Monetary Union for the Countries "ASEAN": The Analysis on the Business Cycle Synchronisation

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Abstract
Ten years after the signing of the Treaty of Rome, and thus the birth of the European Economic Community, Indonesia, the Philippines, Malaysia, Singapore and Thailand decided to create a new regional organization, the Association of Southeast Asian, through the Bangkok Declaration (August 8, 1967). It was the result of a long process of cooperation between states, newly independent, which, confirming the achieved political and economic maturity, abandoned the autarkic attitude of closing out in favor of an idea shared by the same opening principles. Since the early 80's membership of ASEAN produced important effects on the economic system of the member countries as openness to trade intra-regional and international levels was a kind of link between structural change of economies and economic growth. The new entity, also by virtue of its strategic location between the Indian Ocean and the Pacific Ocean, not only stipulated number of cooperation agreements and bilateral and multilateral partnership - allowing integration with commercial high growth rates of the member countries - but also became a key region in the geo-strategic balance in the Pacific. Initial countries were joined later also Brunei, Vietnam, Laos, Burma and Cambodia.

The objective of this work is to determine whether, by virtue of the numerous official statements, monetary unification is really appropriate for the ASEAN countries and what are the real possibilities of realization. The paper is based primarily on the analysis of business cycles.

Key-words: Optimum Currency Area, Trade integration, ASEAN, Business Cycle Synchronisation.

JEL Classification: F15; F31; F32; F33; E31

I Introduction
The Asian financial crisis, the long and not easy process that in Europe has led to the creation in 2001 of the Monetary Union Europe showed that the lack of economic cooperation as well as the heterogeneity in the monetary exchange rate regimes are a source of economic instability. Therefore, when the thesis of a monetary union behind the example EMU has represented a feasibility model, in the Asian region has moved up the hypothesis of a possible monetary union even before the presence of many divergent political and cultural. However, although the draft greater economic financial activity to a single currency in Asia represents a understood quite recently (before the Pact of Hyderabad in 2006, then the meeting of deputy governors of ASEAN in the Vietnamese city of Da Nang in 2008), that of economic integration has ancient origins. In fact, from the time when Europe was taking its first steps towards a common economic space and create a supranational entity in the field of defense, some countries in South-East Asia took over the same period, to carry out the plan "Southeast Asian Treaty Organization "(SEATO, 1954). The failure of the same, due in part to the Vietnam War, led the Asian countries to seek a broader regional integration both economic
and political-military. Therefore arose the "Association of Southeast Asia" (ASA, 1961), the "Maphilindo" in 1963 and the "Asian Pacific Council which represented the first attempt at the realization of a type of organization "regional" time to a project of economic cooperation between the member countries. By the failure of these forms of organization, in particular due to frequent political tensions which limited therefore cooperation in the economic field, were laid the foundations for the creation of a more mature form of regional integration in Southeast Asia: "Association of Southeast Asian Nations' (ASEAN, 1967, which includes Thailand, Indonesia, Malaysia, Philippines, Singapore and which were added later also Brunei, Vietnam, Laos, Burma and Cambodia). This new entity, also by virtue of its strategic importance between the Indian Ocean and the Pacific Ocean, soon not only concluded several cooperation agreements and bilateral and multilateral partnership - allowing integration with commercial high growth rates of the member countries - but it has also become a key region in the geo-strategic balance in the Pacific.

The process of economic integration in South-East Asia assisted with one of the largest free trade areas in the world (ASEAN) has therefore led many scholars to question whether the integration process could actually be completed with that of a currency union first, then monetary. Therefore the end of the nineties there have been numerous scholarly papers and official statements about the desire to create a monetary union.

In this regard, in 1997, the Brooklyn-authoritative Institution think tank American-revealed itself the need for a 'monetary union in the Far East as a response to the financial crisis recorded at that time in Asia. This goal, however, would only be possible if accompanied by radical changes in the organization institutional, political and economic similar to those covered by the European Union.

