Sabbatical Report

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The poor economic performance in some parts of the developing world, and the outstanding and admirable record in others are not without posing serious challenges to researchers. This economic disparity defines the objectives of my research interests which lie in international trade competitiveness, currency zones, and third world economic development. My past research focused on foreign exchange rate policies, currency crises, and growth prospects in developing countries. There are specific and important research topics of interest (such as currency misalignment and trade) that I wanted to explore but could not because of time constraints. I therefore requested the sabbatical leave to investigate the impacts of real exchange rate misalignments on international trade, as the large and persistent global imbalances that plague the world economy today remain an undeniable key challenge. This issue moved to center stage and began attracting more attention in the academic and political debates as theory suggests that a large and persistent deviations of real exchange rates from their equilibrium levels can generate rapid economic growth in some countries at the expense of other nations.

In fact, one of the current challenges facing the world economy is the large and persistent trade imbalances believed to have been caused by competitive exchange rate policies adopted by various countries leading to currency misalignments. These global imbalances are inherently unsustainable and are expected to be addressed either through market forces or multinational government negotiations. Empirical investigations show that more than a dozen of countries intervene in foreign exchange markets to deliberately devalue their currencies with the main objective of gaining an unfair competitive trade advantage. But given that an exchange rate is a shared variable, an attempt by one country to alter its value in a desired direction (say, a depreciation), creates the opposite effect (overvaluation) for the country's trading partners. As such, exchange rates, not only play an important role in a country's trade and overall economic performance, but also generate important international repercussions.

Theoretically, foreign exchange market interveners, by keeping their currencies substantially undervalued for a prolonged period of time, help accumulate their official assets and boost their international competitiveness and trade surpluses. Many trading partners are the immediate bearers of the costs of such policy in terms of deterioration in their trade deficits and loss of jobs. Contrary to the argument above, that currency undervaluation can stimulate exports and retard imports in the undervalued-currency country and impose costs on trading partners, it can also be claimed that, under some conditions, currency undervaluation may have no perceptible effects on trading partners and, in fact, may positively contribute to their trade and welfare. Predatory currency manipulation to gain competitive advantage is a policy doomed to failure on both theoretical and empirical grounds and should have no effect on the manipulator and its trading partners alike. In that context, the sources of the rapid economic growth in (undervalued-currency) developing countries and the slow growth in developed countries should therefore be found in factors other than exchange rate management. Given the controversies surrounding the issue, the real impacts and magnitudes of real exchange rate movements on international trade should be searched on empirical grounds.

The objective of the study during my sabbatical leave was to contribute to the debate and, most importantly, quantify the effect of exchange rate movements on the exports of competing countries (the United States in particular). The innovation in this research is that, contrary to previous studies that concentrate on evaluating the impacts of exchange rate movements on the country initiating the change, it focuses on the (negative) externalities a country's foreign exchange policy imposes on its trading partners in terms of lower exports.

During the Sabbatical leave, I first spent a considerable time on the literature revue and learning new econometric techniques related to my investigation. Models were then formulated and data collected from different sources, including the *International Financial Statistics* and the *Direction of Trade Statistics databases* of the International Monetary Fund, and the *World Development Indicator database* of the World Bank. Finally, the models were estimated and interpreted and policy implications derived. The investigation of the real exchange rate misalignments of foreign currencies and there impacts on U.S. exports was conducted for seven Asian countries, namely China, Hong Kong, India, Indonesia, Korea, Malaysia, and Thailand. Given the complexity and length of the investigation, the analysis was divided into two separate areas leading to two research papers:

- *Real Exchange Rate Misalignments of Asian Currencies*
- *Real Exchange Rate Misalignments and U.S. Exports to Asia*

These two manuscripts were completed by the end of the Sabbatical leave and one of them (*Real Exchange Rate Misalignments and U.S. Exports to Asia*) was submitted and accepted for presentation at the Missouri Valley Economic Association Annual Meeting in Kansas City, Missouri, in October. The second paper will also be submitted for presentation in a professional meeting. After incorporating feedback/comments from peers, the two manuscripts will be submitted to peer-reviewed journals for publication.

Overall, the sabbatical leave was very productive. It allows me to contribute more to my profession and helps keep me current in my discipline. I would like to take this opportunity to express my gratitude and appreciation to the Administration for approving my Sabbatical leave request. I would not have been able to do all these without it.

The summaries of the two manuscripts are presented below:

1. Real Exchange Rate Misalignments of Asian Currencies

Although currency manipulation in some developing Asia countries is irrefutable, the degree of their real exchange rate (RER) misalignments is much more difficult to ascertain or prove. Given the current challenges facing the world economy in terms of large and persistent trade imbalances believed to have been caused by competitive exchange rate policies leading to currency misalignments, and due to the fact that equilibrium real exchange rate and its misalignment are recognized as pivotal variables in international macroeconomics, it has become imperative to investigate exchange rate behavior and RER misalignments.

This study investigates the existence and size of currency misalignments in seven developing Asian countries (China, Hong Kong, India, Indonesian, Korea, Malaysia, and Thailand) and Japan. It first examines the relationship between the equilibrium real exchange rate and its economic fundamentals to obtain the cointegration equation for each of those countries. Then, using the long-run parameters derived from the cointegration regression analysis, the equilibrium real exchange rates and the RER misalignments are estimated. The empirical results in this study show that the real exchange rates of the Asian countries mostly oscillate around their equilibrium rates with no persistent and significant misalignments. The real exchange rate behavior in those countries is mostly consistent with their economic fundamentals. Although the monetary authorities in some of those countries resort to frequent intervention in the foreign exchange market to secure undervalued currencies, the magnitudes of those depressed currencies are not alarming. Many of the fears about the exchange rate policies of developing Asian countries in an attempt to secure RER undervaluation and boost their competitive advantages are sometimes exaggerated.

2. Real Exchange Rate Misalignments and U.S. Exports to Asia

The global imbalances the world is experiencing lately is attracting more attention in the academic and political debates as theory suggests that the large and persistent deviations of real exchange rates from their equilibrium levels in countries that deliberately forge their real exchange rate policy to that end, is generating rapid economic growth in those countries at the expense of trading partners. This study examines the impact of real exchange rate misalignments in seven Asian countries (namely, China, Hong Kong, India, Indonesia, Korea, Malaysia, and Thailand) on the exports of their trading partner, the United States.

To that end, an analytical framework is first developed to estimate the real exchange rate misalignment for each of the seven countries. To establish the long run relationship between U.S. exports and its key determinants and estimate the cointegration vectors, the study relies on the autoregressive distributed lag (ARDL) bound testing approach. In the final step, the dynamic short-run relationship is obtained using the error correction model of the ARDL approach.

The empirical results show a negative and significant long run relationship between real exchange rate misalignments and U.S. exports to each of the Asian countries under investigation, and that relationship is robust across all models. This confirms the view that RER misalignments of Asian currencies impose real cost on the U.S. in terms of exports. The results also show that the level of real exchange rates continues to be an important factor explaining international trade. Consistent with previous studies, a positive and statistically significant relationship between the level of real exchange rates and exports is revealed for each of the seven Asian countries, suggesting that predatory currency manipulation by Asian countries, if materialized, could cost the United States in terms of exports and jobs. The total adverse impact on U.S. exports could be worse if the Asian currencies are misaligned during a time of persistent real undervaluation of those currencies.