Chapter 1

Causes and Consequences of Globalization in East Asia: What do the Micro Data Analyses Show?

Chin Hee Hahn
Korea Development Institute (KDI)

Dionisius Narjoko
Economic Research Institute for ASEAN and East Asia (ERIA)

March 2010

This chapter should be cited as
Hahn, C. H. and D. Narjoko (2010), 'Causes and Consequences of Globalization in East Asia: What Do the Micro Data Analyses Show?', in Hahn, C. H. and D. Narjoko (eds.), *Causes and Consequences of Globalization in East Asia: What Do the Micro Data Analyses Show?*. ERIA Research Project Report 2009-2, Jakarta: ERIA. pp.1-21.

CHAPTER 1

Causes and Consequences of Globalization in East Asia: What do the Micro Data Analyses Show?

CHIN HEE HAHN

Korea Development Institute (KDI)

DIONISIUS NARJOKO

Economic Research Institute for ASEAN and East Asia (ERIA)

1. Background and Objective

This report consists of the papers submitted to ERIA's research project in **Fiscal Year 2009, No 2 (Productivity Impact of Trade and Investment Liberalization)**. The research project is under the fiscal year research pillar of "Deepening Economic Integration".

This topic was one of ERIA's research themes in fiscal year 2009. The broad theme is globalization and its impacts on East Asian countries, with a particular focus on micro data analysis. As in Weinstein (2005), we understand "globalization" as referring to a process or an evolution of closer economic integration by way of increased trade, foreign investment, and immigration. Under the broad theme, country authors chose the specific topics that might be of interest in the context of their own countries. Over the past year, there have been three workshops—the proposal workshop, the midterm workshop, and the final workshop—and the papers have been revised with comments from the discussants and other participants of the workshop, as well as the editors. The papers cover not only the impact on productivity but also many other interesting aspects of globalization relevant for East Asian countries. After the workshops, we decided to give the report the following title, **"Causes and Consequences of Globalization in East Asia: What do the Micro Data Analyses Show?"**

There have been numerous studies of the causes and consequences of globalization, but we feel that the potential value added of this project comes from the *micro data analysis* on *East Asian* countries. It is true that various aspects of globalization have been previously analyzed, but analyses based on micro data are relatively scarce. There might be many micro data analyses on other regions—primarily North and South America and Europe—but not many such analyses exist for East Asian countries. East Asia is a particularly good place for examining this issue for several reasons to be discussed below.[1] This research project tries to fill this gap.

There is no doubt that economic growth is not only the single most important subject in economic science but also the main vehicle for raising the living standards of thousands of millions of people in the world. Also, economists have long recognized

[1] This project includes India, in addition to eight East Asian countries.

the gains from international trade. So, is international trade, or more broadly, globalization related to economic growth? If might be fair to say that most, if not all, economists believe that globalization and economic growth are intimately related and, furthermore, that globalization has brought enormous benefits for many countries and people. This belief seems justified if we look at the long-run historical experience of the world economy. Each of the two waves of globalization, with the first corresponding to the period from late nineteenth century to World War I and the second corresponding to the post World War II period, was accompanied by high rates of growth of the world economy, by historical standards. The inter-war years witnessed a worldwide increase in protectionism and decline in trade, as well as stagnation of economic growth.

Nevertheless, trade or globalization skepticism has also persisted over the past decades, and the debates and controversies among economists and policy makers, particularly over the relationship between trade and growth, have soared to prominence in the past decade. There are several reasons for the skepticism. First, various theoretical studies, prominently those based on endogenous growth theories, suggest that the relationship between trade or trade liberalization and growth is ambiguous at best; trade liberalization can lead to either faster or slower growth. Here, the key is whether trade liberalization facilitates international knowledge spillovers and/or whether trade liberalization increases the incentives invest in research and development (R&D) or in human capital.

Secondly, the controversies are at least partly related to the mixed empirical evidence on the trade-growth nexus. For while most important empirical studies report a positive relationship between trade and growth, criticisms have been raised with regard to the data, measurement of trade policy, empirical techniques, and model specifications. The most notable examples are the controversies on cross-country evidence on trade and growth.[2] Nevertheless, it is worthwhile to note that, while the debate on the macroeconomic effects of trade on growth is still quite open, there are a growing number of studies that find positive correlations between trade flows and international knowledge flows. These knowledge flows are crucial for the realization of

[2] See, for example, Sachs and Warner (1995) for evidence in favor of a trade-growth nexus and the criticisms raised by Rodriguez and Rodrik (1999).

