博士論文審査報告書

論文題目

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申請者

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2015年6月
1. Summary

The thesis investigates the issues related to exchange rates and monetary integration in East Asia by focusing on the developments after the 1997-1998 financial crisis. One important reason that these issues were taken up for research by the author was the recognition that the 1997-1998 financial crisis in East Asia, which damaged East Asian economies seriously, was largely due to misalignment of the exchange rates and “original sin,” or inability to borrow funds in local currency from foreign markets.

An analysis of the movement of the exchange rates in the East Asian region revealed that the US dollar, that is the currency of the country outside of the region, plays an important role although many countries switched from the US dollar peg exchange rate system to floating exchange rates. Under the current situation, there is no East Asian currency that is ready to become the anchoring currency. The Japanese yen is one of the major currencies in international financial transactions and therefore is a candidate for the anchoring currency in the region. However, there still remain a number of hurdles such as limited degree of internationalization. The Chinese renminbi has attracted a lot of attention from policy makers and observers as a potential anchor currency in the region reflecting its emergence as a big economic power, surpassing Japan to become number 2 in the world behind the United States in terms of GDP in 2010. Despite rapid rise of the Chinese economy and increasing use of the Chinese renminbi in international transaction, it faces a number of hurdles including the absence of full convertibility in becoming a major international currency.

Monetary integration is considered one of the ways to avoid financial crisis. As such the idea of initiating monetary integration has been floated. This idea was not so far-fetched, as economic linkages through trade and investment in East Asia were deepening. An analysis of the suitability of monetary integration in East Asia shows that only a subset of the countries may be considered suitable for monetary integration. Besides, a lack of political coherence among East Asian countries is argued to be a big obstacle for monetary integration. Moreover, it is pointed out that recent difficult economic situation in the European Union, where monetary integration has been achieved, leads one to rethink the benefit and cost of monetary integration.

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2.2 Contents of the Thesis

Chapter 1 provides the background of the study and the definition of monetary integration, the key concept in the analysis. It also explains the objectives of the study and the methodologies applied for the analysis. The chapter ends by presenting the structure of the thesis and brief description of the chapters.

Chapter 2 presents literature review on exchange rates and monetary integration in East Asia. It takes a look at monetary integration theories and pays attention to European monetary integration process. It then reviews the literature on exchange rate regimes and monetary integration in East Asia and finds that previous research is insufficient in addressing a number of issues: (i) research on the exchange rate regimes in East Asia; (ii) “original sin” and its relation to monetary integration in the region; (iii) impacts of increased vertical intra-industry trade on business cycles, one of the most important indicators of monetary integration, among East Asian economies.

Chapter 3 investigated exchange rate regimes in East Asia. Unlike previous research that used the ordinary least squares method to estimate exchange rate regimes economy by economy, the author used the seemingly unrelated regression model to take into account of the possible correlation between East Asian currencies. The empirical results are three-fold: (i) the exchange rate regimes in the region changed considerably over time; (ii) the role of the US dollar became more important during the recent global financial crisis; (iii) average correlation among exchange rates of East Asian currencies increased over time even after controlling for the effect of potentially important international and regional currencies including the US dollar, the euro and the Japanese yen. The results imply the important unobserved common factor that
influenced daily movements of exchange rates of East Asian economies. This finding may serve as another evidence of increased economic linkages in the region.

Chapter 4 examined the original sin hypothesis and analyzed whether the elimination of “original sin” through monetary integration could be viewed as an appropriate reason for monetary integration in the region. Unlike previous research, the author used panel data analysis based on a random effects Tobit model to examine the influencing factors of “original sin”. The author also used pooled Tobit model for comparative purposes. The empirical findings showed that it was rather hard for all East Asian emerging markets to be free from “original sin” through domestic policies within the intermediate term. The author also examined relation between “original sin” and currency mismatch. Although on average economies with higher levels of “original sin” were likely to have bigger pressure of currency mismatch over the past decade, there was no direct relationship between the annual variation of “original sin” and the annual variation of currency mismatch pressure. Combining the experience of the 2008 euro area crisis, this result suggests that there is no direct relationship between monetary integration and strengthened financial stability through the elimination of “original sin” in the region.