In 2001, an article in "Asia Times Online" made known the speech by Robert A. Mundell at Chulalongkorn University in Bangkok, in which the economist said as the 'ASEAN +3 (ie the ten members of the Association of Southeast Asian countries plus China, Japan and Korea) should look to the European Union as a model for a more Tight integration of monetary and trade in order to achieve even a currency integration.

On 6 May 2005, the official website announced that ASEAN, China, Japan, Korea and the ten ASEAN members have agreed to expand their network of currency trading to what could become, in effect, a kind of Asian Monetary Fund.

In August 2005, the San Francisco Federal Reserve Bank published a report on the prospects of a monetary union in East Asia (ASEAN + China, Japan, Korea), stating that this area met the conditions for an Optimum Currency Area but, However, the creation of a single currency would have more difficulty than those recorded for the realization of EMU. This is because the monetary union in Europe is the result of a larger process of political integration that instead, in East Asia, seems to be totally absent because of the great cultural and historical differences. Another big problem indicated by the report of the San Francisco Fed is that governments in East Asia appear to be reluctant to delegate significant powers to supranational organizations. In addition, the study shows that East Asia does not seem to have a natural candidate as the domestic currency of reference for a cooperative agreement on exchange rates. The analysis therefore concluded as the stabilization of the exchange rate and monetary integration does not seem to be achievable goals in the short term. However, despite this, the East Asia and more specifically the ASEAN +3 is recording a high trade integration process as well as increasing cooperation in the financial field including the development of regional arrangements for the provision of liquidity during crises through foreign exchange swaps bilateral discussions on a regional economic surveillance and the development of a stock market of ASEAN.

In August 2007, at the dawn of the U.S. financial crisis, Asia Times Online announced as Asia in the future may need to establish its own fund to tackle financial crises, similar to that of 1997. Then in
September of 2007, Forbes magazine says a new study which shows that monetary union ASEAN +3 with Japan as the country of reference, is found to be feasible due to the economic potential of the area covered by the study despite the absence of the political foundations for such an agreement.

II ASEAN and monetary union: the theory’s OCA

The expression “currency area” refers to that for countries that have exchange rates permanently and rigidly fixed to each other and full convertibility of their currencies, while exchange rates are flexible to third countries. A more narrow area of currency is the currency union. It provides for the adoption of a single currency and also requires the establishment of a common monetary authority which is delegated the management of the monetary policy of the entire area.

With reference to the currency has run mail the need to define the character of optimality. In particular, it has been identified in the capacity of the area to reach equilibrium without external injury to the internal one.

The economic debate on optimum currency areas has its origins in the increased capacity on the fixed exchange rate or flexible to ensure that the character of optimality.

In this regard, we distinguish the position of the Keynesian economists, supporters of the preferability of a fixed exchange rate regime, from the monetarist school of economists, who opt for a regime of flexible exchange rates.

In particular, according to the monetarists, the main benefit resulting from the choice allowed to float freely exchange rate is to maintain control of monetary policy. In this way, in front of a negative exogenous shock, such as a fall in foreign demand, the policy-maker can expand the money supply and lower interest rates, stimulating the economy and causing a depreciation of the exchange rate that making exports more competitive and improves the trade balance. For this reason, the exchange rate is a shock that the national economy has at its disposal to deal with external shocks.

The position of the opponents of flexibility tends, however, to emphasize the variability of the exchange rate could introduce uncertainties in the estimates of operators and foreign exchange risk. It also emphasizes that flexibility could facilitate speculation on the currency market.

