship and risk-taking."[30] When the World Bank argues that "countries" must do something, presumably it means that governments must do it. If this means that the government of Vietnam should do a better job of supplying public goods and create a policy environment that encourages individual entrepreneurship and risk-taking, who can object. These are, after all, the fundamental responsibilities of every government in a market economy no matter what the level of export value-added or a country's niche in the international value-chain. If, on the other hand, those who exhort Vietnam to move up the value chain are explicitly or implicitly advocating a government-directed industrial policy that defies the country's comparative advantage, then that is an entirely different matter—it is tantamount to advocating a strategy that has a proven record of failure.

E. The trade impact of the global crisis and its implications

The global recession of 2009 reminds us that trade is not only a source of growth but also one of slowdown when the world economy collapses as it did in 2009. It is a legitimate question whether in the aftermath of the global crisis Vietnam should reconsider the globalization-based strategy it has followed over the past two decades. The answer depends on two issues: (1) whether the developed countries that constitute Vietnam's main export market will make a rapid and sustained recovery from the "great recession;" (2) whether there is a viable alternative to a globalization-based strategy. If the answer to the second is that there is not a viable alternative, then the answer to the first is irrelevant. We argue in this study that, in fact, there is no alternative since the potential for Vietnam to de-couple its economy from the developed countries' economies is, at its current level of economic development, extremely limited.

F. Financial globalization and growth

[30] World Bank East Asian and Pacific Economic Update 2010, p. 21.

Theory argues that both trade integration and financial globalization contribute to higher growth in developing countries. The empirical evidence strongly supports the proposition that trade contributes to higher growth, but it does not support the proposition that financial globalization contributes to growth. In order for financial globalization to contribute to growth, and not to macroeconomic instability, certain threshold conditions must be met that allow a country to manage reasonably well the risks associated with financial globalization. We argue that Vietnam's currency crisis in May 2008 was just such case of premature financial globalization.

G. Role of foreign capital flows in the currency crisis of 2008

Vietnam experienced a massive inflow of foreign capital in 2007 (equivalent to 25 percent of GDP) and early 2008 that, in conjunction with a significant increase in consumption and investment spending as a percent of GDP in both the private and public sectors, generated large trade and current account deficits and a high level of inflation. When the deteriorating macroeconomic fundamentals became too blatant to ignore in March/April 2008, foreign bond holders rushed to liquidate and repatriate their holdings causing a brief currency crisis. The government responded rapidly to contain the crisis and with success, but at the cost of about 2 percentage points of GDP growth for several quarters, which could be considered a reasonable price to pay for learning an important lesson about the fallibility of international investment bankers and the need for financial sector development as a precondition for financial globalization.

H. The role of FDI

No doubt foreign direct investment has made a significant contribution to Vietnam's growing prosperity, but it is impossible to weigh its benefits and costs.

Indeed, it is difficult even to measure the flow and stock of FDI or its allocation across the different sectors of the economy. What evidence there is suggests that WTO accession gave a powerful boost to FDI in Vietnam, but it seems also to have sparked a boom in asset markets (equity, bonds and real estate) that have pulled FDI away from manufacturing and into non-tradable goods sectors where the potential for productivity growth and employment generation is relatively weak.

I. Balance

An economy consists of many integral parts—the public and private sectors, the real and financial sectors, markets for goods and assets, tradables and non-tradables. When these various parts of the economy get too far out of balance, relative prices (eg. the real exchange rate, real interest rate) become distorted and problems arise, as they did in early 2008 when there was a brief run on the currency and costly measures had to be taken. The policy response to the 2008 currency crisis succeeded in containing the crisis, but did it eliminate fundamental imbalances that threaten sustainable growth in Vietnam. Unfortunately, the data available are not sufficient to answer this question definitively. Why don't private domestic companies play a bigger role in the industrial sector? Why does surplus labor persist in the economy after almost two decades a relatively rapid growth? Why is wealth creation so heavily concentrated in asset markets (in particular in real estate) and not in production of goods and services? Why has the supply of public goods broadly defined not kept pace with the growth of GDP?

Hypotheses abound, but hard evidence and rigorous analysis of these issues are largely absent, including in this report, unfortunately.