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MONETARY INTEGRATION IN EAST ASIA: A CRITICAL REVIEW

This paper presents the case of fixed exchange rates and monetary union in East Asia, in connection to the theory of optimum currency areas (OCAs) which has been widely implemented in the field of exchange-rate regime. A total of 20 empirical papers published in 1994–2010 are reviewed and the original members of ASEAN are found to be commonly indicated as relatively feasible candidates for a monetary union. In addition, common threads are observed. First, in the selection of country samples for analysis, recent developments could have played a more important role than the traditional theory. Second, unlike the early intellectual work which had been molded by the debate on external and internal adjustment mechanisms, current empirical literature appears to be driven largely by the enthusiasm to identify homogenous economies. Third, there is a reason to believe that very few have reflected on the endogeneity argument of OCA-related convergence in the Asian context. Finally, an explicit monetary anchor country is scarcely set a priori in these studies.

Keywords: optimum currency area; Asia; business cycles; integration; ASEAN.

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ФІНАНСОВА ІНТЕГРАЦІЯ У СХІДНІЙ АЗІЇ: КРИТИЧНИЙ ОГЛЯД ЛІТЕРАТУРИ

У статті представлено ідеї щодо фіксації валютного курсу та монетарних союзів у Східній Азії у контексті теорії оптимальної валютної зони, яка є досить популярною при прийнятті рішень щодо валютного курсу. Проаналізовано 20 емпіричних робіт за період з 1994 по 2010 роки. Продемонстровано, що члени АСЕАН постійно розглядаються в них як потенційні члени фінансового союзу. При цьому при комбінуванні країн для потенційного союзу в першу чергу враховувались актуальні зміни у світових фінансах і лише в другу – традиційні фінансові теорії. У більш ранніх роботах більше уваги приділялося зовнішнім та внутрішнім механізмам регулювання; в пізніших роботах акцент зроблено на однорідності економік. Лише незначна частина авторів звернули увагу на чинник ендогенності при розгляді можливостей створення валютних зон в Азії. Також майже не звертається увага на вибір країни, валюта якої мала б стати якорем для потенційного союзу.

Ключові слова: оптимальна валютна зона; Азія; бізнес-цикли; інтеграція; АСЕАН.

Літ. 37.

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ФИНАНСОВАЯ ИНТЕГРАЦИЯ В ВОСТОЧНОЙ АЗИИ: КРИТИЧЕСКИЙ ОБЗОР ЛИТЕРАТУРЫ

В статье представлены идеи по фиксации валютного курса и монетарным союзам в Восточной Азии в контексте теории оптимальной валютной зоны, столь популярной при принятии решений относительно валютного курса. Проанализированы 20 эмпирических работ за период с 1994 по 2010 годы. Продемонстрировано, что члены АСЕАН постоянно рассматриваются как потенциальные члены финансового союза. При этом при выборе комбинации стран для потенциального союза в первую очередь учитывались актуальные изменения в мировых финансах и лишь потом – традиционные финансовые теории. В более ранних работах больше внимания уделялось внешним и внутренним механизмам

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регулювання; в поздних работах акцент сделан на однородности экономик. Лишь незначительное количество авторов обратили свое внимание на фактор эндогенности при рассмотрении возможностей создания валютных зон в Азии. Также крайне редко обращается внимание на выбор страны, валюта которой стала бы якорем для потенциального союза.

Ключевые слова: оптимальная валютная зона; Азия; бизнес-циклы; интеграция; АСЕАН.

1. Introduction. In the interwar years, the difficulties of reinstating the gold standard and the disruptive shock of the Great Depression had prompted a wide debate on the international monetary system both in the US and Europe. Today, the 1997-98 Asian crisis, the birth of euro, the recent global financial meltdown and subsequent threats of "currency wars" are the drivers which spur the intellectual work on monetary arrangement in East Asia.

It has remained difficult to operationalize the conceptual frameworks of currency areas into practice given the complexities and uncertainties prevailing in the real world. In spite of this, numerous empirical studies have attempted to demystify the theoretical conception in the process of identifying the groups of economies which could possibly come together under a common monetary umbrella.