However, despite the limitations of a regime of flexible exchange rates cannot be neglected as the system of fixed exchange rates may lead to the sacrifice of autonomy of monetary policy. This risk will be greater, the more likely the occurrence of asymmetric shocks relative to demand, defining how asymmetric shocks those unexpected changes in aggregate demand for a country that does not take place simultaneously in other countries. In particular, if a negative shock affects only one country, it will have the need to adopt monetary policies against cyclical in nature, while the other countries, immune from the shock, they will not have the same need, and indeed fear the inflationary consequences of policies expansive. In the case of currency union and asymmetric shock, the central banks would follow differing political views, which would make it untenable to maintain currency parity. In the case of monetary union, the central bank would be unified in the dilemma of having to choose between an expansionary monetary policy, advocated by the country affected by the shock and a restrictive monetary policy desired by other countries. If the opportunity to be in this situation was very high, ’s accession to a currency or monetary union would not be appropriate.

The literature of optimum currency areas (OCA), built in the sixties, takes effect from the second half of the seventies, when the phase of increasing instability open from sunset of the Bretton Woods system and the political debate on the design of the Werner Report of European Monetary Union rekindle the interest on the definition of the boundaries of a currency area.
III Literature’s review
With the pioneering work of Mundell in 1961 began the traditional theory of optimum currency areas. Looking at the United States of America, he wondered what conditions should be met in order for a country not to give up the independence of monetary expensive. The fulfillment of these conditions would have allowed us to identify the optimal regional environment for the adoption of a single currency (monetary union), or the irrevocable fixing of exchange rates (currency union).
His answer to the question was that of abandoning the monetary instrument will not be expensive if, once there has been an asymmetric shock, there are automatic mechanisms of adjustment, such as labor mobility and wage flexibility.
In theory, therefore, if wages are flexible and / or labor mobility between the two countries is high enough, the opposite imbalances between the two countries will disappear automatically. The 'high mobility of factors and in particular labor, eliminating the use of the exchange rate as an instrument to correct external imbalances, defines a geographic domain as optimum currency area. Latter 'does not necessarily coincide with the geographical boundaries of individual countries, but it is important to include all those regions that respond symmetrically to the stimuli of economic policy, gaining in terms of efficiency.
A subsequent contribution to the theory (OCA) came from McKinnon (1963). He singled in the degree of openness to international trade of a country another crucial factor to evaluate the optimality of a currency area and thus the convenience of a country to be part of it. Exchange rate stability in this case would significantly reduce transaction costs and risks associated with the presence of multiple currencies. The higher marginal propensity to import is associated with an open economy limit the variability of output and the 'need for interventions of domestic monetary policy. The opening thus represent a sort of automatic stabilizer. It in fact make it possible to reconcile the objective of internal balance with that of external balance.
For McKinnon, therefore, in the case of countries with high trade openness, it is preferable to adopt a fixed exchange rate regime and act on the expenditure components of domestic demand or to improve the foreign trade balance and control the level of domestic prices.
Another aspect considered by McKinnon regarding the likely absence of money illusion. In Kenen (1969), however, found in the more diversified economies another key feature that a region must have to constitute an optimal currency area. In fact, it prevents any demand shocks that occurred in a given area can pour the whole economy. Diversification, therefore, an insulation from shocks that interested foreign trade, thus eliminating the need for changes in exchange rates between currencies.
The evolution of the theory of optimum currency areas has gone through the consideration of cost-benefit approach Ishiyama (1975), to the credibility of the first and endogeneity theory of Frankel and Rose (1998) in recent years. We believe, however, important to dwell a few contributions of these theories. In particular, Krugman and Obstfeld (1993-1999) defined the OCA as the region in which countries are closely linked by trade in goods and services. Important, therefore, the need for greater economic integration which will allow the elimination of all those distortions which have always encouraged, however, the spread of intra-industry trade and slowed the inter-industry so that the country can become progressively more specialized.
Haberler and Flemming (1971) argued, however, that countries with similar inflation rates could become part of an optimal currency area because, in this way, they could re-balance the flows on the current account. The differential rate of inflation, in which case, they are considered as the main causes of the problems of balance of payments.
Finally, recently, much of the literature has given importance to the so-called degree of business cycle synchronization and adjustment processes - in front of an asymmetric shock - from the mobility of factors.
and several damping mechanisms (Bayoumi and Eichengreen, 1994 -2002, Lee, Park and Shin, 2002; Alesina, Barro and Tenreyro, 2002).

