Chapter 1

Introduction and Overview

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CHAPTER 1
Introduction and Overview

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1. Background and Objective

This report is the outcome of the ERIA research project *Globalization and Performance of Small and Large Firms* in fiscal year 2013, which was launched as part of a series of micro-data studies of globalization by ERIA since 2008. Under this project, ten country studies were conducted for eight countries in the Asia-Pacific region: China, Indonesia, Japan, Korea, Malaysia, Philippines, Thailand, and Vietnam.

The objective of this report is to empirically examine whether and how *globalization* has differential effects on small and (or versus) large firms, and to identify policy issues that need to be addressed to achieve a more strong and resilient economic growth in East Asian countries.

During the past decades, the growth performance of many East Asian countries has been far above the international standard. There is a growing consensus that one of the key factor behind the relatively strong growth performance of these economies lies in the fact that they were increasingly integrated with the global market, *de factor* and *de jure*. However, in many East Asian economies, there is also a growing concern that the growth performance has been very uneven across firms. Not only in developed countries such as Japan and Korea but also in developing countries such as Indonesia and Vietnam, for example; there seems to be a popular belief that firm performances are divergent, particularly along the dimension of firm size.

Furthermore, it is often claimed that these possibly divergent performances of small versus large firms are caused by globalization. In other words, it is often claimed that, compared with large firms, small firms or SMEs are at a disadvantageous position to adjust in various dimensions to the process of globalization – in terms of adjustments to an increased import competition, expanded export opportunities, enlarged foreign investment opportunities, and increased global production sharing. Indeed, the perceived divergent performance between small and large firms and its possible linkage with globalization, irrespective of the existence of its factual basis, has become an important economic or socio-economic policy issue in many countries. This project attempts to shed light on these issues.

Specifically, the key questions raised and addressed in this report is as follows. Has the performance gap between small and large firms been increasing? Or, are there observable forces that work toward this direction? Does globalization cause firm performance to diverge? If so, what are the specific mechanisms? If not, why? What is the empirical evidence? Where exactly are the market failures in this process? What are the policy measures that are deemed necessary to achieve strong and resilient growth and development?

More specific questions can be raised under the broad theme of this report. Here are some of the examples. Is there evidence that the performance (size, productivity, profitability, survival probability, etc.) gap between small and large firms is increasing? Or, more generally, how does the performance of initially small firms compare with those of initially large firms, conditionally or unconditionally? Do trade and FDI liberalization policies have uneven effects on small versus large firms? How do the adjustments of small firms differ from those of large firms when market is opened? Are small firms at a disadvantageous position to appropriate the potential benefits from global engagement: i.e., interaction with global markets via trade, FDI, outsourcing, participation in global production networks? What are the specific mechanisms? What are the important firm- or plant-characteristics that help to understand the performance of small firms vis-à-vis large firms? What are the roles of innovation, human resources, finance, product diversification in this process?

Although one cannot answer all of these questions in one project, the ten country studies of this report address at least some of these questions. We believe that this report provides some new empirical evidence and insights into the relationship between globalization and performance of small and (or versus) large firms and, furthermore, points out at least some important policy issues which are likely to be necessary to fully appropriate the potential benefits from globalization and make the growth processes more strong and resilient.

Despite the utmost importance of these issues, existing empirical evidence on the possibly differential effects of globalization on small and large firms are surprisingly rare. Of course, there are numerous empirical studies which examine possibly heterogeneous responses of firms to globalization under the theoretical background of the so-called heterogeneous firm trade theories. However, most of these empirical studies tend to focus not on firm size but on other firm characteristics, such as firm productivity or firm's exporting and importing characteristics as determining a firm's response to globalization. This report also aims to fill this gap in the literature.

Standard heterogeneous firm trade theories predict that firm's responses to globalization differ according to initial productivity. For example, the standard Melitz' model predicts that, in response to the symmetric reduction of trade costs, initially more productive firms grow and prosper while initially less productive firms shrink and exit. In this model, firm productivity is positively correlated with firm size and also determines firm's initial exporting status. So, in order to empirically test the implications of Melitz' style heterogeneous firm trade theories, researchers have focused on firm productivity or firm's exporting status to capture possibly differential responses of firms to globalization. In view of the practical importance of the firm size dimension, however, we consider it as a worthwhile effort to focus on firm size in assessing the possibly heterogeneous responses of firms to globalization.

