



# Real and Financial Integration in Asia – Recent Evidence and Policy Perspective

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## Abstract

The papers in this Special Issue focus on real and financial integration in Asia. The papers were presented at a workshop organized by the FernUniversität Hagen. We discuss core results and discuss potential policy implications related to monetary policy in China and the integration of Asia in the world economy.

**Keywords** Asia · Real and financial integration

**JEL classification** Code: F13 · F41 · E52

## 1 Introduction

From May 25 to 26, 2021, the FernUniversität Hagen hosted a Workshop on Real and Financial Integration in Asia. This special issue presents a peer-reviewed selection of papers from the workshop comprising both real and monetary studies in context of Asia's integration in the world economy. The contributed papers sort into two sections: The first section deals with monetary policy and the monetary system while the second part has a stronger focus on the real sector and international trade.

Figure 1 shows some data on the evolution of Asia's and Europe's nominal and real integration in the world measured by international capital and trade flows. The comparison group in this first glimpse at the data is Europe, where the share in

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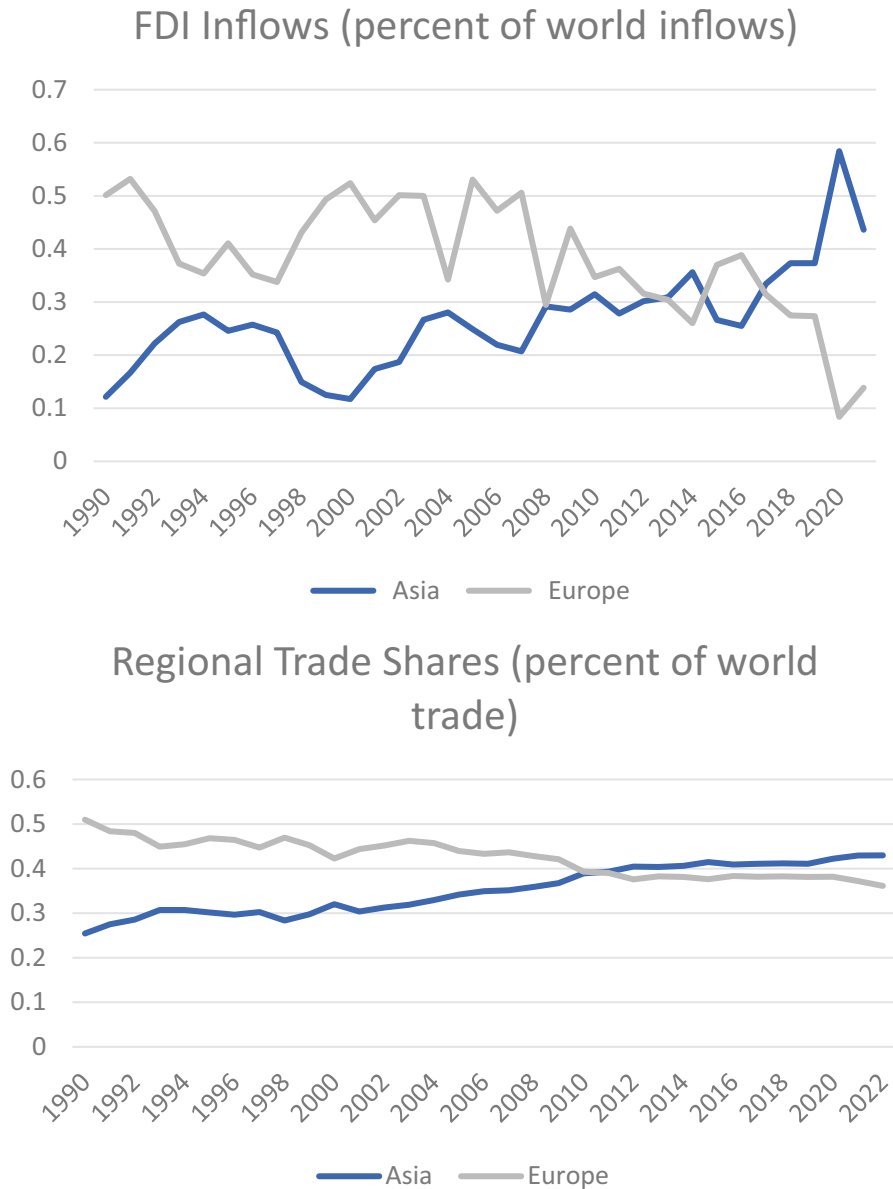