The objectives of this paper are twofold. First, the paper seeks to offer the reasons why the idea of monetary integration with a focus on East Asia has gained so much popularity in the literature notwithstanding the complication highlighted above. While others have stressed the devastating effects of the Asian crisis and avoidance of IMF interference into domestic and regional affairs as the primary motivation, this paper concentrates on the potential economic benefits of a monetary union and the smallness of the implicated costs. Second, the paper reviews 20 related empirical articles published in 1994-2010 categorized into the data periods used, that is, pre-1997, pre-2000, and pre-2008 periods of the dataset to uncover the underlying threads in them.

Among other findings, the 5 original ASEAN member countries are commonly suggested to be comparatively feasible to constitute a monetary union. Viewed in this light, policy makers of these ASEAN members may consider further foster their political, social, and economic relationships to reap the benefits of a single monetary zone. Meantime, business managers might need to tune their extra- and intra-regional decisions knowing the fact that macroeconomic conditions between these countries are to a great extent connected and symmetrical.

The remainder of the paper is structured as follows. Section 2 revises the essence of the classical works on OCA theory. Section 3 explains the case against flexible exchange rates for East Asia. Section 4 provides the case for unified exchange rates and monetary union. The discussions in Sections 3 and 4 broadly reflect the recent interests in the literature. Section 5 provides a review of 20 empirical studies whilst Section 6 discusses the findings and concludes.

2. The Theory of Optimum Currency Areas: A Background. In the classic work published in 1961, Robert Mundell summarizes that an optimal currency area is characterized by internal factor mobility and external factor immobility. Interregional and interindustrial factor mobility could substitute for changes in nominal exchange rates in restoration of internal and external equilibriums when economic regions suf-

ferred asymmetric economic shocks. The main concerns are full employment, stable prices, and international balance of payments. Given that perfect labor mobility hardly prevails, Kenen (1969) provides an alternative definition of optimality. He argued that a well-diversified economy is less susceptible to adverse supply or demand shocks and hence is more appropriate to fix its exchange rate. Another dimension for optimality came from McKinnon (1963) who propounded that a highly open economy is least suitable for flexible exchange rate and should instead fix its external price of money to a putative currency.

3. The Case against Flexible Exchange Rates. In his 1953 magnum opus, Milton Friedman argued that floating exchange rates can act as a buffer against adverse external shocks. Nonetheless, attempts to increase competitiveness by devaluations would most likely lead to internal inflation and external retaliations (see McKinnon, 1963; Krugman, 1990). In highly open economies, domestic prices and wages are closely linked to exchange rates of significant trading partners, rendering depreciations ineffective in improving the current account – the net result would just be greater inflation. Also, depreciation is useless and might even be detrimental when a shock comes from a capital account as when emerging markets are hit by contagion and face sharply higher interest rates (Calvo, 2002).

4. The Case for Fixed Exchange Rates: A Brief Note. The primary case in favor of exchange rate fixation against a pivotal currency rests upon the desirability of certainty (Krugman, 1990). Amongst all, renminbi is quite a decent candidate for a monetary anchor given recent internationalization of the currency undertaken by Chinese authorities. The current stable yuan-dollar rate, if perpetuated, provides a good platform for yuan to be a world currency. The following benefits would most likely be attainable if China be the anchor country for the region and if the yuan continues to be stable against the dollar.

Greater Integration. Tighter economic integration in East Asia is ever warranted in wake of rising regional integration elsewhere such as NAFTA, EU, Mercosur, CEMAC¹, OECS², UEMOA³, and CACM⁴. These arrangements have brought greater intraregional stability but also larger interregional rivalry. Therefore, East Asia needs to enhance its intraregional trade further, through a single exchange rate, to insulate itself against demand shocks from outside. Indeed, the recent robust growth in the region spearheaded by China despite the recessions in the West exemplifies the possibility of East Asia being the center of the world economy.