Furthermore, because of the positive correlation between firm productivity and firm size, the popular belief that small firms are relatively at a disadvantageous position in the process of globalization is not without some theoretical ground. However, the actual responses of small and (or versus) large firms to globalization could be much more complex than can be captured by some simplified theoretical models. That is, there might be other important factors which are not understood well enough or left out in simplified theoretical models but still important for determining firm's responses to globalization. For example, it could be large firms rather than small firms that are more vulnerable to an increased import competition if small and large firms are producing different products within a narrowly defined industry and if imported products are primarily of the sort which is typically produced by large firms. This could be a realistic scenario given that most trade are conducted by large firms. Another example might be that small firms, although they are disadvantaged in utilizing enhanced export opportunities, might exhibit greater improvement in performances than large firms if they succeed in participating in exporting. Some available evidence on greater learning-by-exporting by smaller firms, although it is not modeled in standard theories, lends support to this scenario. In short, there might exist factors that determine firm's responses to globalization which might differ along the firm size dimension. These factors are important in reality but are not adequately captured in existing theories, This report therefore firstly examines whether small and large firm's responses to globalization differ and then further investigate why.

As the shown by the case studies across the countries covered by this project, , diverse patterns of relative response of small firms vis-à-vis large firms are found. There is evidence that small firms are indeed disadvantaged in some aspects of globalization and in the context of some of the countries, but there is also evidence to the contrary in other aspects of globalization or in the context of the other countries. Nevertheless, what is particularly interesting to find is that there seems to exist some hard-to-ignore tendency that small firms, although they are relatively disadvantaged over large firms in participating in global activities, exhibits larger gains of some form after participation.

We provides a synopsis of what follows below and summarize the main policy implications arising from all studies in this project.

2. Summary of Country Studies

Inui, Ito, and Miyakawa's paper, *"Japanese Small and Medium-Sized Enterprises' Export Decisions: The Role of Overseas Market Information"*, examines whether the information on overseas market provided by banks helps to explain firm's export market participation, and whether the effect is more pronounced for SMEs than large firms. To do so, they use a unique dataset containing information not only on firms' export activities but also on their lender banks' exposure to other exporting firms and lender banks' own overseas activities. They explain that, relative to large firms, SMEs are at a disadvantageous position to acquire information on foreign markets, which are necessary to enter and remain in the foreign market. Under this context, the key focus of their paper is to examine whether lender banks play the role of providing information on foreign markets to their client firms. In the case of Japan, they explain, lender banks generally provide not only financial support but also business consulting services to their client firms utilizing extensive knowledge collected through their lending transaction relationships and from various information sources. If so, it is plausible that SMEs, which are at an informational disadvantage relative to large firms, would find it more helpful than large firms to receive such information through lender banks. Against this background, the authors examine whether the information spillovers through the lender banks positively affect the likelihood that a firm will start exporting as well as the number of export destinations. In addition, they examine whether this effect is more pronounced for SMEs.

Their empirical results highlight an important role of lender banks as a conduit of information spillovers in firm's exporting behavior, particularly for small- and medium-sized firms. Specifically, the estimation results indicate that information spillovers through the banks positively affect SMEs' decision to start exporting and the range of destinations to which they export. Such information spillovers also reduce the likelihood that exporters exit from export markets. The export-to-sales ratio of exporters, however, is not affected by such information spillovers. These results imply that information on foreign markets provided by lender banks substantially reduces the fixed entry costs associated with starting exporting and entering new export markets, as well as firms' costs associated with continuing to export.

Based on the results, Inui, Ito, and Miyakawa argue that government should proactively involve banks in its export promotion policies, which will be particularly important for increasing the number of SMEs participating in export market.

Specifically, they suggest that properly helping and incentivizing small banks, in particular, to build international service networks and provide necessary information to their clients could be one effective way of implementing export promotion policies.

Hayakawa and Matsuura's paper, *"Dynamic Two-way Relationship between Exporting and Importing: Evidence from Japan"*, investigates the dynamic nature of trading (exporting and importing) using Japanese firm-level data. Specifically, they first examine whether state dependence and cross effects exist in Japanese firms or not. Here, the state dependence exists if past exporting (importing) helps current exporting (importing), while the cross effect exists if past importing helps current exporting or vice versa. The authors explain that the state dependence can exist if, for example, there is a sunk entry cost in exporting of if there is learning-by-exporting. The cross effect can exist if, for example, there exists a common element in the sunk costs of exporting and importing. Then, they examine whether or not state dependence and cross effects differ by firm size. Finally, they investigate whether state dependence and cross effects are destination-specific or not.

