6. Conclusion

This report analyzed trends and patterns in rejections of agri-food exports from East Asian countries to the Japanese and other key international markets. While often overshadowed by the size of manufacturing exports, agri-food exports from East Asian countries are still substantial. In 2010, East Asian countries exported US$149 billion worth of agri-food exports, which is similar to the value of exports from Latin America. However, some of these exports were rejected at the destination because of non-compliance to food safety regulations.

Among the 10 countries with the highest number of such rejections in the Japanese market, five are from East Asia, including China, Viet Nam, Thailand, Republic of Korea, and Indonesia. Among the agri-food products rejected at Japanese borders, "fish and fishery products" and "fruits and vegetables" are rejected most frequently. Reasons for such rejections vary. The most common root causes of import rejections by Japanese authorities are bacterial contamination, inadequate hygienic condition/controls, and the presence of pesticide residues, mycotoxins, and additives.

When looking at the rate of rejections per US$ billion of imports (an indicator that is termed unit rejection rate) for Asian exporting countries, food products originating from Japan, Republic of Korea and the Philippines are among the most frequently rejected in the Australian market. In the EU market, China, Thailand and Republic of Korea are among the countries with the highest number of rejections. In the United States market, Hong Kong (China), Republic of Korea, Singapore, Viet Nam and China have rather high rejection rates. So, interestingly, not only lower-income countries but also relatively higher-income countries such as Japan and Republic of Korea perform poorly in some markets.

There is also variation in the predominant reasons for rejection across the four markets analyzed here. In Australia and the United States, non-compliance with labelling requirements results in significant numbers of rejections while Japan does not reject for labelling reasons and the EU only makes relatively few rejections on this basis. In contrast, bacterial contamination is the most prominent reason for rejections in Japan. Rejections caused by inadequate hygiene conditions are significant in the United States.

These rejection reasons all point to certain kinds of problems along the supply chain and the report gave special attention to four commodities from two countries: frozen vegetables and eels from China; and *pangasius* and shrimp exports from Viet Nam. These case studies were chosen because they are significant export commodities for these countries and, at the same time, face difficulties in clearing inspections at ports.

One finding that clearly came out from looking at these four commodities and their supply chains is that export activities in these countries are increasingly vertically integrating. This is because to meet the standards set by importing countries (especially those of advanced countries), exporting firms need to put in place some kind of traceability system so that they can identify where the problem occurred and how to deal with such problems when faced with import rejections. Vertical integration facilitates such flow of information.

One implication of this trend to vertically integrate is the compartmentalization of these industries into export-oriented and domestic-oriented segments either by the necessity of the market force or by the regulations imposed by the government as in the case of China. Those that are export-oriented are typically led by large firms that can invest in their own quality control and inspection equipment. They also tend to contract with large farmers for their inputs and provide technical assistance if necessary. In contrast, domestic-oriented firms do not have such capacity to strictly control the quality of their products to the level required by importing countries. Thus, the industry is bifurcating: one mainly composed of large firms (and farms) that are producing higher quality food meant for the export market; the other composed of smaller firms (and farms) that are mainly oriented towards the domestic market with varying quality.

While a certain degree of vertical integration may be unavoidable, more focused attention should be given to smallholder farmers so that these small and medium establishments can more easily and seamlessly integrate into global supply chains. In addition, for certain commodities such as shrimps, the small size of farms is necessary as a risk mitigation measure. Furthermore, from a poverty reduction point of view, it is vital to improve the capabilities and productivity of small and medium-sized firms and farms because they provide valuable employment opportunities in rural areas.

To improve the capacities of small and medium-sized firms and farms, filling the information gap is of highest importance. The case studies in these two countries reveal that throughout the supply chain there are still knowledge gaps among different players with respect to the proper usage of agricultural chemicals and medicines and the gap seems to be largest upstream, i.e. among the original producers, especially smallholder farmers. For cultured aquatic products, in addition to proficiency in

dealing with medicines, sufficient knowledge and proper understanding of feeds are also required. To improve upon this knowledge aspect, two efforts need to be undertaken. The first is to raise awareness among farmers and processors on the proper usages of agricultural chemicals, medicines, and feeds. Such effort needs to be coupled with proper technical assistance so that farmers can readily apply their knowledge in practice. In addition to the awareness raising efforts, the distribution of these chemicals, medicines, and feeds needs to be tightly controlled and recorded more stringently to enable traceability. Furthermore, this kind of efforts should not be restricted to certain sectors but should be applied to a wider variety of commodities, if applicable, to allow rotation of crops or aquatic products to be cultured and to prevent negative spillovers coming from other farming activities conducted nearby.