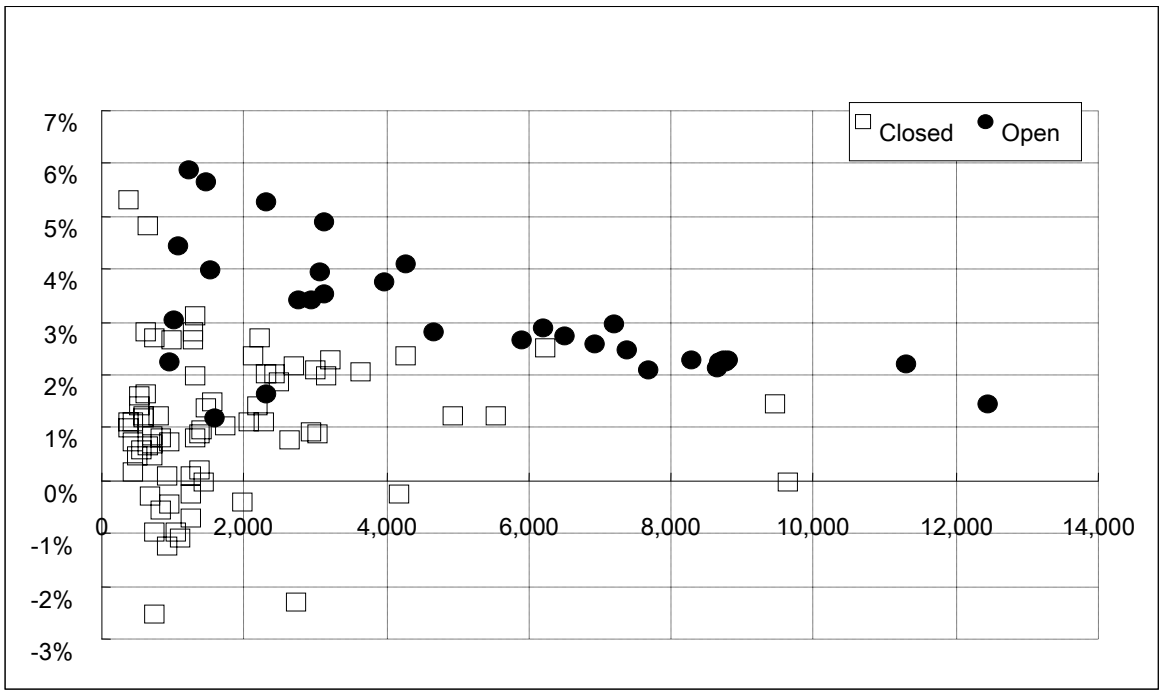
the dynamic gains from trade (Coe and Helpman, 1995 and Coe *et al.,* 1997, etc.). For example, Coe and Helpman (1995) found that technology spillovers are higher when a country imports relatively more from high rather than low-knowledge countries. In their subsequent study, Coe *et al.* (1997) reported that total factor productivity (TFP) in developing countries is positively related to the R&D in their industrial country trading partners, and that the effect is stronger when the machinery and equipment import data are used.

Thirdly, but more importantly, even if international trade or globalization brought about benefits for the world as a whole, there is a strong recognition that the benefits have not been evenly distributed, not only across countries but also across people within a country. After World War II, a reversal in protectionism started among the industrialized countries, and spread to the developing countries in the 1970s. Trade reforms were further expanded and consolidated in the 1980s and 1990s across the developing world: in South Asia, East Asia, Latin America, Eastern Europe, and, to a lesser extent, in Africa and the Middle East. Yet the results of trade reform have varied, and have sometimes fallen short of expectations (World Bank, 2005).

Indeed, the post-war growth experience is consistent not only with the beneficial effects of openness, but also with the uneven effects of trade on growth.[3] Figure 1, drawn from Sachs and Warner (1995), shows the relationship between the post-war growth rate of 84 countries and their initial income, distinguishing between "closed" and "open" countries by their own criteria. Here, the open countries are denoted by solid dots while the closed countries are denoted by blank squares. If we compare growth rates of open and closed countries, holding constant the level of initial income, the growth rates of open countries tend to be higher. Based on this finding, Sachs and Warner (1995) suggested that open countries tend to grow faster. Later, Lucas (2009) re-interpreted this figure,

[3] O'Rouke and Williamson (1999) argue that the first wave of globalization in the nineteenth century worked not only as a force of convergence but also as a force of divergence. Helpman (2004) reviews the sizeable theoretical literature and discusses the conditions under which trade works as a force of convergence or divergence.