Main empirical results, among others, are as follows. First, there are evidence of the existence of significant state dependence and cross effects in exporting and importing. Second, the state dependence and the cross effects are found to be market-specific. This implies that it is more difficult to expand trading partners than to continue trading with the existing partners. Finally, such market-specific state dependence and cross effects are more pronounced for SMEs. The authors even find some evidence that trading with one region discourages SMEs from starting trading with other regions.

Hayakawa and Matsuura point out that the existence of more pronounced market specificity in the state dependence and cross effect implies that it is more difficult for SMEs to expand their trading partners. They go on to argue that it is important not only to support the first-timers in exporting or importing but also to encourage currently exporting or importing SMEs with just a few trading partners to expand their trading partners.

Zhang's paper, *"Productivity Evolution of Chinese Large and Small Firms in the Era of Globalization"*, examines the productivity evolution of large and small Chinese firms between 1999 and 2007, and quantifies the contribution of exporting and FDI to changes in TFP gap between small and large firms. First of all, he finds that small firms are less productive than large firms, even after controlling for a set of firm characteristics. However, he also finds that productivity gap has decreased from about 40% in 1999 to 25% in 2007, a remarkable productivity convergence in 8 years.

Next, Zhang quantifies the impact of exporting and FDI on the productivity gap and productivity convergence, utilizing Blinder-Oaxaca decomposition methodology in labor economics. In these analyses, the average log TFP difference between small and large firms is attributed to an endowment effect and a return effect. The endowment effect reflects the differences in share of exporter firms or foreign-invested firms between small and large firms, while the return effect reflects the estimated differences in exporter TFP premium or FDI TFP premium between the two groups. The estimation and decomposition results show that exporting and FDI together explain about 13.8 and 8.1 percent of the TFP gap between small and large firms in 1999 and 2007, respectively. Furthermore, it is found that the impact of exporting is driven mainly by the endowment effect while the impact of FDI by the return effect. Zhang also decomposes the difference in TFP growth between small and large firms using dynamic Blinder-Oaxaca method. He finds that exporting and FDI can explain about 23.9% of the productivity convergence between the two groups. For both exporting and FDI, the endowment change effects as well as the return change effects are found to be important channels for the productivity convergence.

Based on the results, Zhang argues that, in order to encourage the productivity growth of small firms, the government should focus more on helping small firms to become exporters and strengthening their ability to benefit from exporting. He also argues that the government should also guide more FDI into smaller firm sector as multinationals are a critical source of technology and knowledge.

Nam and Oh's paper, *"Changes in Competition of Small vs. Large Firms from International Trade"*, examines whether increased trade has differential effects on small and large firm's mark-up, utilizing plant level panel dataset in Korean manufacturing sector. Using estimated firm-level mark-up, they first provide several interesting facts. First, mark-up is higher for firms with higher market share (firm size) and for exporters. Another finding of interest is that the dispersion of mark-up distribution across firms has been reduced over time in Korean manufacturing. The issue which is most relevant for this project is whether the squeeze in the mark-up distribution over time is related to globalization. They do not find, however, any empirical linkage between the reduction of dispersion of mark-up distribution and globalization; industry-level import penetration does not have any significant effect on firm-level mark-up. In terms of policy, the authors cautions against policies to interfere with the increased competition from globalization.

Takii's paper, *"Import Penetration, Export Orientation and Plant Size in Indonesian Manufacturing"*, examines the effects of globalization on firm size and whether these effects differ between initially small and large firms, utlizing a plant-level panel dataset for Indonesian manufacturing sector. As measures of globalization, he considers import tariff, trading partner countries' tariff, import penetration and export-output ratio. Some of the interesting results are as follows. In the case of import tariff reduction, he finds some evidence that import tariff reductions decreases firm size but this effect was not statistically significant. There was no strong evidence, either, that import tariff reductions affects small firms more adversely. By contrast, in the case of import penetration, he finds strong evidence that an increase in import penetration reduces firm size. However, there was no strong evidence that this adverse effect is larger for smaller firms. He concludes that evidence do not support the fear that only relatively large firms can benefit from globalization and smaller firms are at a disadvantage. Based on these results, Takii argues, among others, that plant size is not necessarily an appropriate criterion when deciding on the extent of public support for manufacturing plants under globalization.

Aldaba's paper, *"Understanding the Relationship Between Globalization and Survival of Philippine SMEs"*, examines whether the effect of globalization on the probability of firm exit differs between SMEs and large enterprises utilizing a firm-level dataset on Philippine manufacturing sector from 1996 to 2006. As measures of globalization, she considers tariff rate, effective protection rate, foreign ownership, and export intensity. Probit model of firm exit is estimated based on the full-sample of firms as well as on subsamples of SMEs and large enterprises.