Knowing the importance of integration, recent free trade deals in East Asia have encompassed ASEAN⁵, China, Japan, India, Australia, and New Zealand which cover aspects of goods, services, investments, and intellectual property. Nonetheless, based on the IMF statistics, in 2006 intra-regional trade in Asia still lagged behind those in NAFTA and EU15 by more than 10%⁶. Besides trade, the share of intrare-

¹ Economic and Monetary Community of Central Africa.

² Organization of Eastern Caribbean States.

³ West African Economic and Monetary Union.

⁴ Central American Common Market.

⁵ To date, ASEAN contains Myanmar, Vietnam, Laos, Cambodia, and Brunei in addition to the original members of Thailand, Malaysia, Singapore, Indonesia, and the Philippines.

⁶ See <http://www.imf.org/external/pubs/ft/survey/so/2008/CAR02608A.htm>.

gional portfolio investment flows in East Asia is also still low, a mere 6% in 2005 compared with those of NAFTA (16%) and EU15 (62%) (Kawai, 2008).

The benefits are especially relevant to the highly heterogeneous economic structure of East Asia. All the while, MNCs diversify their production processes and stages to exploit comparative advantages across economic zones in the region (Ramos, 1994). Examples of subregional economic zones are the tourism and electronics growth triangles (GTs) set up to foster economic complementation between East Asian countries.

Lower Transaction and Operating Costs. A currency area enhances the role of money as unit of account by setting economies of scale into play and reduces transaction costs, including the costs of information, search, exchange, hedging, and calculation (Tavlas, 1993). Small economies, which describe less developed and less liberal economies in Indo-China should benefit the most from the unit of account, means of payment, and store of value services provided by a major currency (Bayoumi and Eichengreen, 1997).

A credible monetary union anchored on a stable currency also leads to lower costs of capital. Since the uncertainty arisen from currency risk and sudden regime change is removed, the costs of international and hence domestic borrowing become lower (McKinnon 2005; Chang, 2000). In this connection, improved allocational efficiency of financing process in a monetary bloc provides both borrowers and lenders a broader spectrum of financial instruments, thereby enabling more efficient choices to be made in terms of duration and risk (Robson, 1987).

Lower cost of capital also stems from lower reserves requirement because enlargement of foreign exchange market removes volatility of exchange rates and ability of speculators to influence money prices (Tavlas, 1993). Moreover, if countries are structurally diverse, like those in East Asia, reserves for intra-area transactions may be substantially reduced because any payment imbalances may be offsetting.

Price Stability. A monetary standard based on a credible currency also helps to curb inflation in several ways (Tavlas, 1993). First, with respect to inflation targeting, exchange-rate targeting is better than monetary-growth targeting because exchange rates are highly observable. Second, any high inflation country which joins a low inflation monetary bloc can "import" low inflation reputation without loss of output and employment. Third, internal monetary policy can be removed from politically driven domestic authorities and delegated to a more independent authority.

Countries implementing credible currency boards such as Estonia, Lithuania, Bulgaria, Hong Kong, and Macau (Guide, Kahkonen, and Keller, 2000) and dollarization such as Panama (Chang, 2000) have recorded lower inflation in the long run than those with other monetary regimes. In all these economies, monetary discipline has been the key to low and stable inflation.

For East Asia, stability of price levels can be achieved if countries adopt the monetary policies of China which have been counter-inflationary thus far. Indeed, the dollar peg regime held by China has been mainly intended to peg its domestic price level to the world price level which is predominantly determined by the value of the dollar (McKinnon and Schnabl, 2009).

Financial Market Stability. A stable domestic currency against the denominator of external liabilities is utmost crucial in times of contagion of fear where capital flight

could easily deplete reserves even in the countries that are marginally leveraged (Rogoff, 2005). The Thai and Indonesian experience during the Asian crisis is a very good lesson. If exchange rates had been rigidly fixed, though a debt crisis might still be inevitable, without an exchange rate crisis the resulted consequences would have been much milder.