Partly motivated by the requirements coming from the export sector and partly to improve the quality of food available domestically, both Chinese and Vietnamese governments are putting in place stricter domestic standards regarding agricultural and food products. This move is more visible in China where a number of food related scandals occurred lately. In general, as income rises, the demand for safer food will only increase in any country. The key is to put in place action plans and measures to improve the quality of agricultural and food products early on in the development stage, so that even smallholder farmers can adjust their production processes to meet higher standards in both domestic and international markets as the country develops. Without such efforts, small-hold farmers will be further left behind which could potentially lead to an increase in inequality between export- and domestic-oriented sectors, and also between rural and urban areas.

Some markets (notably the EU and the United States) put emphasis on obtaining internationally recognized certification (e.g. to ISO or HACCP standards) and this is becoming a necessary condition to export (although not sufficient to guarantee successes in exports). These certificates work as signaling devices at the processing stage. While difficulties in obtaining such certificates differ across Asian export countries, public assistance to firms may be necessary.

Smaller firms find it difficult to continuously scan and gather information on the required rules and standards of importing countries, especially when these rules and standards are subject to frequent changes. Industrial associations or similar organizations should have enough capacities to follow the trends in these standards. What is important is that such effort should include not only notifying concerned actors on the changes in the rules and standards ex post facto, but also to let these players know of anticipated changes in these standards so that they have enough lead time to prepare until changes take effect.

Finally, as the case of China illustrates, the presence of foreign direct investment often provides great benefit to the development of the local industry. Multinational corporations (MNCs) typically have enough experience and capacity to meet the requirements set by importing countries. In addition, they tend to provide necessary technical assistance to local producers so that their products can meet prevailing trade standards. Through these kinds of vertical technology transfer, the competitiveness of local industries can be greatly enhanced. Thus, in addition to strengthening the capabilities through domestic efforts, liberalization of foreign direct investment in this sector could be pursued simultaneously.

Future challenges

Similar to manufactured goods, agri-food trade is increasingly organized within global supply chains that involve multiple players from different countries. In order to ensure success in export markets, all players along the supply chain must comply with the required standards and regulations. Awareness of food safety is especially needed at farm level. The quality of initial inputs provided by farmers will influence the quality along the supply chain. No matter how good the supply chain is, it is only as good as its weakest link (Kremer 1993). However, looking at the data used in this report, it is quite apparent that some countries (and regions) were more successful in meeting trade standards than others. Similarly, some commodity chains seem to fare better than others. Comparative studies of supply chains of a certain commodity across different countries and regions could lead to better understanding of why some countries are successful and others not. Further studies on value chains of various commodities are needed to shed light on some of the factors that are associated with better management of the supply chain and better compliance with public regulations.

The rejection data analyzed here represent only the tip of an iceberg of potential non-compliance issues. This is because the import rejection data capture only instances of non-compliance with public regulations at the time of export. More rejections can potentially occur along the supply chain, including in business-to-business transactions. This brings up the importance of private standards in addition to the public regulations which have been given primary attention in this report.

In fact, the role of private standards in governing and shaping global supply chains has grown rapidly in recent years. Obtaining certificates to well-known practices such as HACCP and internationally recognized voluntary public standards (e.g. ISO standards) are merely necessary conditions to operate in this industry. In addition to these, more and more firms are required to obtain other certificates, often related to private standards, to get or maintain access to global supply chains. Such private standards often build upon and go beyond international standards and public regulations and can as well cover other issues including environmental sustainability or social responsibility. The emergence of private standards stems primarily from growing consumer demand for certain product characteristics or production processes, particularly in advanced countries. This is adding a further layer of complexity to enter these export markets, especially when there are numerous similar yet different private standards that are in existence and that all involve different auditing, conformity assessment and certification procedures. Those firms and farms engaging in export activities need to be aware of these standards and build up enough capacity to comply with some of these private standards to ensure their success in export markets.