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Trade and Economic Growth in Asia: The Paradox of Globalization and Decoupling

MasterCard Worldwide Insights

2Q 2008

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The Puzzle

In the US, residential property fell at an annualized rate of over 20% in the fourth quarter of 2007, according to the widely used S&P/Case-Shiller Index. Given the importance of the wealth effect on household consumption (home equity being the key asset in household wealth), consumer spending in the US will shrink rapidly in 2008. Add in the impact of the declining stock market, American households will be in a belt-tightening mode for this year and beyond. Indeed, while US GDP is estimated to have grown by 0.6% in the first quarter of 2008, net exports accounted for 0.9% of GDP. In other words, domestic demand shrank. A US recession in 2008 is all but inevitable.

How will the rest of the world be affected? And how will Asian economies perform under such conditions? For example, the impact on the equity markets in Asia from the turmoil in the US has been severe. Between December 31, 2007 and the end of March 2008, Japan's Nikkei 225 had dropped by a whopping 17%; China's "A" shares by a heart-stopping 31.5%; India's BSE by 20.7%; and Hong Kong's Hang Seng Index by 18.7%. Volatility across all markets has also risen significantly.

The question on everyone's mind is whether Asia can continue to grow and prosper in the near term while the US economy tanks. Is the old saying that when the US sneezes the rest of the world catches a cold still true? The answer to this question in turn hinges on whether Asia has "decoupled" from the US? In spite of being more globalized, and China being the champion globalizer of them all in the past two decades, is Asia today somehow better insulated from the impact of a US economic downturn?

Historical evidence seems clear. Estimates of correlations between US GDP growth and other regions in the world over the course of the past 35 years (with a total of five recessions and two slowdowns recorded in the US)[1] show that cyclical movements in the US economy significantly affect the rest of world.[2] Table 1 shows the impact on GDP in "other industrial countries"[3] and "emerging Asia"[4] from each of the past five recessions in the US in terms of how much GDP contracted in these two regions as a result of one percentage point contraction in US GDP. For each one percentage contraction in US GDP, the impact ranges from as high as 0.89% to as low as 0.05%. The average impact for the "other industrial countries" is 0.55%; and for emerging Asia 0.28%.

For many proponents of the "decoupling" school of thought, such historical correlation analyses are inappropriate because things have changed. The Asia of today is clearly very different from the Asia of 10, 20 or 30 years ago. More specifically, they point to the relatively low value of net exports in relation to total GDP in Asia, as shown in Table 2, in support of their argument. In the case of China, for instance, net exports are estimated to have accounted for 7.5% of GDP in 2006. Should net exports fall catastrophically by 30%, it would only subtract

Table 1. Percentage Contraction in GDP for Each One Percentage Contraction in US GDP (Median for the Region)

	1974-1975	1980	1982	1991	2001
Other Industrial Countries	0.89%	0.44%	0.09%	0.62%	0.69%
Emerging Asia	0.57%	0.09%	0.33%	0.05%	0.38%

Calculated with Data from Helbling, Thomas, Peter Berezin, M. Ayhan Kose et. al

2.25% of GDP. Assuming a growth rate of real GDP at 9% for China in 2008; a 30% contraction of net exports would only reduce China's growth to 6.75%; a significant but not fatal decline.

Table 2. Net Exports as a Percentage of Real GDP in 2006

China	7.5%
Japan	0.8%
India	-0.7%
Indonesia	1.4%
Korea	1.6%
Malaysia	0.0%
Philippines	4.2%
Taiwan	3.6%
Thailand	4.8%

(Estimated with Balance of Payment Data from CEIC)

Decoupling," however, means different things to different people. To simplify, it can be defined tightly or loosely. A "tight" definition, such as the one used by researchers at the Hong Kong Monetary Authority,[5] specifies three conditions to be met in order that Asian economies can be said to have decoupled from the US. They are: (i) exports having diversified sufficiently to markets other than the US; (ii) setting of monetary policy becoming sufficiently independent from the US; and (iii) the financial markets in Asia are sufficiently uncorrelated with those in the US. Applying such a tight definition would certainly lead to the conclusion that Asia has not decoupled from the US, especially in terms of conditions (ii) and (iii). And no one has seriously argued the decoupling case in this tightly defined version. Instead, decoupling proponents invariably use some versions of a loose definition; emphasizing both that Asia's exports have diversified in recent years (to EU markets, for example), and thus are less dependent on US demand; and that the domestic demand in Asia is also sufficiently robust to support economic growth in the event of a slowdown in external demand.

