A Leading Index for Indian Exports

March 2, 2001

The Development Research Group (DRG) in the Reserve Bank of India has brought out a study entitled "A Leading Index for India's Exports", the twenty-third in the DRG Study Series. The Study is authored by Dr. Pami Dua of the Delhi School of Economics and Dr. Anirvan Banerji of the Economics Cycles Research Institute (ECRI), USA.

The DRG Study Series have an accent on policy-oriented research. They are released for wide circulation with a view to generating constructive discussion among professional economists and policy makers on subjects of current interest (the study is available on the RBI website http://www.rbi.org.in). The views expressed in these studies are those of the authors and do not reflect the views of the Reserve Bank.

With the progressive globalization of the Indian economy, monitoring the external sector has assumed critical significance for policy formulation, both at the national as well as at the corporate levels. A key driver in the external sector is the level of exports because it directly impacts upon domestic economic performance. Therefore, the construction of an accurate and reliable tool for forecasting the direction of change of the level and growth rate of exports could greatly facilitate policy formulation.

This study constructs a leading index for exports that predicts movements in real exports, price of exports, as well as the value of exports. The rationale for the construction of the leading index for Indian exports is as follows: A cyclical expansion in the economies of India's trading partners is expected to enable an increase in India's exports. These cyclical upswings and downswings in the business cycle (associated with the level of economic activity) and/or growth rate cycles of the trading partners' economies can be predicted by leading indices, typically six to nine months in advance, and/or by long leading indices that typically have a few months' extra lead over traditional leading indices. These cyclical changes in the economies of the trading partners also encompass their demand for imports, or, for India's exports. In addition to the cyclical fluctuations in the economies of India's trading partners, movements in the exchange rate vis-à-vis the trading partners are also a leading indicator of exports. If a cyclical expansion in the economies of India's trading partners is accompanied by a depreciation in the currencies of the trading partners, the net impact on India's exports will be ambiguous since the expansionary impact will be partly or wholly offset by the increasing cost of imports faced by the trading partners. Therefore, exchange rate fluctuations must also be taken into account along with cyclical factors in the economies of India's trading partners to accurately gauge current and future exports of the Indian economy. Thus, leading indices of India's trading partners can provide a basis to forecast India's exports and a weighted average of the leading indices of these countries can be used to predict fluctuations in India's exports.

The composite leading index developed in this study combines information in the 36 country real effective exchange rate of the Indian rupee and the long leading indices of India's 15 major trading partners developed at the ECRI. The 15 countries are the U.S., Canada, Mexico, Germany, France, the U.K., Italy, Spain, Switzerland, Sweden, Japan, Korea, Taiwan, Australia and New Zealand, which collectively account for about half of India's total exports. The predictive ability of the composite

index (created on the basis of the real exchange rate and the leading indices of 15 countries) is evaluated vis-a-vis cyclical movements in the quantum index of exports, unit value of exports and their total value over the past 25 years. The results show that the leading index of Indian exports (in level and growth form) would have anticipated most of the cyclical turns in real exports, the price of exports, and the value of exports over the past 25 years. The results are robust since the standard deviations of the leads are typically low. On the basis of the past performance of the leading index, its predictive power can only be expected to improve further in the future.

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Press Release : 2000-2001/1226