Unquestionably, most countries in East Asia have transformed into net creditors since the Asian crisis but they are nevertheless confronted by the so-called "conflicted virtue" (McKinnon and Schnabl, 2009). Perhaps due to underdeveloped financial systems and residual capital controls, their currencies are not widely used in international lending and by "immature" international lenders. These "virtuous" surplus countries are "conflicted" because if their currencies appreciate sharply against the dollar, their banking systems with assets mostly in dollars but liabilities typically in domestic currency would be bankrupted. On the contrary, if their currencies depreciate or "crawl" against the dollar, these countries might be accused by international community of subsidizing their exports. Hence, this conundrum would have been avoided if East Asian nations moved from pegged to fixed exchange rates against renminbi which is stable against the dollar, letting automatic specie flows and their domestic price levels to adjust, much like HK and Macau currency boards.

5. Empirical review. 20 empirical papers dated 1994-2009 are reviewed here. The studies can be categorized into those which use dataset prior to the Asian crisis in which the region was experiencing remarkable growth (pre-1997), those which also include the crisis period (pre-2000 dataset), and those which extend the dataset till the post-crisis period (pre-2008) but before the 2008 global financial crisis. Only relevant results from the main analyses are abstracted.

Pre-1997 dataset. In their 1994 much celebrated work, Bayoumi and Eichengreen (B-E) compared 9 East Asian countries to Western Europe. 1969-1989 data and Blanchard-Quah (B-Q) extraction technique were used to extract and quantify demand and supply shocks that affect a country's economy. They concluded that two country subsets came even closer to being OCAs: (1) Japan-Korea-Taiwan and (2) Hong Kong-Indonesia-Malaysia-Singapore-Thailand.

Later in 1999, Eichengreen and Bayoumi complemented their earlier results by regressing bilateral exchange rate volatility on relative output variability, dissimilarity of export composition, strength of bilateral trade, and economic size. Time period of 1976-1995 and 8 Asian countries were examined. 3 country groups displayed significant correlations in the exchange rate variability which were comparable to the European ones: (1) Singapore-Malaysia, (2) Singapore-Thailand, and (3) Singapore-Hong Kong-Taiwan. In another study, Loayza, Lopez, and Ubide (2001) used 1970-1994 data of 7 Asian economies to present evidence from an error components model. The shock dimensions examined were country-specific, sector-specific, and common shocks. The study discovered significant short-run and long-run co-movements of shocks that were comparable to the European ones in (1) Japan-Korea-Singapore-Taiwan and (2) Indonesia-Malaysia-Thailand.

Pre-2000 dataset. In 2000, Yuen examined GDP, real growth, inflation, interest rates, domestic investment, value-added in agriculture, and value-added in services using hierarchical clustering and 1990-1997 data among Asia Pacific economies, of which 9 were Asian. The results suggested 5 country groups: (1) Japan-Australia-New

Zealand-US; (2) Korea-Malaysia-Thailand; (3) Indonesia-Philippines; (4) Hong Kong-Singapore; and (5) China.

In 2001, Bayoumi and Mauro updated the earlier B-E work with the larger dataset of 1968-1998 which involves the crisis period. As before, 9 Asian countries were examined. 2 country sets displayed faster speed of adjustment to supply shocks: (1) Hong Kong-Indonesia-Malaysia-Singapore and (2) Philippines-Thailand. Adopting B-E methodology also, Ngiam and Yuen (2001) used 1967-1997 dataset that included 9 countries. They proposed 3 plausible pairs for a monetary union: (1) Brunei-Singapore-Malaysia, (2) Japan-Korea, and (3) Taiwan-Hong Kong.

Using a dynamic factor model on 10 Asian economies, Lee, Park, and Shin (2004) discovered Indonesia, Korea, Malaysia, Thailand, and the Philippines shared higher degree of regional output co-movements over 1978-1999. In 2005, Kawai and Takagi applied a variation of SVAR model to study the impulse response patterns of real GDP and price to exchange rate depreciations among 9 Asian economies. Time period used is 1970-1998. Symmetry of response pattern in real GDP could be found in (1) China-Hong Kong-Singapore-Taiwan and (2) Indonesia-Korea-Philippines-Thailand. With respect to symmetric response pattern in price, the symmetric groups were: (1) China-Hong-Kong-Singapore-Taiwan-Korea and (2) Indonesia-Malaysia-Philippines.