Figure 1. The Relationship between Openness and Growth: Sachs and Warner (1995)



and suggested that, among the set of open countries, there is a convergence. However, Lucas (2009) also notes that even among the set of open countries there are large variations in growth outcome starting from the same level of initial income; in some cases, the growth rates of open countries fall far short of those recorded by not only other open economies but also by some closed economies. Furthermore, although systematic cross-country evidence of the effect of trade on within-country income inequality is hard to find, there is a growing concern that globalization has been an important factor raising within-country inequality, not only across skill groups but also across regions.[4]

WTO (2008) succinctly summarizes the various concerns raised in this regard in the following two paragraphs.

[4] Feenstra wrote various papers suggesting that outsourcing has increased the demand for skilled labor not only in developed countries but also in developing countries.

"…Comparative advantage may be meaningless if the costs of shipping a product are higher than the costs of producing it. The overall gains for a country will matter little to those who lose their jobs as a result of specialization driven by trade. These people may have difficulties in taking up positions in expanding sectors because they are not adequately trained. The poor may be particularly vulnerable, since they do not have the means to ensure a smooth transition from one activity to the next.

Industries do not spread their operations evenly across countries, but tend to concentrate in particular locations. These dynamics can be self-reinforcing, leading to agglomeration in some places and de-industrialization in others. At the same time, with reductions in transport and other trade costs, production processes can be split up into more and more individual steps. This has allowed firms in remote locations to become leaders in specialized activities and to join international production networks. Others remain outside these networks, often due to institutional, administrative and other constraints. (pp. 13. WTO 2008)"

The current state of our knowledge, as well as the past diverse experiences of countries, suggest that there are still many questions, old and new, that need to be explored in order to improve our understanding of various aspects of the globalization that we are facing today, including its causes and consequences. Most of these questions are related to the relationship between globalization on the one hand, and growth, productivity, reallocation, location of industries and firms, employment and wage inequality, market structure, etc. on the other. Does trade and investment liberalization lead to economic growth and productivity improvement? Is there still a role for infant industry protection? Does trade and investment liberalization improve or worsen wage inequality? How does the reduction of trade cost affect the location choice of multinational firms? Does trade have a disciplining effect on domestic firms? What are the relationships between trade, innovation, and the product choices of firms? Does trade and investment liberalization have differential effects on firms and industries? If so, what are the firm, industry, and country characteristics that shape the relationship between trade/investment liberalization and various outcome variables? These are only

a few examples of questions that need further scrutiny. Developing answers to these questions is likely to be a pivotal step toward maximizing the potential benefits from globalization, as well as sharing those benefits more widely not only across countries but also across various economic agents in a country. All papers contained in this report tackle some of the questions raised above.

One of the key features of this report- micro data analysis of globalization -stems from the recognition that many of the old and new issues raised above can be addressed better by utilizing micro datasets. We also expect that micro data analysis can potentially give us much richer information on various issues of globalization, such as the exact channels through which the benefits of trade materialize, the possible differential effects of trade and investment liberalization, and the existence of factors or policies that are complementary to trade and investment liberalization. In this regard, it should be noted that recent advances in theoretical and empirical studies based on firm heterogeneity have made a considerable contribution to our knowledge in this area. There have been studies, both theoretical and empirical; suggesting that even in a narrowly defined industry there is considerable heterogeneity among firms, particularly in terms of productivity. According to these studies, industry-level productivity growth can arise through the entry and exit of firms, share shifting from less productive to more productive firms, and productivity improvement in continuing firms. Building on this literature, and following an influential theoretical work by Melitz (2003), a growing number of studies, has examined the effects of trade on the process of industry productivity growth: that is, entry/exit and share shifting. In essence, his work and many of the variants of his model showed that trade and trade liberalization can enhance the productivity of the aggregate economy by reallocating resources from less to more productive firms, even when there is no change in firm level productivity. It has been argued that this effect provides another source of dynamic gains from trade, on top of conventional channels, such as scale, variety, and the pro-competitive effect (i.e. lower mark-ups), although there are others suggesting that the heterogeneous-firm-based literature does not prove the existence of “new” gains from trade. Regardless, it seems clear that the heterogeneous-firm-based literature has made a contribution to understanding more clearly the mechanism by which trade promotes productivity and growth. Some of the papers in this report take this literature as their background.

Before describing the structure of the report and the questions raised in each paper, we intend to discuss briefly why this type of micro data analysis of globalization is particularly interesting for East Asian countries. Above all, most East Asian countries are characterized by relatively open trade and investment regimes compared with other developing countries, and have experienced rapid de facto integration recently, not only among themselves but also with countries in other regions. Also, they have exhibited most dynamic growth performances for the past decades. As a consequence, the effects of globalization are likely to show up in a relatively short period of time for the dynamic countries of East Asia. If this is the case, it is a great advantage for this type of research, given the usual constraint that micro datasets are generally consistently available for only a relatively short period of time. So we expect that any proposed benefits or costs of globalization are likely to show up clearly in East Asian countries.