However, even if loosely defined, the decoupling argument is still very much part of a larger puzzle. It has been widely acknowledged that Asia's rise has been powerfully propelled by its openness to international trade as a result of its much celebrated "export-led" growth strategy, hence trade being very important to economic growth. Now the opposite is being suggested by the decoupling argument— that a reduction in trade, and exports specifically, will have only minimal impact on economic growth in Asia. How important in fact is trade to economic growth in Asia? Another way of expressing the puzzle is how is it that Asia can manage to be more globalized and decoupled at once?

Trade and Economic Growth

The first step in getting a better handle on how trade affects economic growth is to cast our sight wider, beyond the focus on "net exports." Net exports are artificial statistical constructs used in the framework of estimating Gross Domestic Product (GDP); and are set to equal export minus import. GDP itself is then set to equal the sum of net exports and domestic demand. This highly aggregated standard formulation separates, in a neat and tidy way, net exports (external) from domestic demand (internal) as two distinct sources of economic growth. The effect of trade on economic growth is then simply equated to the value of net exports. Highly aggregated and abstract concepts like net exports and domestic demand have been called "dangerous definitions" by Jim Walker, founder and CEO of Asianomics; who argued compellingly that the investment community is at risk of being fooled by these definitions, and is thereby underestimating the potential impact on economic growth from a slowdown in exports in Asia today.[6]

The point is that in real life there are no "net exports," but lots of imports and exports. That is what trade is—a set of economic activities that have to do with importing and exporting; and the way trade affects economic growth is through these activities, not the abstract notion of "net exports." In exporting, domestically produced goods and services are sold overseas. For such an endeavor to be successful, a great deal of learning by the exporter has to take place. The tastes and preferences of the consumer overseas need to be taken into account in product design, sometimes even down to the final packaging; thus new marketing expertise is crucial. The quality benchmark is now raised; the goods and services exported must match, if not exceed, the standards in the destination markets. Quality competition overseas then feeds back to the entire domestic production process in terms of quality control and improvement, and in driving efficiency. To minimize the time and cost of shipping to destination markets; new skills in logistics management are in turn required. All these are important and valuable knowledge that benefit the exporting business; but, once learned, such knowledge also quickly "leaks" to the business community at large; thus socializing the benefit. Exports thereby benefit the exporting country above and beyond the incremental employment and income generation that can be directly attributed to exports.

What about imports? Even though imports are seen as a negative for growth in national accounting terms (the value of total imports is subtracted from GDP); the reality is more complex and nuanced. Firstly, not all imports are substitutes for domestic production. To the extent that some imports are simply not available from domestic sources regardless of price (from specific commodities to fresh tropical fruits in winter months in a northern country); they then add rather than subtract value in the importing market. A great deal of domestic economic activities would not be possible without such imports (for example, imported components are critical inputs to certain manufacturing exports in the so-called process trade). Secondly, even if the imports could be replaced by local production, the chances are that these imports are superior in quality and/or are priced lower than local production; otherwise the market would not have been there for the imports in the first place. Thus, even if domestic alternatives are available, imports embody additional benefits when compared with local production. Thirdly, there is an important distinction between imports of consumer goods and capital goods. Capital goods imports are a positive for future economic growth; and the fast growing emerging markets in Asia, for instance, typically have relatively higher capital goods imports than developed countries.[7] Finally, and similar to the story of exports, the actual process of importing requires a great deal of logistics, distribution, and marketing skills that may not be needed for distributing domestic products. Thus, along with the imported goods and services, new areas of expertise are also introduced by importers; and, once introduced, such knowledge quickly "leaks" to other businesses and ends up benefiting the society at large.