Fig. 1 Asia's Realand Nominal Integration in the World

worldwide inward FDI flows and the share in worldwide merchandise trade were both declining by respectively more than 20 and more than 10 percentage points. To some extent, these developments are likely caused by the rise of Asia and in particular China. In their attempt of gaining market share, firms in and out of Asia invested huge amounts in China and its neighbors during the period studied in Fig. 1. The

more successful investments caused soaring trade flows of final and intermediate goods, which may also explain the increase in real trade flows in Asia documented in the lower panel of Fig. 1. Some of the deeper determinants of this market integration in Asia are discussed in the various contribution presented at the workshop in Hagen.

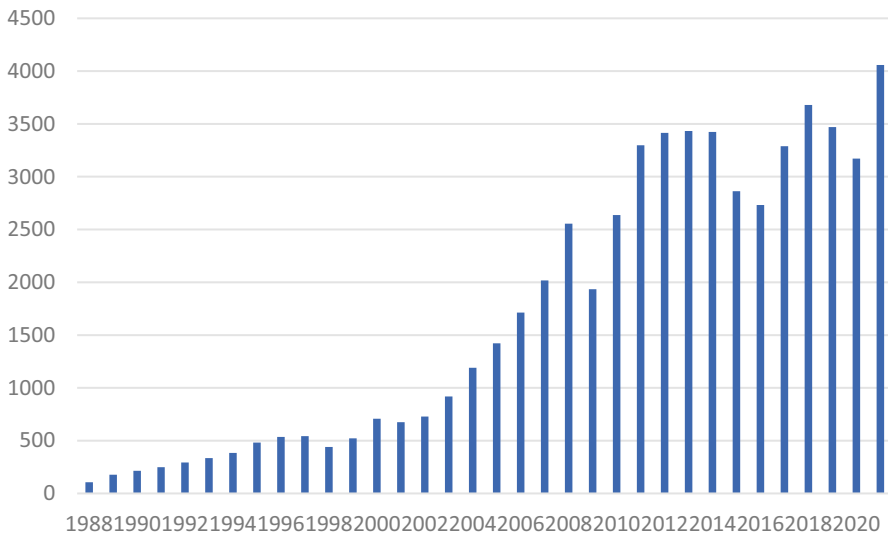
However, measuring financial and real integration going beyond the broader picture shown in Fig. 1 is challenging. Potential measures of real integration include the size of intra- and inter-regional trade while financial integration can be measured through cross-border financial assets, correlation of stock returns, interest rate differentials and the use of domestic currencies. Given that some of these quantities, in particular interest rate and stock return correlations, are heavily influenced by the global financial cycle, we will not discuss all measures in greater detail and focus on the use of domestic currencies and intra-regional trade. Some contributions to this special issue are dealing with trade agreements between Asia and the rest of the world. These initiatives are aiming at a stronger integration of Asia with other regions, for example the European Union, and are complementary to policies which are designed to achieve stronger integration between Asian countries.

One important determinant of regional integration is a commonly accepted currency used to convert local prices for international trade. Eichengreen (2011) argues that the world is heading towards a multi-polar system where the Euro dominates in Europe, the US dollar is the anchor in the Americas while Chinese Renminbi becomes the main currency in Asia. However, as it stands today, the Dollar is still the dominant invoicing currency in Asia (Boz et al. (2022) and also the dominant currency in terms of reserve holdings, debt denomination and currency anchor in Asia. This strong dependence might seem surprising given the strong economic growth in Asia over the last decade and the emergence of China. As the largest economic region in the world, a stronger use of Asian currencies as anchor would be sensible and China's Renminbi is a natural candidate given the strong regional ties. However, an increase in its relevance could also coincide with a deteriorating role of the yen, generating further turmoil in the region.<sup>1</sup>

Despite the dominance of the Dollar, some regional initiatives have promoted the use of local currencies instead. The ASEAN+3 Finance Ministers' declared aims are strengthening policy dialogue, coordination, and collaboration on common financial, monetary, and fiscal issues. The local currency settlement framework (LCSF) represents a set of bilateral agreements among central banks to use their own currencies for cross border settlements of bilateral trade, foreign direct investment and other international transactions through designated banks as appointed cross currency dealers (ACCDs), including direct exchanges of the two currencies without the triangle transactions of using the U.S. dollar as a vehicle currency. An increasing amount of countries are implementing LCSF. As it stands, the use of local currencies will gradually keep expanding particularly in the area of trade invoicing or settlement and even for some international financial transaction (Asian Development Bank 2022).