IV The "cost" of giving up the monetary policy for the ASEAN
Much space is given by the economic literature in recent years to the possibility that the ASEAN member countries could share a single currency or not and therefore compliance with the criteria established by the theory of the optimum Currency Area.

In this regard, Madhur (2002) stated that the cost of giving up monetary policy appears to be very low because most of the ASEAN countries has always been a record inefficiency in the conduct of monetary policy by the respective central banks. In contrast, the economist argues that a monetary policy run by a "Central Bank Regional" that enjoys credibility would benefit in the management of the exchange rate itself and therefore also in the current member states.

Eichengreen and Bayoumi in a study conducted in 1999 showed how ASEAN would present a high mobility of the workforce and capital, especially compared with the countries of the European Union prior to the entry into force of the Treaty of Maastricht. In particular, the study noted that workers in Malaysia, the Philippines, Indonesia and Thailand covered up more than 10% of jobs in countries such as Singapore and Burma. In addition, the flexibility of wages and prices were found to be in line with those of the EU pre-Treaty. In fact, the second Eichengreen and Bayoumi changes in wages and prices in response to a shock result to be very flexible and in general, the symmetry of shocks between the ASEAN countries appears to be similar when compared to that of the European Union. In this regard Madhur remarked that the empirical evidence of this symmetry was manifested by the economic slowdown joint of Asian countries in 2001 as a response to the global crisis highlights, therefore, the high degree of symmetry of shocks between countries: it reflects the 'high degree of trade openness and the similarity between the productive structures of the countries.

Moving from this background the question arises whether the ASEAN member countries constitute an optimum currency area or not and then meet the conditions of optimality in order to also share a single currency.

V The analysis on the Business Cycle Synchronisation
The possibility of establishing an area of about countries a common monetary policy assumes that it is consistent with the cyclical phases in place in different countries. Hence the so-called theory of the Business Cycle Synchronisation extensively studied in economic literature (Artis, 1997; Zhang, 1999; Beine, 1997; Frankel and Rose, 1998, Beine, 2000; Sensier, 2002). In particular, the studies converge on the fact that a strongly integrated approach should provide a high degree of business cycle synchronization. If it does not, the adjustment process - in front of an asymmetric shock - could be favored by the factor mobility between the participating countries.

Prior to the adoption of the Euro, most of the studies on the synchronization of business cycles have focused on European countries and the United States of America in order to determine compliance with respect to the OCA theory. In this regard Sayek and Selover (2002) through a study of the IS-LM model with estimated VAR sought to determine the co-cyclical movements of prices, interest rates and money supply between Turkey and the EU coming to the conclusion that Turkish business cycles were not synchronized with those of the EU. This divergence of business cycles was due to the presence of internal political conflicts, the difference in the levels of economic life in the nation the same from city to city, the country's exposure to possible conflicts such as the Gulf War.

Dueker and Wesche (2001) examined instead the co-movements of the cycles on production, income and employment levels between Germany, France, Italy, and later the United Kingdom and the United States.
of America in order to analyze whether economic cycles to 'inside the euro area were more related to each other than in countries outside of a' monetary union.

Bayoumi and Eichengreen (1994) used the synchronization of business cycles to also check the suitability of various regions monetary integration stating that the more shocks will be uncorrelated, the greater the cost of giving up monetary policy and the rate exchange.

VI Business Cycle Synchronisation: about ASEAN

There are numerous studies on the potential synchronization of business cycles in Asian economies such as to form a currency union monetary. In particular, the contributions can be divided into those that support the possibility of a monetary and currency union first then, and those who come to results that reject this hypothesis.

Among the first Choe (2001), through an analysis of ten years and an estimate OLS, said that ASEAN, although not presented a clear synchronization of business cycles, however, showed a higher intra-regional trade that would have assisted processes stabilization in the moment in which they were presented asymmetric shocks area.