Another reason that East Asia is an interesting place for this type of research is that East Asia covers countries that are very heterogeneous in many respects. They differ not only in terms of level of development and size, but also of liberalization strategies and economic structures. In terms of foreign direct investment and migration flows, East Asia includes both home and host countries. These diverse country characteristics provide us with the opportunity to assess whether and how the effects of globalization differ across countries, and why.

Thirdly, East Asia is an appropriate place for analyzing the causes and consequences of the so-called "second wave of globalization". Irwin (2005), as well as many other scholars, noted that the second wave of globalization is distinguished from the first wave in that outsourcing, or the formation of international production networks, driven by multinational firms, has rapidly expanded across the globe. In fact, it has been pointed out that the formation of international production networks has been most marked in the East Asian region. As a result, a large share of trade, particularly intra-regional trade, in East Asian countries comprises parts and components, while trade between East Asia and other regions is still dominated by finished goods. One frequently raised issue has been about the possibly differential effects of trade in parts and components, as distinguished from finished goods, on growth and income distribution in home and host countries. Although there is a large and growing literature on this issue, some of the papers of this report tackle it from a new perspective.

Finally, as is well recognized, the rise of China and its integration into the world economy is probably one of the most important economic developments in the post-war world. Over the past three decades China grew at nearly 10 percent per year, driven by the expansion of a modern, export-oriented industrial sector. Moreover the structure of China's exports has also been changing rapidly, away from low-tech labor intensive manufactures to medium- to high-tech skill intensive products. China also became the number one destination for foreign direct investment (FDI) from more advanced East Asian countries such as Korea and Japan. China's rise has had tremendous impacts through various channels not only on East Asian countries but also on the world economy as a whole. Most importantly the rapid growth of China itself, and the rapid improvement of the living standards of more than 1.3 million people, reversed the trend in world income distribution, which had been deteriorating for about 200 years since the industrial revolution. It also changed the patterns of world trade and capital flows, as well as the prices of goods and commodities. It has also deepened production fragmentation in East Asia to an unprecedented level (World Bank, 2006). So how did China's rise affect other East Asian countries? How did the formation of production networks affect China itself? Some of the papers in this report address issues that might be related to this question either directly or indirectly.

Now we briefly explain the structure the report, as well as the main questions raised in each paper. Key findings of each paper will be summarized separately below. This report consists of eleven papers on nine countries: Japan, China, Korea, Malaysia, Thailand (two papers), Philippines, Indonesia, Vietnam (two papers), and one South Asian country, India. As explained above, all papers address issues related to the causes and consequences of globalization. Specifically, nine papers examine the effects of trade and investment liberalization, although the outcome variables examined differ somewhat across the papers. One paper on Japan examines the causes, as well as consequences, of globalization, and one paper on Thailand examines the effect of cross-border labor inflows. One commonality running through the papers is that they all carry out micro data analysis. Another is that they examine whether there are any firm, industry, or country characteristics that affect the relationship between globalization and the outcome variables of interest.

The second chapter of this report, by Matsuura and Hayakawa, examines the causes underlying the rapid increase of Japanese FDI to developing countries. The research is motivated by the observation that Japanese FDI increased more rapidly for developing countries, which cannot be explained by trade cost reduction under the horizontal FDI (HFDI) theory. They raise two specific questions. Has the trade cost been reduced between Japan and other East Asian countries? Does the reduction of trade cost make firms more likely to choose vertical FDI (VFDI)?

The next five chapters examine the relationships between trade and/or investment liberalization on the one hand, and productivity, innovation, and new product introduction on the other. Chapter 3 by Choi and Hahn examines the effect of trade liberalization on plant total factor productivity growth (TFPG), and within-plant across-product reallocation behavior, in the Korean manufacturing sector. As empirical framework, they take the variety-based endogenous growth models, which suggest that the increase in intermediate input variety via trade reduces the cost of R&D, and hence induces new product introduction and TFP improvement. Specifically, they examine whether the increase in imported intermediate input variety increased plant TFPG and measures of product switching (adding to, and dropping products from a firm's product range). Although the products added by a plant are not necessarily new products from the viewpoint of the economy, new products will show up as added products at plant level.

Chapter 4 by Narjoko examines whether trade and investment liberalization in Vietnam improved industry productivity by improving resource allocation across firms within industries, taking recent theories of heterogeneous firms as the theoretical background. This paper is motivated by the observation that Vietnam underwent a rapid trade and investment liberalization during the 1990s, and experienced a massive firm entry in the 2000s. To address this issue, he asks several questions. Did trade and investment liberalization contribute to the entry of firms? Is more firm entry associated with greater industry productivity growth? Did the firm entry contribute to the growth in productivity of firms having an intermediate level of productivity, as theoretically predicted?

