GSAPS  THE SUMMARY OF DOCTORAL THESIS  
Patterns and determinants of export diversification in  
China, Japan and Korea:  
- A study using highly disaggregated data -  
4009S318-4  Ferdous, Farazi Binti  Chief Advisor: Prof. Urata Shujiro  

Keywords:  
Export Diversification, Intensive and Extensive Margins, Trade Costs, Disaggregated Data  

Most empirical works on export diversification have focused exclusively on positive trade flows. Recent studies of export diversification have revealed a wealth of new stylized facts. The trend of using increasingly disaggregated data discovered surprising patterns of export entrepreneurship among the countries. Contemporary studies in international trade have focused on changes in trade patterns driven by countries export in goods that they had not exported before. These sorts of changes are referred as changes on extensive margin or the new goods margin. At the same time, changes in intensive margin are changes in exports of goods that were previously exported. This study focuses on these two measures of diversification particularly in relation to China, Japan and Korea and their major twenty trade partners.  

In order to understand export diversification, it is important to acknowledge its microeconomic determinants. The flawless dataset to deal with export diversification issues from a microeconomic point of view would be firm-level export data for each country pair. Unfortunately, such data is not available to researchers, so it is a common practice to use the highest level of internationally comparable disaggregated country level trade data. The 6-digit Harmonized System (HS) from UN Comtrade database is one of the most reliable sources for this kind of trade data. This study extracts export data from the Trade Map of International Trade Center (ITC), based on UN Comtrade, from 2001 to 2011.  

Previous literature on East Asian export diversification did not thoroughly study the intensive and extensive margins of export in China, Japan and Korea. The highly disaggregated data is used in this research in order to pick up the extensive margin of export, i.e. the range of products that one country export to another. At this level of disaggregation there are many ‘zeros’ in the trade matrix due to the fact that countries export only a subset of goods to each partner. With the help of recent trade models as Melitz (2003) the existence of zeros in the trade matrix can be related to the variable and fixed trade costs. The new-new trade theories suggest that the likelihood of observing a zero in the trade matrix increases with the level of fixed trade costs.  

Helpman et al. (2008) argue that estimates of the impact of trade resistance measures or trade costs provide important information. Countries should focus on discrete changes in which bilateral trade liberalization and other trade cost factors facilitate the transformation of some goods from non-traded to traded status. For this reason, it is important to obtain reliable estimates of effects of those trade barriers (trade costs) or trade enhancers (FTAs) on international trade flows.  

Existing literature that consider various cost factors as barriers to trade do not specifically cover individual country cases of China, Japan and Korea. In addition, they do not cover time series or panel data analysis for the barriers to trade and export diversification. This study estimates the effect of export, import and starting business cost on extensive and intensive margins of export. These cost data are compiled from World Bank Doing Business database available from 2005 to 2011. Under the circumstances, this research is expecting to contribute to the international trade literature by including the study of export diversification and trade cost relations in China, Japan and Korea.  

The study finds significant changes in the diversification pattern of China, Japan and Korea. Diversification is measured by the number of exported products or the extensive margin of export; an increase in the export numbers indicates export diversification. The results show that China and Korea are increasing the average number of export items to their major twenty trade partners. Nevertheless, Japan shows a decreasing trend of export diversification with the partner countries. This finding thus supports the previous literature that countries diversify at the beginning of their economic development and then concentrates on export products. At the same time, the extensive and intensive margins of export share are concentrated in some few sectors like machinery, metal and related products, minerals and chemicals. Calculation of new goods reveals that growth in export is found to be mainly driven by intensive margin, while the contribution of extensive margin to export growth is rather limited.  

This study hypothesized that trade will be most intensive among countries with similar demand structure due to a large overlap of production and consumption patterns; and this overlap of demand can be seen in terms of product variety or diversified trade. The results support the fact that China’s export diversification does not depend on the similarity of income with the destination economy. On the other hand, Japan’s existing export or the intensive margin of export diversification significantly depends on the reducing trend of the income gap with the partner economy. Interestingly, Korea’s export diversity is significantly affected by the increasing income gap with the partner economy. All findings using aggregate level of export data (total number of exports and total value) support the fact that Korea, Japan and China export more goods of the new and existing category to countries with larger income. Trading with Asian economies induces export diversification for Japan and Korea but not for China. However, exchange rate fluctuations show strong influence on the export diversification in total values and in number of goods for all three exporters.  

The study also finds evidence that supports the hypothesis that greater variety in export is associated with reduction of export costs. For example, trade liberalization through effective FTA reduces export cost and induces export diversification. Furthermore, reduced export costs through improved trade facilitation helps to increase export varieties. Distance, FTAs and trade costs significantly affect export diversification and are always important determinants for export diversification at any level of export (total and HS 6-digit) as found in the study.  

When using disaggregated data the study confirms that FTAs increase the likelihood of exporting new varieties of export to the trade list of these countries. On the other hand, reduction of export cost at home and import cost at destination market helps to induce new varieties in the export list by encouraging new entrepreneurs in the export market. These results of trade and market entry costs provide an indication of the impact of the reduction in trade costs in creating new varieties. This effect is larger for Japan than that of Korea and China. This helps to explain the reduction of number of zeros in the export matrix. Therefore, the study results show that trade costs have significant impact on overall diversification of exports which supports the study hypothesis that export diversification in both margins are influenced by all trade barriers and enhancers, for China, Japan and Korea.  

Reference  