Apart from the "leakage" of knowledge and the socialization of its associated benefits, there is a powerful second-order impact that is not captured by national income accounting. This is the "stimulation" effect of trade on both public and private investment in infrastructure development and education. As experiences in Asia have shown, trade liberalization typically induces more investment in public infrastructure and public education; which are crucial to attracting foreign direct investment and in improving logistics efficiency and labor supply. By and large, the export-oriented economies of East and Southeast Asia have superior logistics compared with other emerging markets at similar levels of income.[8] Such improvement in infrastructure and education, once made, are public goods that benefit both the tradable and non-tradable sectors of the economy.

The "leakage" and subsequent socialization of

new knowledge and skills, improved infrastructure and logistics efficiency, and better education are all powerful transformational forces. Collectively, they raise productivity, increase the extent and intensity of business competition, and in general render the entire economy more dynamic (distinction between the tradable and non-tradable parts of the economy notwithstanding). Consequently, the economy in question becomes more attractive to new investment, both domestic and foreign. The result is what can be considered as a third-order impact; an increase in investment beyond what is conventionally defined as "trade-related."

The impact of an increase in trade on economic growth is therefore at once more far reaching as well as long lasting than what is captured by the artificial statistical construct of net exports. But what happens then when the process goes into reverse? And, more specifically, what happens to growth in Asia when demand for imports from Asia shrinks in North America and Western Europe? To answer these questions, analysis of trade at high levels of aggregation turns out to be not very helpful. To understand the potential impact of a slowdown in trade in Asia, the kind of trade that is being conducted in the region has to be more precisely specified.

Changing Patterns of Trade

To begin with, the patterns of trade between key regions of the world have changed significantly in the past decades. A recent research paper published by the IMF examines sectoral interaction between the key regions, in addition to the conventional macroeconomic channels of interdependence.[9] Two of the key regions analyzed are the "North" and "Emerging South." "North" comprises 23 OECD countries; whereas "Emerging South" refers to 23 emerging markets, which include East Asia and Southeast Asia, corresponding roughly to the Morgan Stanley Emerging Market Index. In addition to GDP, the three broad sectors of agriculture, industry, and services are also included in the analysis, making it possible to discern the dynamic shifts across these sectors that have taken place over the past decades. The pattern of trade is examined over three specific time periods: 1960 to 1972, 1973 to 1985, and 1986 to 2005. The first period corresponds to the Bretton Woods fixed-exchange-rate regime. The second period is associated with the oil shocks of the 1970s and the highly synchronized contractionary monetary policies in the major industrialized countries in the 1980s. The third period represents the globalization era when a number of emerging markets, such as those in East and Southeast Asia, by opening their trade and capital accounts, pulled ahead of the pack of the so-called Third World and dramatically raised their income level as well as their weight in global trade. This analysis is therefore different from the results reported in Table 1 earlier: a time frame that is broader than just the US recessionary years and with more sectoral details.

A key finding reported in this analysis is that the level of correlation between the "North" and the "Emerging South" rose in the second period (oil shocks and monetary policy contraction); but, surprisingly, declined in the third period (globalization).[10] Indeed, the correlation coefficients turned negative (though coefficient values are generally very low) during the third period for GDP as well as all three sectors, as shown in Table 3. In other words, as the markets in "Emerging South" globalized, shrinking outputs in the "North" correlated with (weakly) expanding outputs in these emerging markets instead of vice versa. It also found that during the "globalization" period, countries in the Emerging South traded much more with each other, as well as with other developing countries than before.