Pre-2008 dataset. Kawai and Motonishi (2005) analyzed 11 Asian economies to demonstrate that growth rates of real GDP, real personal consumption, and real fixed investment were highly correlated between Japan, Korea, Taiwan, Singapore, Malaysia, and Thailand, and Indonesia and the Philippines over 1980-2002.

Font-Vilalta and Costa-Font (2006) set Japan as the monetary anchor for 5 East Asian countries. In this correlation-based paper which utilized 1963-2001 data, the authors examined synchronization of exchange rates, business cycles, interest rates, exports, and imports. Only Singapore and Korea were found to experience increasing synchronization during 1963-1979, 1980-1997, and 1997-2001.

Complementing VAR approach with generalized purchasing power parity (GPPP) model and using Japan as the reference, Ahn, Kim, and Chang (2006) managed to find ASEAN 4 (Indonesia, Malaysia, Singapore, and Thailand), Hong Kong, Korea, and Taiwan display significant symmetrical response to supply shocks in magnitude and speed of adjustment. Also, ASEAN 4, Hong Kong, Korea, Taiwan, and Japan were shown to share common trends in real exchange rate movement over 1960-2002 (SVAR) and 1970-2003 (GPPP). 10 Asian countries were studied.

Using 1970-2002 data of 9 Asian economies and 1979-1998 EMU data as the benchmark, Huang and Guo (2006) also found Hong Kong, Indonesia, Korea, Malaysia, Singapore, and Thailand to be viable candidates. A four-variable SVAR model was developed to extract external supply, domestic supply, demand, and monetary shocks. Sato and Zhang (2006) employed 1978-2004 Asian data and 1980-1997 EMU data as the benchmark to assess real output co-movements of 8 Asian economies with the cointegration test. Short-run common business cycles were found in (1) Singapore-Thailand-Indonesia, and in (2) Hong Kong-Korea-China, as well as between (3) Japan and Taiwan.

Based on fuzzy cluster analysis, Nguyen (2007) detected a divergence in the post-crisis East Asia. The time periods involved are: 1990-1996, 1990-2000, 1999-

2003 and 1990-2003. From 10 economies considered, only the Singapore-Malaysia grouping could weather all the periods. The criteria used were: symmetry of business cycles, volatility of real exchange rate, degree of trade openness, inflation differential, and export diversification.

Rana (2007) provided simple 10-year moving correlations between real GDP growth of 11 Asian countries and the group as a whole over 1989-2005. Correlations had been converging towards high levels in (1) the Philippines, Indonesia, Japan, Malaysia, and Thailand. They were, however, a bit lower in (2) Laos, China, Singapore, and Vietnam.

Bacha (2008) examined 12 East Asian economies using SVAR and correlation analysis over 1970-2003. For the SVAR analysis, the paper examined the interrelationship among the real GDP growth rates and countries' response to external shocks. For the correlation analysis, the study looked into similarity of inflation, trade relationships, similarity in business cycles, and extent of policy congruence. The results from both techniques indicated 4 potential country pairs: (1) Malaysia-Singapore, (2) Japan-Korea, (3) Indonesia-Thailand, and (4) Australia-New Zealand.

In 2008 also, Ibrahim utilized hierarchical and fuzzy clustering methods on 7 Asian countries using OCA criteria and Maastricht criteria. Results for the pre-crisis (1991-1997) and post-crisis (1998-2004) periods are compared. Japan is set as the reference country. The OCA criteria used are volatility in real GDP, volatility in real exchange rate, volatility in interest rate, trade openness, and convergence of inflation. Results for the pre-crisis period indicated groupings of Indonesia-Philippines and Malaysia-Thailand-Korea. Meanwhile, post-crisis OCA results suggested groupings of Malaysia-Philippines-Thailand-Korea whereas post-crisis Maastricht results indicated groupings of Malaysia-Philippines-Thailand and Singapore-Korea-China.

Another support came from Kawai (2008) who discussed how regional integration has been proceeding in trade, FDI, and other activities and exchange rate arrangements in East Asia over 1989-2003. Comparisons to post-euro EMU were made. From 10 economies examined, those which were sufficiently integrated were (1) Japan-Korea, (2) China-Hong Kong, and (3) Singapore-Malaysia-Brunei.

