Trade Integration and Business Cycle Convergence:
India vis-à-vis ASEAN+3
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Abstract

East and South-east Asia for the past couple of decades has seen significant increases in intra-regional cross-border trade, investment and financial flows, thereby emerging as an independent economic zone. Multinational corporations (MNCs) have created a production network in the region by placing various sub-processes of production in different countries according to comparative advantage, relative factor proportions and technological capabilities. As a result, intra-regional, intra-industry trade in manufactured product, parts, and components, semi-finished and finished products has soared. The trade has also been boosted through increases in direct investments. Not only US, European, or Japanese MNCs, but Asian companies are also making significant direct investments in the region, which is strengthening the economic ties. With further opening up of the financial markets, capital flows in the form of bank loans and portfolio investments have also expanded in the region which has led to financial development. This, together with trade and investment linkages, ought to have strengthened macroeconomic interdependence in the region, creating greater synchronization of business cycles.

It is well recognized that a large part of the increase in Asian trade is the result of regional integration. While trade flows outside emerging Asia roughly tripled between 1990 and 2006, inter-regional trade involving emerging Asia rose by 5 times, and intra-regional trade within emerging Asia increased by 8.5 times. In fact, the deepening interdependency, coupled with concern about a recurrence of the Asian financial crisis that hit in the late 1990s, prompted the Asian economies to undertake various initiatives for regional monetary and financial cooperation. The major initiatives for regional cooperation in Asia include ASEAN+3, Chang Mai Initiative, Executives' Meetings of East Asia- Pacific Central Banks (EMEAP), Asian Bond Market Initiative, Asian Bond Fund, the South Asian Association for Regional Cooperation (SAARC) etc. Apart from these, the ASEAN and its full dialogue partners, *viz.*, Japan, China, Korea and India, are all involved in creating free trade agreements (FTAs) with ASEAN as well as among themselves.

Against this backdrop, it is increasingly felt that the creation of a regional unit of account could be an important initiative towards monetary and financial cooperation that would facilitate intra-regional trade and investment. However, at the same time, it is important to study the asymmetries within the region which may erode the intended benefits of common currency area.

The Theory of Optimum Currency Area (OCA) was pioneered by Robert A. Mundell in the 1960s. The core of Mundell's thesis is that countries or regions constitute an OCA when the

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real benefits for their economies of fixing irreversibly their exchange rates (adopting a single currency) exceeds the real costs. While Mundell pointed out some of the theoretical considerations regarding the optimality of a single currency zone, some quantifiable parameters have been suggested as measures of costs and benefits of joining a currency union. Two of the most widely discussed parameters are the extent of trade and the correlation of shocks between countries contemplating monetary integration. Although there are views that adoption of common currency leads to greater convergence of business cycles, but nevertheless even before the adoption, there should be a reasonable degree of co-movement in the business cycle behaviour of participating countries. Otherwise implications of common monetary policy could prove to be costly.

This paper primarily deals with the issue whether ASEAN+3 business cycles are sufficiently synchronized to yield benefits of envisaged monetary union in the region.[2] Apart from this, an attempt has been made to investigate whether India's business cycle behaviour has shown any sign of convergence with that of ASEAN+3 economies. Likewise asymmetries have been examined in terms of inflation and real exchange rate movements and other economic aspects. In order to study the prospects of further monetary cooperation in the region, the trade pattern of these economies (ASEAN+3 and India) has been comprehensively studied. Having examined these aspects, an attempt is being made to compare the present level of convergence with that of the Euro area. It throws light on the fact whether Euro economies were better synchronized before adoption of single currency. In other words, an attempt to draw lessons from the Euro experience has been made.

The results of the empirical exercise show that there are a number of asymmetries existing in the region which makes the case of single currency less plausible. Using the real GDP as a reference series for examining the business cycle behaviour, we find that there is not much improvement in business cycle convergence in the region during post-East Asian crisis period. However, it is found that business cycle behaviour of economies, viz., Brunei, Hong Kong, Indonesia, Japan, Cambodia, Lao, Malaysia, Philippines, Singapore, Taiwan and Thailand have shown convergence to a greater number of countries during the post east-Asian crisis period. In contrast, other economies including China, India, Korea, Myanmar and Vietnam are found to be less synchronized with other economies during the same period. Overall, the analysis shows that still all ASEAN+3 economies are not synchronized with each other and the different degrees of amplitude of business cycles also indicates that some economies fluctuate more than others.

As far as asymmetry in the trade basket of sample economies is concerned, the export and import composition of sample economies is compared based on trade basket data for 1990 and 2006. It is found that rank correlation of export baskets of sample economies has not shown any improvement in most of the cases. However, in terms of composition of import basket, there is significant improvement in rank correlation. It shows that at present the export baskets of sample economies are still not reasonably similar while import baskets have shown greater

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[2] Taiwan, being a large emerging economy of the region is also included for empirical analysis apart from ASEAN+3 and India.

similarity in 2006 as compared with those in 1990. This indicates that nature and extent of external shocks through external demand may vary for these economies as their export baskets are still significantly distinct.

In the context of India, we find that business cycle behavior does not show any tendency towards convergence with that of ASEAN+3 economies. In fact, of late, business cycle behaviour of Indian economy has shown significant divergence from the ASEAN+3 economies including Hong Kong, Indonesia, Korea, Philippines and Thailand. As far as trade basket composition is concerned, India's export basket is quite dissimilar to that of most of other sample economies except Indonesia and Vietnam, while import basket is found to be similar to that of 10 out of 11 sample economies.

Using the same methodology for comparing the level of business cycle convergence in Asean+3 and the Euro area region, it is found the level of convergence was far higher among the Euro area economies before the adoption of single currency in 1999 than the present level of convergence in ASEAN+3 region.

These asymmetries in ASEAN+3 are reflected not only in terms of lack of synchronization of business cycles but also in terms of output structure, policy measures, exchange rate arrangements, institutional developments, etc. These raise doubts regarding the eventual policy coordination, particularly the efficacy of common monetary policy in region. Apart from these, political and security concerns and disparities in demographic features across the countries makes it difficult to have greater factor mobility in the region. All these factors point towards a less matured phase of regional cooperation which is far from satisfying the convergence criteria for an optimum currency area.