So the empirical record is at best inconclusive. While evidence points to a significant correlation in movements of GDP between the US and emerging markets during the recession years in the US (Table 1); the opposite seems to be the case when examined over the longer time period between OECD countries and emerging markets

Table 3. Correlations Between North and Emerging South - (Trade Weighted Indices)

	1960 - 1972	1973 - 1985	1986 - 2005
GDP	0.17	0.41	-0.09
Agriculture	0.26	0.10	-0.03
Industry	0.31	0.44	-0.02
Services	0.05	0.38	-0.17

Source: From Akin, C. and M. Ayhan Kose, 2007. Table 7C

(Table 3). To the extent that cyclical movements of GDP and sectoral outputs have become less correlated between developed countries and emerging markets just as the latter have become more globalized, the puzzle then remains unresolved.[11]

Trade in Theory and in Practice

It's time to return to basics. Countries trade because they derive real benefits from doing so. The economic fundamentals that explain the benefits of trade are formulated in the principle of comparative advantage. This principle states, in its classical form (the Ricardian model of trade), that trade patterns are determined by how relative costs of production within a country differ from those in the rest of the world. Such relative costs in turn reflect differences in overall productivities between the trading countries. Subsequent refinements of the Ricardian model specify differences in the so-called factor endowment across countries. So when countries trade, they produce more (through exporting) in industries where they are relatively more productive compared with their trading partners; while producing less (through importing) in industries where they are relatively less productive compared with their trading partners. This is why trade is a positive sum game in which everyone benefits. Thus, comparative advantage determines what a country would export (and to where) and what it would import (and from where). So far, so good, in theory.

In practice, however, the picture looks quite different. In several path-breaking research publications, Dani Rodrik and his colleagues at Harvard University examined what determined a country's exports with a novel approach.[12] They first used data from the 6-digit commodity code to track more than 5,000 traded products over the period of 1992 to 2003; and worked out the weighted average of incomes of all the countries that exported each of these products. This yielded a specific income level associated with each of the products exported. In other words, each exported product has an "implied product income," which represented the comparative advantage of the countries exporting such a product. It turned out, not surprisingly; more sophisticated, capital intensive and high tech products are associated with higher implied product incomes, typically exported by more developed and high income countries.

They next calculated the overall income level of each exporting country as a weighted average of the implied product incomes associated

with all the products that are exported by that country. If comparative advantage really determines what a country would export, then this calculation of an "implied country income" (derived from the weighted average of the implied product incomes associated with products in its basket of exports) should yield a result that closely tracks the country's actual income.

What Dani Rodrik and his colleagues found is, however, that this is not always the case. Some countries, notably China, tended to show an implied country income many times higher than the actual. For instance, Rodrik calculated that China's basket of exports resembles the exports of a country with an income level over three times higher than China's actual income. Furthermore, it also found that fast-growing countries tended to export products with higher implied product income levels. Rodrik and his colleagues actually showed that, statistically, there is a strong correlation between higher rates of economic growth and the ability to export products with implied product incomes higher than what would have been predicted by a country's comparative advantage as conventionally defined. Thus, apart from the conventional model of comparative advantage, something else is also at work in determining what a country would export. Rodrick believes that there is a strong indeterminacy in how comparative advantage drives a country's exports. This is referred to as a process of "cost discovery" by a country's entrepreneurs.

When trade opens up new business opportunities in emerging markets, like in China over the two decades, entrepreneurs contemplating entry into the market face considerable uncertainty about the costs of operation. These costs will likely depend not just on factor endowment, but also on the entrepreneur's success with technology adoption and adaptation, as well as on the business and policy environment generally. The risks that arise from such uncertainty are borne disproportionately by early entrants into the new industries, who therefore provide valuable informational spillovers to the rest of the economy ("leakage" of knowledge referred to earlier).

This externality implies that market forces on their own would typically generate insufficient investment in new activities in many emerging markets. If, for whatever reasons, entrepreneurs in these markets are unwilling or unable to engage in "cost discovery," then these markets would produce fewer high productivity goods than they could be producing (and selling in world markets). Consequently, economic growth is slower than what it could have been, and incomes are lower than they would be otherwise. Conversely, rapidly growing countries are those that are able to somehow generate investments in these non-traditional, higher-productivity tradables; typically under conditions where entrepreneurs are willing and able to engage in successful cost discovery in entering new activities; hence raising overall investment, driving up the implied product incomes of exports; and accelerating economic growth.

The Paradox

What does all this have to do with addressing the puzzle of globalization and decoupling? The insights provided by Rodrik and his colleagues, especially the notion of cost discovery as distinct from comparative advantage in driving exports, opens the door for us to examine trade in Asia with a different approach; which in turn could shed new light on the potential impact of a slowdown in demand for Asia's exports.