The full-sample estimation results show that tariff reduction increases the probability of firm exit while foreign ownership and higher export intensity decreases it. However, she does not find clear evidence that SMEs are more adversely affected by tariff reduction, compared with large enterprises. If at all, the results indicate that large enterprises are more adversely affected by tariff reduction, although this difference is not likely to be quantitatively large. Sub-sample estimation results reveal more interesting findings. While tariff rate and export intensity are important determinant of firm's probability of exit for both SMEs and large enterprises, foreign ownership is found to matter only in SME sample. Based on the results, Aldaba emphasizes the potentially important role of multinational enterprises in the Philippine economy and argues that the government should try to attract more FDI and strengthen the relationship between FDI and SMEs in particular.

Lee's paper, "*The Exporting and Productivity Nexus: Does Firm Size Matter?*", examines whether the relationship between exporting and productivity differs across firm size in the Malaysian manufacturing sector. A two period (2002, 2006) firm-level panel data from the Study on Knowledge Content in Economic Sectors in Malaysia is used in the study. He first asks whether the exporter productivity premium is different between large and small firms. He finds that the productivity gap between exporters and non-exporters become smaller and less significant as firm size increases. Then he asks whether the larger exporter productivity premium for smaller firms reflect self-selection or learning-by-exporting. He tests self-selection by comparing the productivity of export starters with those of non-exporters. He finds that the statistical significance of the productivity differentials between export starters and non-exporters become weaker as firm size increases suggesting, that self-selection in exporting is more important for small firms than for large firms. He tests learning-by-exporting for larger and smaller firm groups separately. He finds that, while there is no learning-by-exporting for larger firm group, there is weak evidence of learning-by-exporting for smaller (medium-sized) firm group.

Based on the above results, Lee argues that export-oriented industrialization should continue to be an important industrial policy to strengthen productivity-driven growth. In particular, he argues that policies to enhance productivity levels of small firms are likely to be very important in order to encourage them to export.

Kuncoro's paper, *"Small and Large Firm Performance Gaps in Indonesia in the Era of Globalization: Evidences from Micro-Data on Manufacturing Establishments"*, also examines whether examine of the impact of globalization on the performance gap between small and large firms in Indonesian manufacturing. He finds that opening up of Indonesian economy through market liberalization increases the gap between large and small firms in terms of productivity and wages although, over time, small firms catches up large firms at least partially. However, he finds that small firms benefits from more open trade regime, which enable them to acquire imported inputs. In addition, he discusses several factors, such as FDI, R&D, and location factors, which are likely to be important for the benefits of globalization to be realized.

Thangavelu's paper, *"Globalization and Performance of Small and Large Firm: Case of Vietnamese Firms"*, examines the horizontal and backward FDI spillover effects in Vietnamese manufacturing sector, allowing for possibly differential effects between large firms and SMEs. He finds that, while there is no evidence of horizontal FDI spillovers, there is weak evidence of FDI spillovers through its backward linkages. Estimation results for sub-groups of small and large domestic firms show that the backward spillover effect is negative for small domestic firms while it is positive for large domestic firms, although these effects are not statistically significant.

Jongwanich and Kohpaiboon's paper, *"Firm Productivity, Globalization and Global Production Sharing: Lessons from Thai Manufacturing"*, examines productivity determinants which might differ between large and small firms in Thai manufacturing, using the 2006 industrial census. The main focus is to gain better understanding the effect of economic globalization. Two aspects of economic globalization are discussed here, trade policy and global production networks. One of their key findings is that while firm-specific variables such as years of operation, R&D activities, a number of skill workers employed have positive effect on productivity, modes in which firms are integrated into the global economy like market orientation, intermediate imports and foreign partnership positively contribute to their productivity. In particular, it is found that firms operating in more restrictive trade policy register lower productivity than those in more liberal environment. Insulting firms from foreign competition through cross-border protection like tariff tends to induce producers to become ‘unresponsive’ to improved technological capability as well as requests for improvement in the quality and price of what they offer. From this project’s viewpoint, what is particularly interesting is that the negative effect seems to be much higher for large firms, perhaps due to presence of water-in-tariff occurring among small and medium firms.

With regard to the global production network, the authors find that whether small firms are disadvantaged over large firms depends on the type of production network. In the producer-driven network, small firms are disadvantaged in the sense that they need additional productivity in order to survive. By contrast, there is no such evidence in the case of buyer-driven networks. That is, firms participating in buyer-driven networks tend to have lower productivity regardless of their size.

