The economic impacts of trade liberalization and factor mobility: the case of the Philippines

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Received 1 May 1997; received in revised form 6 June 2000; accepted 19 June 2001

Abstract

This study uses the Global Trade Analysis Project (GTAP) model and database to investigate the effects of trade policies in conjunction with factor mobility on the Philippines economy. A total of six experiments were conducted: three trade strategies, each with two degrees of factor mobility. The conclusions are: (1) factor mobility results in a more efficient use of endowments in the economy; (2) lowering trade barriers shifts the pattern of production toward the most competitive sectors; and (3) lowering trade barriers leads to a more efficient distribution of endowment factors among sectors of production, which in turn results in a higher level of real output.

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Keywords: Trade liberalization; Factor mobility; GTAP model

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1. Introduction

In the early 1980s, after three decades of pursuing industrialization based on an import-substitution strategy, the Philippines government was faced with a chronic rural poverty and high unemployment rates, low productivity of agriculture and industry, a large amount of foreign debt (which resulted in the 1983 debt crisis), and lack of competitiveness in the international markets. Because of these problems and domestic and foreign pressures, the Philippines’ government embarked on a gradual trade liberalization program in 1981 and began to undertake reforms aimed at minimizing trade restrictions. The goal was to reallocate the country’s resources to increase domestic industries efficiency and competitiveness in the international markets.

Despite the government’s implementation of these trade policies, there has been no clear indication that the anticipated improvement in income distribution and economic growth has occurred (Gaspay, 1993). In fact, the downward trend in real per capita gross national product that began in 1960, continued steadily until 1993 (Intal & Power, 1990). In addition to the doubtful effectiveness of these trade policies in improving growth, these programs also had the potential to alter cross-sectoral competitiveness within the Filipino economy. The new tariff structure, which was biased against the agricultural sector relative to industry, resulted in an increase in the Philippines agricultural imports and a subsequent decrease in domestic agricultural prices. This, in turn, discouraged production and lowered welfare.

The objective of this study is to analyze the impacts of the Philippines trade policies on resource allocation among various economic sectors, taking into account the degree of factor mobility. The Philippines is chosen as a case study due to the close links between its developmental strategies and its evolving trade-policy approaches. Although a number of previous studies have examined the effects of trade policies on natural resource allocations, this is the first study that takes into account the effects of the mobility of production factors in the analysis.

2. The model and policy simulation schemes

In order to investigate the economic impacts of the interactions of natural resource endowments and mobility with trade policies in the Philippines, the Global Trade Analysis Project (GTAP) model (a computable general equilibrium model for an open economy) is used (Hertel, 1995). The GTAP model is modified for this study to examine the effects of various trade policies in conjunction with different degrees of factor mobility on the Philippines economic performance.

The productive activity for the Philippines model is represented by ten sectors: rice, other agriculture, livestock, forestry, fishing, other resource-based industries, food processing, light manufacturing, heavy manufacturing, and services.
To analyze the interactions of resource endowment mobility with trade policies, three scenarios are examined: (1) restricted trade based on the 1980 tariff system, (2) partial trade liberalization based on the 1986 tariff system, and (3) complete trade liberalization. In each scenario two cases are considered: (A) perfect factor immobility, and (B) perfect factor mobility. All together, they make a total of six experiments. The effects of changes in trade policies on the economic growth, trade structure (in terms of the value of total imports and exports, and terms of trade), investment, sectoral output, price levels, household income, and welfare are analyzed.

Based on the neo-classical theory of trade it is expected that the economic growth would be higher in the final case where endowment factors are perfectly mobile and government follows a complete trade liberalization policy. Moreover, in each scenario, the association of perfectly mobile factors (Case B) with a better economic performance is expected. As the endowment factors become more mobile, their allocations among sectors is expected to become more efficient, leading to higher production levels.

3. Summary of results

The simulation results indicate that factor mobility does play a role in the outcome of trade policy. For a given trade policy, a higher degree of factor mobility results in a higher economic growth rate and an improvement in overall economic welfare. The findings of this study support the statement that sustainable recovery in Asia should include freer factor mobility, which results in economic growth by promoting productivity. Such increased factor mobility allows for increases in efficiency and reduces the economy’s reliance on rapid capacity increases financed by unhealthy debt levels to maintain growth (Fischer, 1999).

The results of this study are also in accordance with the neoclassical trade theory that lowering trade barriers shifts the pattern of production towards the most competitive sectors, which in the case of the Philippines are natural resource-based industries and agricultural sectors. Lowering trade barriers is expected to lead to a more efficient distribution of endowment factors among sectors of production, which in turn may result in a higher level of real output. Nevertheless, the outcome of the experiments indicates that even though free trade results in a better performance of the economy, partial trade liberalization with a biased tariff system (against agriculture) harms the economy and lowers welfare.

4. Policy implications

The results of this study indicate that in the process of foreign trade liberalization, the economic development outcome would improve if the government narrowed the differences in tariff cuts across sectors while moving towards complete
trade liberalization strategy. Moreover, this study shows that a higher level of factor mobility results in a better performance of the economy. There are several studies on the positive effects of capital mobility on economic development. Shaw (1973), McKinnon (1991), and Fry (1988) emphasized the importance of the financial intermediation (which leads to increased capital mobility) in economic growth through increasing the efficiency of investment in less developed countries.

Given the tie between factor mobility and economic development, it is important that governments adopt policies that increase the availability of agricultural credit with such terms that are affordable by small farmers. Rains, Stewart, and Angeles-Reyes (1990) recommend that in order to have higher economic growth rates, governments should encourage the development of credit institutions to finance small-scale activities, agricultural and nonagricultural, in rural areas. Other developments, such as the institution of an agricultural extension service, are expected to increase factor mobility. Moreover, the development of the agricultural extension service is expected to facilitate farmers learning about new technologies that may encourage a more efficient use of land and an increase in factor mobility. Government’s investment in the expansion of infrastructure is also important as it facilitates the mobilization of factors of production.

Finally, the results of the study show the importance of investment in the sectors in which the country has a comparative advantage. The Philippines is rich in natural resources. Fertile land, plentiful forest reserves, a large aquatic resource-base, and vast mineral deposits (such as copper, chromium, and gold) cover the country. With the potential high growth-rates of these sectors, the government should encourage investors to invest in the resource-based industries in order to increase the overall economic growth rate.

References