Armed with entrepreneurial cost discovery, we can look at trade in terms of (i) inter-industry trade, (ii) intra-industry trade, and (iii) inter-firm trade. Cost discovery plays very different roles in each. To begin with, inter-industry trade is likely to have the minimal potential for cost discovery. Trade in basic commodities (as in the classic example of England exporting wool to Portugal in return for imports of port wine, for instance) is typical in inter-industry trade. In Asia today, exports of natural resources from Australia, Indonesia and Malaysia; and Japan, Korea, China and India importing the same nat-

ural resources characterize such inter-industry trade within the region. The traditional formulation of comparative advantage is generally sufficient in explaining the pattern of inter-industry trade.

Intra-industry trade, on the other hand, has a much bigger scope for cost discovery. In the context of Asia, especially among the fast growing emerging markets in East and Southeast Asia, intra-industry trade is manifested as a dense network of pan-Asia supply chains. In the consumer electronics industry, for example, regional supply chains, often involving dozens of countries, function seamlessly to make Asia the world's most efficient producer region. Indeed, studies by the World Bank have shown that intra-industry / intra-regional trade in Asia has been growing at double the pace of world trade; and, in the process, involving ever more small and medium size businesses and local entrepreneurs in its supply chains over time.[13]

Thus, entrepreneurial cost discovery has played a major role in the making these highly efficient regional supply chains possible. In addition, research on "outsourcing," for example, has shown that there is an increasing returns dynamics in cross-border sub-contracting of production in the same industry. The more entrepreneurs are involved in the supply chain (ie. successful cost discovery), more outsourcing follows.[14] Transfer of skills and subsequent "leakage" of knowledge is extensive in intra-industry trade, as local suppliers strive to acquire new skills to win new businesses and increase the value-add of their products.

Intra-firm trade is a sub-set of intra-industry trade where the cross-border trade is conducted by different business units of the same firm. In this instance, entrepreneurial cost discovery is typically conducted by the foreign investors themselves, who made the decision to invest in a market on the basis of their "discovery" (rightly or wrongly) that they could produce and supply the rest of the firm (and eventually the customers) more efficiently and cost-effectively from this market. Sometimes such a cost discovery also involves taking into account the potential advantage in the economies of scale of the local market, supportive local government policies and the like. What makes intra-firm trade different from intra-industry trade is that knowledge and skill transfer in the former is typically more extensive; hence greater "leakage" of knowledge and benefit to the local market.

With this typology of inter-industry, intra-industry, and inter-firm trade, we can now attempt a slightly better informed discussion on how a slowdown in exports may affect Asia in the midst of the current global economic turmoil. It would appear that intra-industry trade would be most severely impacted with a slowdown in demand in North America and Europe. This is because all the supply chains involved are mostly routed toward the same final destination markets overseas. A drop in demand in the final destination markets will create a domino effect all the way back up these supply chains.

Inter-industry trade, especially in terms of basic resources, may fare differently. In order to mitigate a slowdown in exports, fiscal spending by governments in Asia will likely increase. Infrastructure investment will be a focus for government spending; which will in turn support the demand for natural resources.