More recently, Sato, Zhang, and Allen (2009) identified 2 prospective groups: (1) US-Taiwan-Hong Kong-Singapore and (2) Thailand-Malaysia-Singapore-Philippines-Indonesia-Japan. The study employed Johansen cointegration to check the long-run comovements of real outputs over 1978-2006. 10 Asian countries were sampled. Interestingly, the ASEAN countries were prospective only when Japan was included.

Quah (2009) compared the values of the OCA dimensions, namely inflation convergence, export diversification, labor market flexibility, and external indebtedness of 17 Asian economies to those in EMU and dollarized countries over 1980-1996, 1997-2000, and 2001-2007. The anchor currency used is the US dollar. The results suggested that inflation rates and levels of export diversification in Asia were comparable to those in dollarized economies; labor markets in the region were at least as flexible as those in EMU; external debt levels in Asia have fallen considerably in comparison to the dollarized countries, indicating reduced incentive to fix exchange rates to the dollar; and the most prospective countries for a dollar bloc were India, Thailand, and Malaysia.

6. Discussion and conclusion. Whilst results of the reviewed papers differ, it may be more instructive to discuss some of the common threads in them. First, though the

papers have used different methods, some common "groupings" can still be found in the results.

Based on the pre-1997-dataset results, 2 general groupings can be recognized: the Northeast (Japan-Korea-Taiwan) group and the Southeast (Thailand-Malaysia-Singapore-Indonesia) group. The pre-crisis (growth period) data appear to have generated groupings by level of economic development, that is, the more developed Northeast group and the less developed Southeast group.

For those using the pre-2000 datasets, the "Asian Tigers" (Taiwan-Hong Kong-Singapore) group, the "crisis" Korea-Thailand group, and the Southeast Malaysia-Philippines-Indonesia group can be detected. Obviously, the dataset which encompasses the pre-crisis and the crisis period has produced the Asian Tigers group which has been robust during the crisis period, the crisis group which has been severely distressed, and the Southeast group which has been relatively less affected. When pre-2008 datasets are utilized, an "extended Southeast" Korea-Philippines-Thailand-Malaysia-Singapore-Indonesia grouping can be commonly found. It is apparent that this group represents the countries which have been substantially impacted during the crisis but have since rebounded significantly.

Despite variations in the groupings, the original ASEAN members (Thailand, Malaysia, Singapore, Indonesia and the Philippines) appear to be consistently indicated as prospective countries over the periods, including the crisis period. With the expected benefits and the substantially flexible labor at these markets, there is a strong case for a monetary bloc.

Nonetheless, this finding is not highly conclusive since selection bias could have contributed to the results. The fact that the number of countries included differs from one study to another indicates that the sampled cases are varied. Among the studies, relevant Asian economies such as India, Vietnam, Macau, and Brunei have been almost neglected. Some motivation could be behind this. In selecting countries to examine, aside from the data constraints, authors could have been influenced by the notion that flexible exchange rates are undesirable to highly open (and small) economies. Hence, only highly open Asian economies such as ASEAN 5, Japan, Korea etc. are given emphasis. What remains to be unclear, is the non-inclusion of Brunei into almost all the studies even though Brunei is a highly open small economy with the total trade being more than its GDP (Kawai and Takagi, 2005). Of course, Macau is also a highly open small economy. If Hong Kong can be treated as a separate entity in the studies, so does Macau.

Secondly, while early intellectual debate has been spurred by the fact that homogenous regions or countries hardly prevail and hence adjusting mechanisms such as factor mobility, product diversification, flexible exchange rates etc. are needed to achieve the objectives of price stability, full employment, and external balance, the empirical literature appears to have always been on the search for homogeneous countries. There seems to be a consensus among the empirics that symmetrical responses to shocks are extremely important and can be identified in Asia so that adjustment mechanisms may be less needed. Nonetheless, as pointed out by Mongelli (2002), similarity of shocks has been argued strongly as not a strict prerequisite for sharing a single currency if all members of a currency area are financially integrated and hold claims on each other's output. Whilst symmetry to shocks is important, sym-

metry in economic structure is important too (Dellas and Tavlas, 2005). In light of the above, the seminal Bayoumi and Eichengreen's (1994) piece could have impinged an overwhelming influence which partly explains why symmetry in macroeconomic experiences to shocks has gained so much popularity in the empirical works. Along these lines, recent empirical literature could be regarded as the other side of the coin to the early theoretical debate.