Chapter 5 by Aldaba examines how trade reform from the 1980s to the mid-1990s and the reversal of trade liberalization in the early 2000s affected firm productivity in

the Philippines. She asks whether the trade liberalization improved firm productivity and whether the effect changed with the introduction of selective protectionism. Another interesting question she raises is whether and how the anti-export bias present in the tariff structure affects the trade-productivity nexus.

Chapter 6 by Das also asks whether liberalized trade and FDI enhanced firm productivity in India. As is well known, India has implemented massive trade and investment liberalization since the early 1990s, which has attracted attention by many authors. However, Das goes on a step further to examine extensively whether the effects differ across firms depending on various firm characteristics, such as export orientation, import dependency, and foreign ownership.

Chapter 7 by Hoang and Pham examines the spillover effect from FDI to domestic firm productivity in Vietnam. Their paper's motivation reflects Vietnam's situation, because although Vietnam's rapid growth of output and investment has been driven by foreign direct investments, there has been controversy about the role of FDI firms in enhancing the productivity of domestic firms. They are particularly interested in examining whether measures of the absorptive capacity of domestic firms, as well as the technology gap between domestic and foreign firms, affect the degree of spillover.

The question asked by Cassey's paper, which forms Chapter 8, is broadly similar to the previous chapter: what are the relationships between exporting, productivity, and innovation in the Malaysian case? However, unlike the previous chapters, he explicitly considers innovation in the analysis. His paper is motivated by the recent emphasis by policy makers on innovation *and* productivity, seeking to generate a move up the value chain ladder in manufactured exports from Malaysia. He tries to examine whether there are empirical grounds for emphasizing innovation, rather than productivity, for achieving export success.

Kopaiboon's paper, Chapter 9, in contrast to the previous chapters, examines the static and traditional gains from trade in Thailand in a new context. That is, he examines the import-as-market-discipline hypothesis under the new environment of global production networking. His point of departure is that there are reasons for expecting that being a part of a global production network puts a stronger competitive pressure on the firm involved than not belonging to such a network. He examines, in

particular, whether the market-disciplining effects are different between final goods imports and parts and components imports.

The next two chapters address the impacts of globalization on labor markets. Chapter 10, Zhang's paper, examines whether FDI, as well as exporting, had the effect of increasing firms' demand for skilled labor in China. Zhang observed the most rapid globalization and, at the same time, a rapid rise in wage inequality between skilled and unskilled workers. Zhang notes the contrasting implications of trade for wage inequality from the traditional Heckscher-Ohlin theory and the outsourcing theory proposed by Feenstra and Hanson; as an unskilled-labor abundant country, China is likely to experience a reduction of wage inequality due to traditional trade (measured by exporting), while it is likely to experience a rise in wage inequality due to outsourcing (measured by FDI).

Chapter 11, by Aswicahyono and Wicaksono, asks whether the reduced job growth rate in Indonesia after the Asian crisis was related to globalization. In this regard, they start by examining the relationship between job creation and firm characteristics. Specifically, they examine how the roles of FDI and exporting firms have changed over the crisis, relative to domestic and non-exporting firms. Although they do not examine explicitly the possible "China effect", it seems to be one of their candidate explanations.

The last Chapter, by Kohpaiboon and Kulthanavit, is the only paper in this report that examines the migration issue. Their paper has as its background the debates over policy regarding unskilled foreign workers in Thailand. They focus on one specific aspect of the debate: whether the foreign unskilled workers reduce the incentive of firms to upgrade. In order to examine this issue, they construct a survey dataset on the Thai clothing industry.

2. Summary of Key Findings

Matsuura and Hayakawa in Chapter 2 hypothesize that the increase of Japanese FDI to developing countries has been comprised more of vertical FDI (VFDI) rather than horizontal FDI (HFDI). VFDI is an investment that aims at reallocating part of a

production process to cheap-labor countries, and engages in vertical production process division between host and home countries.

The empirical results suggest that a reduction of trade costs between host and home countries has different impacts on HFDI and VFDI. Such a reduction attracts even firms that are not highly productive to choose vertical FDI. The results however suggest that the reduction in trade costs does not lead firms to choose HFDI. Understanding that developing countries, particularly those in the East Asia region, have experienced a substantial reduction in the costs of trading with Japan, Matsuura and Hayakawa conclude that the increase of VFDI through a reduction in trade costs has led to the surge of FDI into developing countries.

