
**INTERNATIONAL COMPETITIVENESS, ECONOMIC GROWTH
AND NEW TECHNO-ECONOMIC PARADIGM**
An Econometric Investigation of Indonesia

by

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RENSSELAER POLYTECHNIC INSTITUTE

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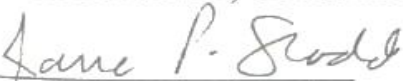
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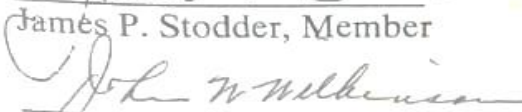
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ABSTRACT

Standard trade theory theorizes that the cause of international trade is the cost comparative advantage, while the Heckscher-Ohlin trade model theorizes that factor endowment is the factor that drives the international trade. The current trade pattern among nations, especially among developed nations, shows the exchange of similar products. Moreover, in many cases the exchanged products have a higher cost than their counterparts in the destination country. The answer to these puzzling phenomena rests within the technology content of the products. Considering that the role of technology is not taken into account in both trade models, it can be safely said that both models are unrealistic.

The more recent development of trade models tries to include technology in the trade models. The common prediction is that technology plays a very important role in determining the trade flow. However, the majority of these models do not emphasize a certain type of technology which has the greatest effect on international trade. The emergence of a new techno-economic paradigm gives strong emphasis on the role of new technology in the determination of trade flow.

It follows that every trade model implicates different sources of competitiveness. In the new techno-economic paradigm, the source of competitiveness rests on the mastery of a new technology which is translated in economic terms as the ability to produce and to export products from this type of technology. Hence, the investigation of competitiveness is directly addressed to the existence of the production

and export of those goods. In this work, these products are identified as composed of SITC 5, SITC 7 and SITC 8.

The investigation of the competitiveness of the Indonesian economy is based on the last argument. This was done by using two different models. In the simple model, identifying the conditions of competitiveness was required through which the competitiveness could be examined. In the advanced model, the investigation of competitiveness was conducted through the own-price and cross-price elasticity, the own-quantity and cross-quantity elasticity and the Rybczinsky elasticity.

From the simple model, it can be inferred that the Indonesian economy is not competitive. But, the country is making efforts to improve their competitive position. This finding is confirmed by the results generated from the advance model. Moreover, from the advance model it was found that there is a growing importance of the new-technology goods in the economy.

In addition to those major findings, there were by-products as a result of the estimation. First, domestic fixed inputs support the improvement of the competitive position. Second, technological change has contributed much to the creation of competitiveness. Third, the relations among an element of fixed input and the other inputs are complementary except for the one between labor and human capital which is substitutive. Fourth, the change in the production of outputs (and the variable input) generate different incomes for fixed inputs. Fifth, the nature of technical change in the country in relative terms uses more capital, human capital and resources-using, but it saves labor.