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Impacts of ASEAN Agricultural Trade Liberalization on ASEAN-6 Economies and Income Distribution in Indonesia

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Acronyms and abbreviations

APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CBS	Central Bureau of Statistics
CEPT	Common Effective Preferential Tariff
CGE	Computable General Equilibrium
DDA	Doha Development Agenda
FAO	Food and Agricultural Organization of the United Nations
FTA	Free Trade Area
GEL	General Exclusion List
GDP	Gross Domestic Product
GTAP	Global Trade Analysis Project
ICT	Information and Communications Technology
IL	Inclusion List
ISI	Import Substitution Industrialization
MFN	Most Favoured Nation
NTBs	non-trade barriers
OECD	Organisation for Economic Co-operation and Development
TEL	Temporary Exclusion List
ToT	Terms of Trade
WTO	World Trade Organization

Executive summary

This research paper intends to analyse: (a) the impacts of ASEAN trade liberalization on the macroeconomy variables – gross domestic product (GDP), Terms of Trade (ToT), balance of trade, inflation and real wage – and agricultural industries (output, exports and imports) in the ASEAN 6 countries (Indonesia, Malaysia, the Philippines, Thailand, Singapore, and Viet Nam); and (b) the impact of trade liberalization on income distribution in Indonesia. A multi-country and multi-commodity computable general equilibrium (CGE) GTAP model has been used as the main tool of analysis.

In order to analyse the detailed impact on the agricultural sector and income distribution in Indonesia, the GTAP model is linked with the one-country Indonesian General Equilibrium Model. To analyse the impact of trade liberalization by a group of countries, all relevant policy interventions (whether export tax, export subsidy, import tax or import subsidy) in each country have been removed in the GTAP model.

Three scenarios of ASEAN trade liberalization have been considered: prevailing zero tariffs for all agricultural products within the ASEAN 6 countries (scenario 1); trade liberalization for all agricultural products except sensitive and highly-sensitive products (scenario 2); and trade liberalization as in scenario 1 complemented by trade facilitation through an increase of 10 per cent in the finance and business sectors (scenario 3).

The results show positive impacts for scenario 1 and scenario 2 in all ASEAN members except for Indonesian real GDP. The Indonesian trade balance, nominal GDP and TOT experience positive impacts while Indonesian real GDP does not change (almost zero per cent). Generally, of the ASEAN 6 countries, Indonesia experiences the smallest improvement in welfare.

Under scenario 3, ASEAN 6 countries would experience welfare improvement, particularly Singapore. The impact of ASEAN agricultural trade liberalization would increase output for the ASEAN member countries as a whole. Nevertheless, scenario 3 is found to worsen the trade balance in the majority of ASEAN members.

When zero tariffs are applied to agriculture in all the ASEAN member countries, Indonesia experiences almost zero change in real income. In contrast, when zero tariffs come in combination with improvement in trade facilitation, nominal and real income becomes positive for each household category.

Welfare of almost all household increase slightly due to ASEAN trade liberalization in all simulations, with the smallest increase (almost zero change) occurring in scenario 1. Protecting some sensitive and highly-sensitive products from liberalization is still necessary in order to raise household welfare, especially among the agriculture household categories.

Key words: ASEAN, trade liberalization and income distribution.

I. Introduction

A. Background

There are several bilateral and regional agreements on trade liberalization, such as the Singapore-China Free Trade Area (FTA), North American FTA, and the Association of Southeast Asian Nations (ASEAN) FTA. In the case of ASEAN, the latest Framework Agreement follows the ASEAN Concord II (also known as Bali Concord II) in 2003. The end-goal of economic integration is establishing the ASEAN Economic Community as outlined in ASEAN Vision 2015. Consequently, there is a free flow of goods, services and investment, a freer flow of capital as well as equitable economic development, and reduced poverty and socio-economic disparities in the ASEAN region (Lloyd and Smith, 2004). The ASEAN Concord II further declares that the ASEAN Economic Community will also establish the region as a single market and production base.