Lastly, perhaps due to the ambiguity of a center economy in Asia (unlike in EU where Germany is commonly accepted as the center economy), a monetary anchor is rarely set a priori in the empirical studies.

Policy makers of the original ASEAN members may really need to look into further political and economic integration in light of the economic indication that ASEAN could feasibly constitute an optimal currency area. One possible alternative is to jointly fix their exchange rates to the Chinese currency if the yuan-dollar rate remains stable.

For regional business managers, the findings here may confirm their decisions which are based on the homogeneity assumption of the ASEAN region. In another aspect, decision-makers may consider to locate some of their operations outside ASEAN to reap the advantages of diversification. Nonetheless, one must be aware of the shortcomings implied in the empirical literature that might undermine the validity of the findings.

Unquestionably, the conclusions made here are limited in the sense that only 20 empirical papers dated 1994–2009 have been reviewed and hence may not necessarily reflect the studies in the field at large. The paper also does not intend to address issues pertaining to political and social dimensions.

References:

- Ahn, C., Kim, H.-B., & Chang, D.* (2006). Is East Asia fit for an optimum currency area? An assessment of the economic feasibility of a higher degree of monetary cooperation in East Asia. *Developing Economics*, 44(3), 288-305
- Bacha, O.I.* (2008). A common currency area for ASEAN? Issues and feasibility. *Applied Economics*, 40(4), 515-529.
- Bayoumi, T., & Eichengreen, B.* (1994). One money or many? Analyzing the prospects for monetary unification in various parts of the world. *Princeton Studies in International Finance*, 76, Princeton: International Finance Section, Princeton University.
- Bayoumi, T., & Eichengreen, B.* (1997). Ever closer to heaven? An optimum-currency-area index for European countries. *European Economic Review*, 41(3), 761-770.
- Bayoumi, T., & Mauro, P.* (2001). The suitability of ASEAN for a regional currency arrangement. *The World Economy*, 24(7), 933-954.
- Calvo, G.A.* (2002). On dollarization. *Economics of Transition*, 10(2), 393-403.
- Chang, R.* (2000). Dollarization: A scorecard. *Economic Review 3rd Quarter*. Atlanta: Federal Reserve Bank of Atlanta.
- Chow, H.K., & Kim, Y.* (2003). A common currency peg in East Asia? Perspectives from Western Europe. *Journal of Macroeconomics*, 25, 331-50.
- Dellas, H., & Tavlas G.* (2005). The global implications of regional exchange rate regimes. *Journal of International Money and Finance*, 24(2), 243-255.
- Eichengreen, B., & Bayoumi, T.* (1999). Is Asia an optimum currency area? Can it become one? In S. Collignon, J. Pisani-Ferry, & Y. C. Park (Eds.), *Exchange rate policies in emerging Asian countries*. London: Routledge.
- Font-Vilalta, M., & Costa-Font, J.* (2006). A note on the feasibility of a monetary area in the East Asia. *Asia Europe Journal*, 4(1), 53-58.
- Guide, A. M., Kahkonen, J., & Keller, P.* (2000). Pros and Cons of Currency Board Arrangements in the Lead-Up to EU Accession and Participation in the Euro Zone. (IMF Policy Discussion Papers 00/1). International Monetary Fund.