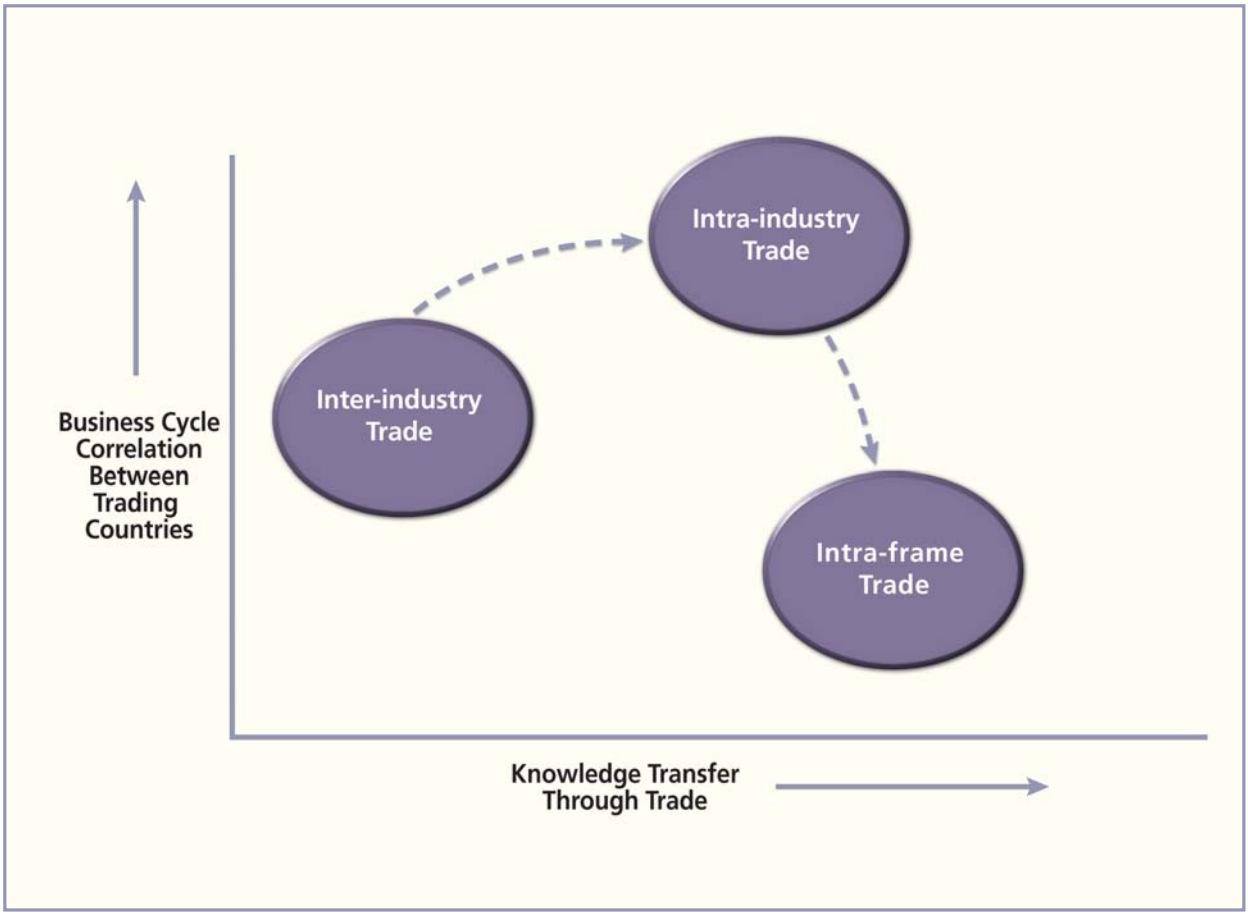
The most intriguing is how intra-firm trade may be affected. While hard data are difficult to come by, the possibility is the strongest here that a recession in North America and Europe may not affect intra-firm trade much. Indeed, intra-firm trade may well increase in favor of Asia in the event of a global economic slowdown; depressed revenue and margin squeeze would motivate more global firms to shift more of their production to their operations in emerging markets in Asia to take advantage of the region's dense supply networks, efficient logistics and infrastructure, and flexible labor market. There is some anecdotal evidence of European multinationals having started to do just that (European multinationals are also suffering from a high euro-dollar exchange rate).[15]

This typology of the three different kinds of trade shows that each may behave differently as the global economy slows; as illustrated in Chart 1. Trade in Asia (and everywhere else, for that matter), is made up of cross-currents characterized by this typology of trade, each has its own specific rationale for being, and each moving according to its internal dynamics. The puzzle of globalization and decoupling is therefore more of a paradox than a puzzle. When emerging markets globalize and become more open to trade, they may become simultaneously more vulnerable to fluctuation of external demand (intra-industry trade) and more resilient (intra-firm trade). There may well be an asymmetry in the impact of trade on economic growth: while an increase in trade could deliver massive benefits to an emerging market, a slowdown in trade, under certain conditions, may not always be catastrophic.