Chapter 5 explored the impact of sustained trade integration on the correlation of business cycles in the region. Specifically, this analysis focused on the impact of vertical intra-industry trade on the correlation of business cycles in the region. Unlike previous studies that adopted only two types of trade, that is, inter-industry and intra-industry trade, this research used the threshold method to divide trade into three types, that is, vertical intra-industry trade, horizontal intra-industry trade, and inter-industry trade. Using a fixed effects model and a random effects model, the author found that the sharp rise of vertical intra-industry trade in the region from the 1990s until the recent global financial crisis. The author also found that the correlation of business cycles increased over time. The recent global financial crisis strongly was found to have affected the region in that the share of vertical intra-industry trade as well as intra-industry trade in overall trade declined. Moreover, the crisis brought a temporary halt to the increased synchronization of business cycles among East Asian economies from 2003 to 2007.

Chapter 6 extended the analysis of the suitability of monetary integration in the region by examining various optimum currency area criteria and real effective exchange rates. The author found that capital mobility increased considerably in the region when compared to two decades ago. Nevertheless, capital market integration process was affected by the recent global financial crisis. The second part of the chapter evaluated the suitability of monetary integration in the region using real effective exchange rates. In a vector autoregressive model, granger causality tests showed that there is a subgroup of East Asian economies that seemed to be more closely associated compared to other economies.
In Chapter 7, the author recapitulates her findings and presents discussions on her views on monetary integration in East Asia by considering recent developments in Europe concerning monetary integration and financial crisis. Despite recent problem in Europe, the author thinks that there are some signs such as emergence of regional production networks and increased synchronization of business cycles that increases the prospect of promoting monetary integration.

3 Discussions at the Oral Defense

Questions and discussions at the oral defense were centered around two issues. One is monetary integration and the other is the methods of statistical analysis. Several questions were raised regarding the issue of monetary integration, a central topic of the thesis. These questions include the definition of monetary integration, the nature of monetary integration in East Asia vis-à-vis monetary integration in Europe and future prospects of monetary integration in East Asia. In response to these questions, the author provided the following answers. The definition of monetary integration that the author adopted is that developed by Max Corden, who argued that two essential components of monetary integration are (1) an exchange-rate union defined as an area within which exchange rates are fixed among the members and (2) convertibility without exchange controls. On monetary integration in East Asia vis-à-vis Europe, the author identified several differences. One big difference is the absence of political coherence in East Asia toward the creation of monetary integration. In Europe political coherence coupled with political leadership enabled the creation of the European Monetary System and later the common currency, Euro. As to the future prospects of monetary integration in East Asia, the author thinks that the future developments depend on political factors. These points were added in the revised thesis.

Turning to the questions on statistical methods, basically two questions were raised. One is the desirability of conducting the Chow test and the other is the suggestion of conducting co-integration test. In the analysis of the changes in exchange rate systems in East Asia over time in Chapter 3, the author compared the coefficients obtained from the analysis conducted for different time periods and argued the magnitude of the coefficients changed without conducting statistical tests. The Chow test was suggested to examine the issue appropriately. The author accepted the suggestion and revised the thesis accordingly. In the same analysis in Chapter 3, the evaluators suggested to conduct co-integration test to examine the stationarity of all variables. The author adopted this suggestion and found the absence of co-integrating relationship. The author revised the thesis reflecting these changes.

4 The Evaluation of the Thesis Evaluation Committee

Regional economic integration has become a very popular subject in many parts of the world. In particularly, East Asian countries seem very interested in
promoting regional economic integration. One of the reasons behind their heightened interest in it is their recognition of high economic growth potential of the region. East Asian countries have been achieving high economic growth for many decades and they are forecasted to maintain high economic growth in the future. Their performance in economic growth has been remarkably favorable when compared to other regions. East Asian countries believe that promotion of regional economic integration would contribute to the realization of high economic growth by increasing and intensifying the economic ties among the countries in the region.

Against the backdrop of these developments, researchers have become increasingly interested in the issues related to regional economic integration. Economists have analyzed the issues mainly from two perspectives. One is to focus on trade, investment and production with a particular interest in the investigation of regional production networks. The other is to focus on financial and monetary aspect. The interest in this aspect increased after the East Asian financial crisis in 1997-1998. This thesis takes up the issues by mainly focusing on financial and monetary aspect with some consideration of the first aspect. This thesis contributes to the literature significantly by summarizing the previous studies and by conducting new empirical research. Among many contributions, the evaluation committee members evaluate highly the contributions in the analysis of the following issues: the evolution of the exchange rate systems in East Asian countries, the determinants of original sin, and the relationship between vertical intra-regional trade and business cycle synchronization. The most important contribution stems from very careful empirical analysis by applying appropriate methods to the issues concerned.

Based on the evaluation presented above, the evaluation committee members came to a unanimous decision that Jingjing Meng, the author of the submitted thesis, should be granted a Ph.D.
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2015年 6月29日