- Huang, Y., & Guo, F. (2006). Is currency union a feasible option in East Asia? A multivariate structural VAR approach. *Research in International Business and Finance*, 20(1), 77-94.
- Ibrahim, S. (2008). A Study of Optimum Currency Area in East Asia: a Cluster Analysis. *Journal of Economic Integration*, 23 (4), 765-790.
- Kawai, M. (2008). Toward a regional exchange rate regime in East Asia. *Pacific Economic Review*, 13(1), 83-103. Retrieved August 12, 2008, from Synergy Blackwell database.
- Kawai, M., & Motonishi, T. (2005). Macroeconomic interdependence in East Asia: Empirical evidence and issues. In *Asian economic cooperation and integration progress, prospects and issues*. Manila: Asian Development Bank.
- Kawai, M., & Takagi, S. (2005). Strategy for a regional exchange rate arrangement in East Asia: Analysis, review, and proposal. *Global Economic Review*, 34(1), 22-65.
- Kenen, P. (1969). A theory of optimum currency areas: An eclectic view. In: R. Mundell & A. Swoboda (eds.), *Monetary problems of the international economy*. Chicago: University of Chicago Press.
- Krugman, P. R. (1990). Policy problems of a monetary union. In: P. de Grauwe & L. Papademos (Eds.), *The European monetary system in the 1990s*. Harlow: Longman.
- Lee, J. W., Park, Y. C., & Shin, K. (2004). A currency union in East Asia. In: Asian Development Bank, *Monetary and financial integration in East Asia: The road ahead* (pp. 139-175). Basingstoke: Palgrave.
- Loayza, N., Lopez, H., & Ubide, A. (2001). Sectoral Macroeconomic Interdependence: Evidence for Latin America, East Asia, and Europe. *IMF Staff Papers*, 48(2), 367-396.
- McKinnon, R. I. (1963). Optimum currency areas. *American Economic Review*, 53, 717-725.
- McKinnon, R.I. (2005). Exchange rates under the East Asian dollar standard: Living with Conflicted Virtue. Cambridge, MA: MIT Press.
- McKinnon, R. and Schnabl, G. (2009). The Case for Stabilizing China's Exchange Rate: Setting the Stage for Fiscal Expansion. *China & World Economy*, 17: 1-32.
- Mongelli, F.P. (2002). "New" Views on the Optimum Currency Area Theory: What is EMU telling us? (ECB Working Paper Series 138). European Central Bank.
- Mundell, R.A. (1961). A theory of optimum currency areas. *American Economic Review*, 51, 657-664.
- Mundell, R.A. (2003). Prospects for an Asian currency area. *Journal of Asian Economics*, 14, 1-10.
- Ngiam, K. J., & Yuen, H. (2001). Monetary cooperation in East Asia: A way forward. *The Singapore Economic Review*, 46(2), 211-246.
- Nguyen, T. (2007). East Asian Currency Area: A fuzzy clustering analysis of homogeneity (DEPOCEN Working Paper 10). Vietnam: Development and Policies Research Center.
- Quah, C.H. (2009). The feasibility of East Asian monetary union as an optimum currency area. *International Journal of Asia Pacific Studies*, 5(2), 65-90. Retrieved June 11, 2009, from <http://www.usm.my/ijaps/default.asp?tag=-1&flag=5>.
- Rana, P.B. (2007). Economic integration in East Asia: Trends, prospects, and a possible roadmap (Economic Growth Centre Working Paper Series 07/01). Nanyang Technological University.
- Robson, P. (1987). *The economics of international integration*, London: Allen and Unwin.
- Rogoff, K.S. (2005). Fiscal conservatism, exchange rate flexibility and the next generation of debt crises. *Cato Journal*, 25(1), 33-39.
- Sato, K., & Zhang, Z. (2006). Real output co-movements in East Asia: Any evidence for a monetary union? *World Economy*, 29(12), 1671-1689.
- Sato, K., Zhang, Z., & Allen, D. (2009). The suitability of a monetary union in East Asia: What does the cointegration approach tell? *Mathematics and Computers in Simulation*, 79(9), 2927-2937.
- Tavlas, G. (1993). The "new" theory of optimum currency areas. *The World Economy*, 16, 663-685.
- Yuen, H. (2000). A cluster-based approach for identifying East Asian economies: A foundation for monetary integration (Department of Economics Working Paper Series). Singapore: National University of Singapore.

Стаття надійшла до редакції 9.09.2011.