3. Policy Implications

This project aims to better understand whether and how globalization has affected the performances of small and large firms as well as identifying policy issues needed to be addressed in order to achieve a more strong and resilient economic growth and development of East Asian economies.

As summarized, the country papers indeed provide some evidence on this, that globalization may affect size or performance of firms. The impact of globalization moreover could be different depending on the size of the firms. Evidence gathered from the country studies however is not able to clearly point out the direction of the impact, i.e. whether or not globalization widen or narrow the performance gap between small and large firms. The gap is found to have narrowed over the time in the case study of some countries while it is not clear in the experience of the other countries. Nevertheless, the fact that globalization has made performance of firms in some countries to diverge is sufficient to flag policy makers on the potential adverse impact coming out from globalization. In this respect, over the time the country may be locked in a situation where there is very unequal distribution of firm by size. In this situation, the different in firm performance by size is also usually very large which in turn will create some issues in output and welfare generation.

It is important to note however that some studies in this project found the gap in the performance between large and small firms has narrowed over the time and this could be attributed to some extent by globalization. As in the case study of manufacturing firms in China, for example, export participation and FDI are able to explain some portion of the reasoning for the convergence in the productivity performance between large and small firms in the country. This is a positive impact and, for policy makers, this sends a signal that there is a merit to engage in, as well as deepen the engagement with, globalization. One plausible outcome coming out from this scenario is a situation where large and small firms coexist but with very small productivity difference. In other words, smaller and larger firms are more or less the same in terms of their competitiveness in doing business. This will be a favorable situation because there will no be issues in output and welfare generation coming out from large and small firms.

The studies in this project show and further suggest that the most obvious way to increase the performance of smaller firms which inherit a scale disadvantage is by engaging in export and maximizing the productivity spillovers by multinationals (MNEs). The latter could take many forms, one of which is direct involvement of smaller firms as suppliers of the MNEs. As uniquely presence in Southeast and East Asia in general, MNEs typically operate either as or in networks of productions with other firms/MNEs in other countries but within the region (i.e., commonly known as the East Asia production networks). As the case study of Thai and Philippines manufacturing show, engagement in supplying to MNEs operating in the production networks proved to be able to increase the growth, survival and productivity of SMEs in these countries. Meanwhile, engaging in exports evidently is able to increase the productivity performance of SMEs, as indicated in some of the country papers. In fact, exporting seems to be one of the important ways to increase the productivity of smaller firms. As shown in the case study of manufacturing firms in Malaysia for example, engaging in exporting by smaller firms can be explained more by the theory of self-selection rather than by learning by exporting theory. Selfselecting in to exporting arguable requires a firm to do more effort to increase its productivity rather than that implied by learning by exporting theory.

Performance of smaller firms may also improve as a result of increased pressure of competition commonly exists when a country is connected to or becomes more open to global economy. As shown by the case study of Korean manufacturing, the variability of mark-up across firms was reduced over the time consistent with deeper integration of Korean economy to global economy. In this setting, smaller firms are forced to improve their performance in order to survive which translates to better performance for overall group of the firms. Competition pressure works more from demand side. Meanwhile, from the supply side, greater imports in a country as results of more opened trade regime could improve the performance of smaller firms by providing firms, including the smaller ones, with more choices of production inputs; this is indicated by one of the papers on Indonesian manufacturing.

Notwithstanding the evidence on the positive impact of globalization on the performance of smaller firms, it remains a fact that these firms has a scale disadvantage that inherently put them in a different (lower) productivity level than their larger counterparts. Therefore, it is important for government to facilitate smaller firms to be able to read the benefit offered by globalization. In terms of exporting, this can be done by providing assistance or facilitation that reduces the sunk cost of exporting. As shown by one of Japanese country studies, providing information about foreign market through the relation of firms to banks that lend them loans proved to be beneficial in this case. Assistance could also be given more by ensuring conducive the general business environment. This includes the strategy to make investment regime open and be friendly to foreign investors, considering potential positive productivity spillovers coming from MNE activities.

Overall, results of the studies in this project provide useful information for policy makers in respect to managing the impact of globalization on performance of firms and, more importantly, to address the issue of potential diverging effect on the size distribution of firms. The studies seems to convey a message that globalization could indeed improve the performance of smaller firms provided there is a careful policy management, and the policy being managed needs to have a clear objective of maximizing the potential or opportunities from globalization by providing the right and balanced facilitation measures.