Ling (2001) examined the suitability instead of the economies of East Asia and ASEAN in particular to a monetary agreement, using annual time series from 1967 to 1997. Through the use of a structural VAR based on a system AD-AS, Ling suggested that it was possible for this area to move towards a monetary integration although advised to continue in the short term through the creation of small currency area. In the long run, in fact, the regional economies of these OCA have reached a sufficient level of harmonization and convergence as to take into account the formation of a single currency area.

Finally Ng. T. (2002) examined the correlation along the Hodrick-Prescott economic shocks between five ASEAN economies (through annual data of real and nominal GDP for a period from 1970 to 1995) stated that even in the presence of asymmetric shocks, the ASEAN easily be able to implement a process of adjustment under the high economic and trade integration in the area.

Among the contributions that instead discourage the possibility of a 'monetary union among the ASEAN countries, Bayoumi and Maoro (1999) stated that although the ASEAN comply fully McKinnon criterion by virtue of the large international and bilateral trade between the euro area countries, the high dependence of the exchange strongly anchored in foreign currencies (the U.S. dollar par excellence) exposing countries to shock of sudden fluctuations do not depend on their monetary policy and exchange rates.

Chow and Kim (2003), Kwak (2004) using the structural VAR developed by Blanchard and Quah (1989) stated that by virtue of a higher intra-regional trade and diversified economies, particularly the countries of South-East Asia and in particular those ASEAN were "naturally" predisposed to deal with asymmetric shocks. However, the lack of political commitment to closer cooperation-especially with regard to the movement of capital-makes the formation of a monetary union is quite impossible in the near future.

VII The empirical analysis

Moving in the wake of the studies mentioned, the following analysis will attempt to verify the existence of synchronization between the business cycles of the ASEAN countries. To this end, we construct a dataset in time series from 1980 to 2011 on annual rates of change of GDP growth at constant prices and uses the Hodrick-Prescott in series to separate the cyclical component from the trend.
The visual examination of the figure above shows an almost perfect synchronization of business cycles in the ASEAN countries in the period 1980-2011. In particular, the cycles of all countries except China and Laos, showed an initial phase of prolonged contraction touching its lowest point in 1997, ie the period of the Asian financial crisis, a period of growth from 2001 to 2006 with the peak recorded in 2004 due to the expansion of global demand, a new downturn shared since 2007, caused most probably by the crisis of the U.S. sub-prime mortgage first, and from that of European sovereign debt that has contracted again global demand thereafter.

It’s interesting to note that the cycle of China is perfectly synchronized with that of the other ASEAN countries, although China’s economy is much larger than that of the entire group considered. However, although the synchronization of cyclical movements seems almost perfect, the presence of differences gives rise to the suspicion that they may not exist in a very close correlation. This possibility could involve the risk of different responses compared to the same shock.

To exclude this possibility, it is desirable to verify the existence of correlation between the filtered values, according to the approach of Hodrick-Prescott, the time series of rates of change of GDP.

As shown in Table 1, the correlation analysis confirms the existence of a perfect synchronization of economic cycles. The coefficients, in fact, show for couples Malaysia-Indonesia, Philippines-Singapore, Malaysia-Philippines-Singapore Laos, Laos-China, Laos and Vietnam, Cambodia and Vietnam, a value higher than 90%, the remaining pairs, however, readings between 60% and 89%, indicating a high correlation. So, for the ASEAN countries is fully checked the main condition for the success of monetary union. In this respect, indeed, their position is much better than the EMU countries.

The previous statement follows from the comparison of the correlation coefficients of the cycles of the ASEAN economies with those of the EMU countries before the birth of the euro.
As shown in Table 2, in the period 1980-2000 only some European countries had interrelated cycles: France, Germany, Belgium, and Austria Fillandia recorded a level of correlation between them very high, averaging 85%. Cycles Ireland, Italy, Portugal, Greece and Spain were not related. In particular, that with respect to all the countries of the EMU except for Austria and Greece to Italy with regard to Ireland and Greece, while in Greece than in France, Italy, Portugal and to Spain, and finally, that of Portugal, showed correlation with the essence of Greece and Ireland.