In their investigation of the relationship between product variety and productivity, Choi and Hahn in Chapter 3 show evidence that tariff liberalization occurring in Korea indeed contributed to the growth of input variety during the period studied. Their empirical investigation utilizes plant-product data for the period 1991-98. They found that plants belonging to industries with higher variety growth in imported intermediates experienced higher productivity growth. This is a robust finding, after carefully controlling for the possible endogeneity issue.

Choi and Hahn further elaborate the variety-productivity relationships by testing the relationship between the imported intermediate variety and product switching. Product switching, defined as simultaneously adding and dropping products, can be understood as a part of a continuous process of "creative destruction" within plants. Active product switching behavior can enhance the resource allocation process within firms and thereby improve their production efficiency. The empirical results turn out to support this hypothesis. They suggest that increased imported intermediate variety had a positive impact on stimulating product switching by domestic plants.

In Chapter 4, Narjoko establishes a positive relationship between firm entry and industry productivity growth in Vietnamese manufacturing. The rapid trade and investment liberalization occurring in Vietnam since the early 1990s, which has substantially reduced the cost of establishing private enterprises, and of exporting, seems to have triggered a rapid growth in the number of firms entering the country's manufacturing and services sectors. This finding suggests a reallocation of resources

across firms within Vietnamese manufacturing towards the more productive firms, and there is, as a result, a higher industry-level productivity growth.

Narjoko further examines the within-sector impact of firm entry. Plotting the change in the distribution of productivity growth over time, there is evidence that many firms have become more productive. The productivity improvements, however, vary across firms. The work shows that the entry of firms lowered the productivity of firms located at the bottom of the distribution, but increased that of firms located at the centre of the distribution. It suggests that the increase in productivity, as results of the high entry rate, only applies in firms that have already acquired some intermediate level of productivity.

In Chapter 5, Aldaba examines how trade reforms in the Philippines during the 1980s and 1990s, as well as the reversal of the reforms in the 2000s, affected firm productivity in the country. She utilizes firm-level panel data that cover manufacturing industry for the period 1996 to 2006.

Aldaba's investigation provides some evidence in support of the hypothesis that trade liberalization leads to productivity gains, and protection leads to productivity losses. This is confirmed by a negative relationship between the effective rate of protection – as a proxy of the trade-policy variable in this study – and productivity growth that occurs in the group of industries that rely on imports. The failure of the Philippines government to implement a further tariff reform program in the early 2000s, which was instead replaced by a selective protectionist policy, seems to have held back productivity improvement arising from the earlier waves of trade policy reforms. The selective protectionist policy reverses the gains from previous trade liberalization episodes and has weakened the whole process of restructuring and reshuffling resources from less to more productive firms. Hence the change in the policy tends to allow inefficient firms in the industry to survive.

Chapter 6 presents the work by Das that examines the contribution of wide ranging policy reforms governing trade and investment, on the productivity of firms in Indian manufacturing, utilizing firm-level data of Indian manufacturing over the period 2000-08 when most of the reforms took place.

Das finds that productivity improvements have occurred since 2000. The investigation further explores the important determinants of productivity improvements

across different type of firms. These include imports of raw materials and capital goods, firm size, quality of employment (captured by wage rates), and imported technology (measured by royalty payments). The importance of imported goods in improving productivity suggests that firms are learning from imported and more advanced technology. This is important to note, since positive productivity gains seem to have accrued due to liberalization of the imports of intermediate inputs and capital goods.

Das' study however finds that R&D in the Indian manufacturing sector is still at a nascent stage, possibly because of inadequate emphasis laid on this dimension by the private sector. Export orientation also does not seem to improve productivity. Das interprets this finding as a pattern whereby the import-dependent firms have been oriented towards the Indian domestic market and a possible import-export link is yet to be established. In other words, it is argued that liberalizing the import side, especially of capital and intermediate inputs, has largely helped consumers in domestic markets.

In Chapter 7, Hoang and Thanh investigate the existence of FDI spillovers in Vietnamese manufacturing for the period 2003-07, utilizing the rich firm-level data of the country's industrial sector. They argue that Vietnam is a good case study, because of bold investment policy reform since the mid 1980s. Indeed, it is well noted in the literature that FDI now plays a vital role in the Vietnamese economy, having become increasingly important over time.

Hoang and Thanh find evidence of the existence of spillover effects from the foreign presence in Vietnamese manufacturing. They indicate that the magnitude of the effects is large, and they further elaborate this finding by examining how technology and factor intensity differently affect domestic and foreign firms. Their results suggest that gaps in technology and skill intensity really limit positive spillovers from the presence of foreign or multinational firms.

Lee attempts to reveal the interrelationship between exporting, productivity, and innovation in Malaysian manufacturing. His analysis is presented in Chapter 8. As noted, Lee tries to find empirical grounds for emphasizing innovation, rather than productivity, in achieving success in exporting.