A Final Caveat

A final caveat is in order, however, notwithstanding the different cross-currents affecting Asia's trade in general and exports in particular. The caveat is that we must not confuse the structural with the cyclical; and the immediate with the longer term. The global credit crunch today is a massive cyclical downturn. It is a consequence of the extraordinary expansion of money and credit associated with derivatives and structured finance over the past five years or more. The fact of the matter is that much of the strong growth of the recent past in the emerging markets in Asia, including China and India has been part of this global phenomenon of massive liquidity expansion. As credit expansion turns into credit crunch, the impact on Asia's growth will be immediate and severe

Chart 1.



from the point of view of liquidity; not just in terms of a slowdown in demand for the region's exports. The paradox of globalization and decoupling is a structural phenomenon that will affect Asia in the decades to come; the global credit crunch, on the other hand, will extract its pound of flesh in the coming year or so.

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1. The five recessions are (i) 1974/75, (ii) 1980, (iii) 1982, (iv) 1991, and (v) 2001. The two slowdowns are (i) 1986 and (ii) 1995.

2. Helbling, Thomas, Peter Berezin, M. Ayhan Kose et.al. April 2007, World Economic Outlook. Chapter 4 (pp 121-62). Washington: IMF.

3. OECD countries; the memberships of which has changed over the course of the last 35 years.

4. China, Taiwan, Korea (before it joined the OECD rank), Hong Kong SAR, Singapore, Malaysia, Thailand, Indonesia and the Philippines.

5. Dong He, Lillian Cheung and Jian Chang, April 2007, "Sense and Nonsense on Asia's Export Dependency and the Decoupling Thesis:, HKMA Working Paper, 03/2007.

6. ExposAsia: Dangerous Definitions. No.3/2008. 27 February 2008; by Jim Walker; who was for many years chief economist at CLSA before he founded Asianomics in 2007. See www.asianom.com.

7. I am grateful to Maurice Levi, Chair of Bank of Montreal Professor of International Finance at the University of British Columbia for pointing this out.

8. For example, see Gill, Indermit and Homi Kharas, 2007, An East Asian Renaissance, Washington DC: The World Bank. Chapter 2, Trade.

9. Akin, C. & M. Ayhan Kose, 2007, "Changing Nature of North-South Linkages: Stylized Facts & Explanations," IMF Working Papers WP/07/280. December 2007.

10. This finding is supported by another recent analysis done by the European Central Bank which shows that the business cycle in the Asian region has become more independent of that of the US. See Dees, S. & I. Vansteenkiste, 2007, "The Transmission of US Cyclical Developments to the Rest of the World," ECB Working Paper No. 798/Aug. 207; Frankfurt.

11. These correlation results need to be interpreted with care, however; since the 1986 - 2005 period also saw the India balance of payment crisis, Brazilian hyper-inflation and its aftermath, the Mexican and Russian crises, the Asian crisis and the dot-com bust.

12. See Hausemann, R., J. Hwang, and D. Rodrik, 2005. "What You Export Matters," Center for International Development, Working Papers No. 123, Harvard University; and Rodrik, D., 2006, "What's so Special about China's Exports?" China and the Global Economy 2010, China Economic Research and Advisory Programme, Harvard University.

13. See for example, Ng, F. and A.Yeats, 2003. Major Trade Trends in East Asia. World Bank Policy Research Working Paper 3084. Washington, DC.

14. Grossman, M. G. and E. Rossi-Hansberg, "Outsourcing in a Global Economy," Review of Economic Studies, (2005), 72: 135 - 159. See also Grossman, M. G. and E. Rossi-Hansberg, "The Rise of Offshoring: Its Not Wine for Cloth Anymore," presented at the Federal Reserve Bank of Kansas City Symposium on "The New Economic Geography," 2006, Jackson Hole, Wyoming.

15. Ewing, J., "Dollar Daze in Europe," BusinessWeek. P. 47-49. March 31, 2008.

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