VIII Concluding remarks

The Asian financial crisis began in July 1997 led to a clear effect of "contagion" in which the crisis in Thailand quickly spread to the countries of the ASEAN. The mechanisms by which transmitted the infection were manifold: real contagion, contagion and panic among financial institutions which caused capital flight and bankruptcies. In this context the increasing integration of Asian economies seems to have played a key role in the moment in which the Asian region and in particular that ASEAN, turns out to be increasingly interdependent. Interdependence, this, the potential for contagion to other possible crises due to shock also different from that of 1997.
Since the outbreak of the crisis, however, the ASEAN countries-as well as other Asian countries-have demonstrated a capacity for rapid economic recovery result of numerous factors: global recovery, increased fragmentation of production, productivity growth and a significant increase in global liquidity which stimulated the international capital markets and investments. The greater openness to international trade and investment initiatives in Asia and increasing regional economic integration have characterized the process of making it a natural growth of the region in which it was possible the occurrence of a vertical integration of production and trade fragmented in which China, since 1999, has been the epicenter of this process. Vertical integration is made possible by the multinational companies that have used the region as a production base, while allowing them to make production decisions based on the comparative advantages and competitive economies in the region composite. The presence of barriers to trade and gradually lower the incentive for investment by liberalization policies have improved the outlook for the construction of a production network and fragmented market, a process that improves the efficiency and make the most of the opportunities the diversity of the region. The natural result of this process has been a growing intra-regional or intra-industry and intra-regional FDI. In this context of economic recovery the danger to a potential new effect "contagion" placed actually the basis for the ASEAN countries to create instruments to internalize externalities also policies through the instrument of regional cooperation. However, it is still kind of weak. In fact, in the ASEAN economic integration of a regional or via formal agreements differs from other regional integration agreements in at least two crucial points. The first concerns the fact that ASEAN was not created by a rapidly approach the integration from top to bottom (in fact there has been a greater integration only when the economic conditions of the market appeared favorable), the second is that the ASEAN free trade area, although it has a higher intra-regional trade tends, however, to be more oriented towards the outside. There is no certainty yet what will be the last configuration of Asian regionalism. Over the years, certainly, it is likely that there will be, in the area concerned, a single market, although most likely different from that of the EU. It will require a real trade policy and financial policy, which means that ASEAN countries should be connected in a market context "extended" the ASEAN with reality, already close to agreements rather weak, such as China, South Korea and Finally, also in Japan. The presence of a form of regional integration as ASEAN is able to meet the criteria of the synchronization of business cycles as well as those of the least traditional theory of Optimum Currency Area, lead us to conclude, in the first instance, that in purely economic level these countries-as no other form of FTA this today-they are ready to process more inclusive: monetary union. Indeed, the cost of giving up monetary policy would be too low compared to the benefits that the single currency could lead to the whole area: minor variability in the relative prices of goods and factors, and therefore less uncertainty in the formation of expectations about future prices and investment decisions more credibility orientation anti-inflationary monetary policy, and therefore effectiveness of this policy, greater transparency of relative prices in ASEAN; less segmentation of markets, elimination of exchange rate risk inside the area, and the related risk premium. However, although they are strong economic reasons which would lead ASEAN toward a monetary union, those policies opposing the transfer of sovereignty, even monetary-turn out to be more. The need, further, to consider China, the high flow of intra-regional trade can generate and Japan, by virtue of the mature and largest financial market in Tokyo and a consideration of the yen as an anchor currency, in area is creating major problems of historical-political.
You will need therefore still very year that the discrepancies policies can be set aside because of a larger project, the monetary union, which will no longer only limited to the boundaries of ASEAN but will rely on new and important country for a possible monetary union in South-East Asia.

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