Utilizing firm-level data from three waves of Malaysian innovation surveys covering the period 1997-2004, Lee finds that the link between exporting and

productivity is a weak one in Malaysia. Productivity is driven by capital intensity and human capital but this may not necessarily translate into export dynamism. Innovation, whether product or process innovation, is likely to be the key driver in exporting. There is some evidence that trade liberalization can promote exporting, but such policies may be less relevant to innovating firms. Furthermore, exporters are likely to be larger firms with foreign ownership. This is consistent with the present role of FDI and large multinational companies (MNCs) in exporting activities.

Kohpaiboon, in Chapter 9, examines the hypothesis of imports as a market discipline mechanism, using census data of Thai manufacturing. In his investigation, Kohpaiboon finds that while imports have the potential to act as a market discipline, their effect on price-cost margin (or, profitability) seems to be different across two types of imports. It is imports of parts and components, rather than final goods, which act as a market discipline. The higher the proportion of imported parts, the narrower the gap between price and marginal cost, thereby promoting more efficient use of scarce resources. The study thus provides evidence of gains from opening up international trade on resource allocation, and urges further liberalization. The finding particularly highlights gains from participating in global production networks in terms of growth opportunity and resource allocation efficiency.

Zhang examines how trade and FDI affect firms' demand for skilled labor in China's manufacturing sector, utilizing the large-scale firm-level census data of the sector. His testes whether there is a relationship between the demand for skilled labor and exports, FDI, or both of these. His empirical investigation and its analysis are presented in Chapter 10.

The empirical results suggest that exporters tend to employ more unskilled workers than non-exporters. The results hold for both Chinese exporters in the ordinary trade regime and foreign invested exporting firms in the processing trade regime. Although this finding is consistent with the Heckscher–Ohlin model, it is somewhat surprising given the predictions of the trade literature on heterogeneous firms. Zhang also finds that FDI is associated with a higher share of skilled labor, and he interprets this finding as evidence in support of Feenstra and Hanson's outsourcing theory.

Chapter 11 addresses the question of whether the reduced job growth in Indonesian manufacturing after the Asian crisis was related to globalization. Aswicahyono and

Wicaksono attempt to answer this question by utilizing plant-level data of the sector for the period 1990-2006.

They find that high output growth during the pre-crisis period was driven significantly by the existing firms. The trend, however, reversed in the 1996-2000 period where the source of manufacturing output growth came from new entrants. There are, however, no significant differences in terms of ownership and market orientation. In terms of employment, they find that exporting firms consistently provide more jobs than non-exporting firms. Interestingly, prior to the crisis, non-FDI firms created many more jobs compared with FDI firms. The position was reversed post-crisis with FDI firms creating more jobs than non-FDI. Another salient feature is that both FDI and exporting firms were able to withstand the crisis better than the non-FDI, non-exporting firms.

The analysis observes a significant drop in labor productivity in non-FDI firms. In contrast, the contribution of FDI to manufacturing productivity was consistently increasing throughout the periods. The finding also reinforces the significant role of FDI in improving labor productivity over periods. The story is similar to exporting versus non-exporting firms, where the labor productivity of exporting firms also improves throughout the period.

The last chapter of this report presents the empirical investigation conducted by Kohpaiboon and Kulthanavit on the migration issue. They consider the issue as one of structural adjustments coming out as an impact of the globalization process, and they examine the issue using the Thai clothing industry as a case study. The empirical investigation is based on in-depth interviews with fifty firms in the industry during November 2009 and February 2010.

They found that not all firms opt to hire unskilled foreign workers. There are systematic differences in firm characteristics between firms who hire foreign workers and those who do not. The latter are relatively large in size (both in employment and sales), perform better, and actively undertake upgrading activities. The former are struggling to maintain their profit margins, are relatively small, and do not invest sufficiently in upgrading activities. Interestingly, hiring foreign workers is not their first response, but is a reflection of the fact that firms have yet to successfully undertake functional upgrading. While there are many kinds of upgrading (service, product and

functional), Kohpaiboon and Kulthanavit's finding points the relative importance of functional upgrading for long-term and more sustainable development. Firms which are late to undertake functional upgrading are likely to hire foreign workers during their structural adjustment process. Allowing the migration of unskilled foreign workers on a temporary basis would be a win-win-win solution for labor importing and exporting countries, as well as for the migrants themselves. Nevertheless, as a condition for allowing firms to hire unskilled foreign workers, government must guard against any retarding effect on the firms' upgrading efforts.

3. Policy Implications

In this section, we discuss policy implications that can be directly drawn out from the report as a whole, as well as from the individual papers forming its chapters.

