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論文題目

Impacts of Trade Liberalization on Agricultural Trade, Growth, and Poverty in Mongolia
(モンゴルにおける貿易自由化の農業貿易、成長および貧困への影響)

This dissertation aims to assess the impacts of trade liberalization and related complementary policies on agricultural trade, growth, and poverty in Mongolia. As majority of the poor in Mongolia live in rural areas, engaging in livestock herding activities, agricultural development has great potential to reduce poverty. Moreover, agricultural trade accelerates agricultural development more than domestic markets by bringing cash income and creating jobs. Meanwhile, the contribution of agriculture in trade and GDP is declining over time although Mongolia has a comparative advantage in producing livestock products. Therefore, one of the biggest challenges that Mongolia faces is to improve living standards of rural poor while keeping up with the trade reform procedures at the international level.

To achieve its objective, the dissertation first assesses impacts of different types of trade liberalization on growth and poverty by adopting a macro-micro simulation approach that combines the Global Trade Analysis Project (GTAP) computable general equilibrium (CGE) model with household survey data. The macro-micro approach has an advantage over a standard CGE model in studying

distributional impact of trade liberalization, because it takes into account heterogeneities within household groups and improves the realism of modeling. The newly released GTAP database, version 8, which includes Mongolia as an independent region for the first time, and the Mongolian Household Socio-Economic Survey (HSES) 2007–2008 database allow the extension of evidence on impacts of trade liberalization on growth and poverty to Mongolia. In the macro-micro model, changes in household welfare are computed across 11,172 households sampled in HSES 2007–2008. Results demonstrate that impacts of trade liberalization vary depending on its type. In the case of Mongolia, bilateral trade liberalization with China and Russia increases growth and reduces poverty, whereas multilateral reform is likely to have a negative impact. Moreover, household characteristics determine whether they gain or lose from the trade reform.

However, trade policy related distortions are not the only barriers to trade. Even if substantial trade liberalization removes all trade policy-related barriers, there still exist obstacles to trade such as transportation costs, information costs, and environmental costs. Therefore, the dissertation quantifies total trade costs for agricultural trade, and evaluates how the reduction in trade costs complement effects of trade liberalization using a combination of two approaches. First, an ad-valorem tariff equivalent of overall trade cost is analytically derived from the micro-founded gravity model. Then, the measure of trade costs is used to assess the impact of trade costs on agricultural trade and welfare in Mongolia, by modifying a multi-market, industry-oriented spatial partial equilibrium model. Results show that agricultural trade costs in Mongolia is decreasing over time, but they are still significant in size. The effect of total trade costs is much larger than just tariffs and a reduction in trade costs increases trade and improves welfare.

Finally, greater exposure to international trade could bring about agricultural productivity growth through improvements in technical efficiency and technology diffusion. This process could help Mongolia to exploit its comparative advantage in livestock products and increase exports of these products. Thus, to measure the current level of technical efficiency of the agricultural sector in Mongolia, and determine its sources, the stochastic production frontier approach was applied in the case of livestock sector in Mongolia. Using the results from the stochastic frontier analysis, changes in total factor productivity (TFP) and its components are computed. This study contributes to empirical literature on the relationship between trade openness and technical efficiency with evidence from the Mongolian livestock sector. Results show that trade openness is an important determinant of efficiency improvement in the livestock sector. TFP is increasing but at a declining rate.

Results of the dissertation provide some policy recommendations for Mongolia to achieve more equitable growth from trade liberalization. As trade reforms create both winners and losers, complementary policies that would help the poor to overcome the adverse effects of liberalization are necessary. For example, macroeconomic stability policies could mitigate short term adjustment costs. Moreover, trade facilitation policies and investment in infrastructure may accelerate benefits of trade liberalization by reducing trade costs. Finally, agricultural research and extension services would help to improve declining agricultural TFP growth.