Agriculture-based industries are included in the 11 priority sectors agreed on under ASEAN economic integration. The framework agreement for the integration of priority sectors, which was signed at the tenth ASEAN Summit, includes the scope, modalities, and timelines necessary for accelerating the integration of 11 sectors: agro-based products, air travel, automotives, electronics, fisheries, health-care products, rubber-based products, textiles and garments, information and communication technology (ICT), tourism and wood-based products (Austria, 2004).

Trade liberalization has several impacts including: (a) a decrease in imported goods prices due to relaxation and reduction in tariffs; (b) an increase in consumer demand due to low prices of goods and services; and (c) an increase in domestic competitiveness in international markets due to tariff reductions across national borders. This situation clearly will create opportunities for exporting and importing. However, some experts have criticized trade liberalization by arguing that it potentially damages domestic production and food security as reductions in tariffs will cause a decline in the relative price of imported goods and an increase in imports.

Most ASEAN countries depend on the agricultural sector as a major source of gross domestic product (GDP). For example, Indonesia has an agricultural-based industry contributing around 15 per cent of total GDP and that depend largely on small-scale farming systems. Therefore, it is interesting to analyse specifically what the impact of ASEAN trade liberalization will be on ASEAN agricultural industries. In Indonesia, particularly, some 60 per cent of employees work in the agricultural sector and live in rural areas. Therefore, it is important to analyse the impact of trade liberalization on income distribution, especially in the rural areas, as an indicator of poverty incidence.

Indonesia, like other developing countries, is a small nation in terms of its position in international trade activities. It is implied that Indonesia cannot influence world market prices. As a price taker, the fluctuations of world prices will affect the performance of export commodities. The capability of Indonesian commodities to face regional or global competition is still questionable, especially in the case of agricultural products that greatly depend on small-scale farming systems; the main actors in agricultural activities, particularly in production, are categorized as smallholders who live in rural areas. Most smallholders are

facing poverty and achieving stable agricultural commodity prices has become a key issue in attaining the ultimate development goals of Indonesia, as in other such countries.

B. Research questions

The implementation of ASEAN economic integration is expected to affect the performance of ASEAN exports and imports as well as other macroeconomic indicators such as GDP and inflation. Therefore, to agree on ASEAN economic integration, ASEAN members should set relevant policies so that achieving the intended targets will have a positive result. Moreover, in 2010, members of AFTA will be expected to apply zero tariffs while ASEAN economic integration will achieve the ASEAN vision in 2015. One of the priority sectors that will feel the impact of ASEAN economic integration is agriculture.

The investigation of the impact of liberalization is becoming an important issue as most ASEAN members still rely on this sector and because the sector provides a large percentage of employment. In addition, trade liberalization is expected to affect income distribution in ASEAN member countries, particularly Indonesia. As Indonesia is struggling to reduce its income disparity, it is therefore becoming very important for this aspect to be studied in depth. Based on these factors, the following research questions can be raised:

- What is the impact of ASEAN trade liberalization on the macroeconomics and agricultural sector of each ASEAN country?
- What is the impact of ASEAN trade liberalization on income distribution in Indonesia?

C. Research objectives

The ultimate objectives of the study are:

- (a) To develop an Indonesian CGE model and establish its link to the global CGE model;
- (b) To analyse the impacts of ASEAN trade liberalization on the macroeconomy – GDP, Terms of Trade (ToT), balance of trade, inflation and real wages – and agricultural industry (such as paddy rice and wheat output, and exports and imports of ASEAN countries); and
- (c) To analyse the impact of trade liberalization on income distribution in Indonesia

D. Scope of the study

The study is focused on the impact of trade liberalization in the ASEAN 6 (Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam) because details of these six countries are available in the GTAP database and because they contribute a large proportion of ASEAN trade, including in agricultural trade.

II. Literature Review

A. Previous studies of trade liberalization

A number of previous studies have been carried out by researchers on the impact of trade liberalization on macroeconomics and income distribution, either of individual countries or a region. Their findings, however, vary in terms of size or magnitude. According to the Organisation for Economic Co-operation and Development (OECD) (2006), the most effective way to make trade work for development and poverty reduction is for countries to agree on significantly improved market access under the Doha Round of the World Trade Organization (WTO).