First, trade and investment liberalization is not only a policy to raise static consumer welfare, but also a policy that promotes growth. Trade may not be a sufficient condition for strong, sustained growth, but it is a necessary one.

Despite the debates and controversies on the trade-growth nexus, we find pervasive evidence across the papers in this report that trade and/or investment liberalization had a positive dynamic effect on the aggregate economy studied.

We find strong positive correlations between trade and/or investment liberalization on the one hand, and higher TFP growth (Korea, Indonesia, Philippines, India, and Vietnam) and higher rates of new product introduction (Korea) on the other.

Outsourcing-related foreign direct investment enhances the incentive to accumulate human capital by increasing the demand for skilled labor (China).

Second, trade and investment liberalization should be pursued as part of a broad national growth strategy. In order to enhance the beneficial effects from trade and investment liberalization, other complementary policy ingredients seem necessary.

In most of the papers in this report, we find the existence of factors—national, industry, and firm characteristics or policies—that affect the relationship between trade/investment liberalization and productivity improvement and growth.

Third, enhancing the absorptive capacity, or human capital, of domestic workers and firms might be necessary in order to gain the potential benefits from international knowledge spillovers: i.e., the advantage of backwardness.

The degree of FDI spillover is found to be positively affected by measures of the absorptive capacity of domestic firms (Vietnam).

Fourth, trade cost reduction should be on the policy agenda at a high priority for countries that have yet to join the international production networks. In particular, improving trade-related infrastructure is likely to be an important ingredient of policy.

Not all countries benefit from the formation of international production networks. In many developing countries, transport cost remains a key bottleneck. Lack of transport infrastructure will raise transport cost and make markets isolated. Markets that are isolated may also feature little competition, and this will worsen within-country poverty and distribution issues.

The paper on Japan shows that trade cost is an important determinant of vertical out-bound FDI.

Fifth, it is necessary to ensure that the forces of competition are at work in domestic markets. In particular, some of the dynamic gains from trade are realized through reallocation across firms and industries, and even across products within-firms. It is therefore necessary to focus on the elimination or reduction of existing regulations, such as entry regulations, strong employment protection, and business regulations based on firm size, that inhibit the reallocation of resources by market forces. In cases where there is a lack of proper institutions or markets, such as bankruptcy laws and procedure, building up these institutions or markets should be a top priority.

Papers relating to Vietnam and Korea show that gains from liberalized trade are realized through the resource reallocation channel.

Sixth, enhancing the credibility of trade and investment reform is likely to raise the effectiveness of trade/investment liberalization. Pursuing trade and investment liberalization as part of a broad growth strategy, including other non-reversible policies, is likely to be one such strategy.

The paper on the Philippines shows that trade reform can be reversed and that the reversal of trade liberalization is likely to be damaging.

Lastly, policy measures are necessary to ease the burdens of economic agents who have to make adjustments or who are on the losing side of change. This will be particularly the case when the trade or FDI involved is outsourcing-related.

The paper on China shows that outsourcing-related FDI might worsen wage inequality between skilled and unskilled workers.

References

Coe, David T., and Elhanan Helpman (1995) “International R&D Spillovers.” *European Economic Review 39*:859-887.

Coe, David T., Elhanan Helpman, and Alexander W. Hoffmaister (1997) “North-South R&D Spillovers.” *Economic Journal 107*:134-149.

Helpman, Elhanan (2004) *The Mystery of Economic Growth*. Harvard University Press. Cambridge.

Irwin, A. Douglas (2005) “Trade and Globalization.” in Weinstein, Michael M. ed. *Globalization: What’s New?* Columbia University Press.

Lucas, Robert E., Jr. (2009) “Trade and Diffusion of Industrial Revolution.” *American Economic Journal: Macroeconomics* 1:1, pp. 1-25.

Melitz, Mark. (2003) “The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity.” *Econometrica 71*. pp. 1695-1725.

O’Rouke, Kevin H. and Jeffrey G. Williamson. (1999) *Globalization and History*. The MIT Press. Cambridge.

Rodríguez, Francisco, and Dani Rodrik (1999) “Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Literature.” NBER Working Paper 7081.

Sachs, Jeffrey D., and Andrew Warner. (1995) “Economic Reform and the Process of Global Integration.” *Brookings Papers on Economic Activity*, Vol. 1. pp. 1-18.

Weinstein, Michael M. (2005) “Introduction.” in Weinstein, Michael M. ed. *Globalization: What’s New?* Columbia University Press.

World Bank (2005) *Economic Growth in the 1990s: Learning from a Decade of Reform*. The World Bank. Washington D.C.

World Bank (2006) *East Asian Renaissance*. The World Bank. Washington D.C.

WTO (2008) *World Trade Report 2008*.