Ambitious trade liberalization can generate more gains for developing countries than any other area of international economic cooperation or development assistance. But while access to OECD markets is clearly a key element in developing countries' productivity growth, trade between developing countries is also vital. OECD states that the potential benefit from freer South-South trade may indeed be at least as large as the gains that developing countries can obtain from better access to rich countries' markets (North-South trade). This not only underscores the importance of a successful conclusion of the current round of WTO negotiations, but also the significance of active participation by developing countries.

In a broad region, a study of the impact of liberalization was carried out by Oktaviani and Drynan (2000). They investigated the impact of APEC trade liberalization on the Indonesian economy and its agricultural sector. An Indonesian Forecasting Model was developed based on the ORANI-F general equilibrium model for Australia. APEC trade liberalization was found to be generally beneficial in enhancing growth in most APEC members in the short term and even more so in the long term, except for North America. For a given tariff rate change scenario, the impacts of the two cases of trade liberalization were found to be generally in the same direction. The impacts of full APEC trade liberalization are more positive (or less negative) than the impacts of trade liberalization by only for the APEC developed countries. Indonesia gains more if it precisely eliminates the implied barriers existing after trade liberalization by other APEC members than if it under-adjusts or over-adjusts. Furthermore, Indonesia benefits from participating in trade liberalization, even if other developing countries do not participate, although the effects are small.

The results suggest that the Government of Indonesia needs to avoid over-reductions in tariff barriers if it seeking development focused on increased investment and increased private consumption. Indonesia's comparative advantage appears to lie with producing and exporting raw primary products rather than in processing them. Regardless of the reason for the differences, these industries have an interest in seeing full APEC trade liberalization rather than more limited liberalization. It will therefore be beneficial for Indonesia to pay more attention to develop the agricultural processing sector.

The implications of full APEC trade liberalization on a preferential basis and liberalization restricted to ASEAN member economies between 1995 and 2000 was analysed by McKibbin (1996), using a dynamic multi-sector global model called the Asia-Pacific G-Cubed Model (APGCUBED). The study focused on the role of international capital flows, expectations and physical capital accumulation in determining the size and distribution of income gains from this ambitious programme of trade reform. It was found that the largest

gains for participating economies were realized by full non-preferential liberalization. Preferential liberalization just between APEC economies by discriminating against non-APEC economies would yield only two thirds of these gains.

APEC trade liberalization can have significant effects on international capital flows, although this mechanism affects real exchange rates and trade flows. Allowing for the adjustment, international capital flow shows that some common perceptions in industrial economies of the effect of opening up to trade with developing economies need to be re-evaluated.

A positive impact by APEC trade liberalization was found by Chan and Nugent (1998). Their study showed that APEC trade liberalization could be quite important in terms of trade and income growth, both of APEC countries and the world. Using a simple econometric model of bilateral trade flows based on country size, the study showed that the removal of tariff barriers would have the greatest impact, increasing APEC imports (and presumably exports) by more than 13 per cent. Eliminating NTBs would increase APEC imports by an additional 5.5 per cent.

Another important source of benefits from APEC liberalization would be provided by stimulating the liberalization of barriers to imports in the rest of the world. Indeed, if such liberalization by the rest of the world was also complete, APEC imports would rise by an additional 4.1 per cent. Rest-of-the-world imports would also be increased by APEC liberalization, but the greatest expansion of such imports would come from liberalization by the rest of the world.

With regard to the impact of trade liberalization on poverty, one study of this aspect was carried out by Khan (2005). He used a dualistic, compact and “generic” (macroeconomic) computable general equilibrium (CGE) model specially constructed for the purpose of investigating the implications of trade liberalization for poverty reduction in South Asia. The specific generic model for South Asia, incorporating dualism and rural-urban and urban-rural migration within a Harris-Todaro framework, revealed a number of specific connections between trade liberalization and poverty reduction. Within this particular CGE model, the policy experiments showed that trade liberalization in the South Asian region could lead to further poverty reduction.

In the ASEAN area, a study of the impact of trade liberalization was carried out by Nguyen (2002). He showed that for more than a decade, Viet Nam had followed a number of unilateral as well as multilateral moves to free the trading sector, including measures directed

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