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<sup>1</sup> Ilzetzki et al. (2019) argue that Chinas bound to the dollar reduce the probability that countries might use the yuan as an anchor.



**Fig. 2** Intra-regional trade in Asia

A popular proxy for real integration is the size of intra-regional trade. Figure 2 provides an overview of intra-regional imports in Asia between 1988 and 2020. The strong increase until 2005 has not been affected by the currency crises in 1997/1998. The level of intra-regional imports has hardly increased after 2012 which might also suggest that Asia has already reached a high degree of real integration.

According to the Asian Economic Integration Report (AEIR) 2022, intra-regional trade made up to 58.5% of Asia's total trade in 2020, the highest share since 1990. It is also important to point out that initiatives such as the EU-South Korea Free Trade Agreement were designed to strengthen Asia's trade with the rest of the world.

Kim and Lee (2012) point out that financial integration in Asia lags real integration. Comparing the development of intra-regional trade with the use of domestic currencies supports this view. The strong role of the dollar and the global financial cycle are detached from the contribution of the United States to the World GDP and stronger trade ties within Asia have resulted in efforts to the stronger use of local currencies.

The papers presented in this special issue and summarized in the following overview of the introduction do not deal with overall measures of integration. The focus is instead on specific topics related to specific aspects of integration and local economic development in Asia.

The first study in the monetary block titled "The Impacts of Financial Crises on the Trilemma Configurations" by Joshua Aizenman, Menzie Chinn and Hiro Ito analyzes the impact of crises on the impossible trinity and foreign reserves. The impossible trinity illustrates the finding that governments can pursue only two of

the following three objectives: free capital mobility, fixed exchange rates and independent monetary policy. The authors argue that accumulating foreign reserves is a fourth pillar that boosts financial stability in open financial markets. Moving from any corner within the trinity towards a corner with more open financial markets induces additional risks that can be compensated by accumulating foreign reserves. The paper's contribution to this debate is comparing the changes in the interplay between currency reserves and trilemma policies before and after the Asian and the Global Financial Crisis. The results show that countries faced with significant terms of trade shocks or negative economic growth during the Asian Financial Crisis increased reserve holdings afterwards. Negative growth during the crisis can be associated with a government's higher tendency towards having more exchange rate flexibility and a more open financial market. A more granular view on these findings shows that this result appears in commodity exporting countries only. Overall, countries increased their foreign reserves after the financial crisis.

Related to this first study on country-level adjustment strategies to financial crises, the second paper in this special issue looks at international spillover effects. Vulnerability to global shocks provides another perspective on economic integration since one aim of strong regional integration is to reduce the dependency from the global economy or the global financial cycle. The title of this second paper is "When the United States and the People's Republic of China Sneeze: Monetary Policy Spillovers to Asian Economies" by John Beirne, Nuobu Renzhi and Ulrich Volz. Monetary policy spillovers from the US and the People's Republic of China (PRC) to real and financial sectors in advanced and emerging economies are studied using a structural vector autoregression (SVAR) model. Their results show that Asian economies tend to be more susceptible to spillovers to GDP, inflation, and the current account emanating from monetary policy shocks in the PRC. Contrary to previous results in the literature, they find more persistence in the response of advanced Asian interest rates to PRC monetary policy shocks. These findings are important since previous research has frequently focused on spillovers from the US.

The paper "On the International Spillover Effects of Uncertainty" by Anindya Sen and Dennis Wesselbaum also contribute to the discussion on spillover effects. They assess spillover effects of economic policy uncertainty across borders. Based on a multivariate GARCH, which allows for a time-varying correlation structure of economic policy uncertainty across countries, they show that spillovers are relevant, vary sizably over time, and that spikes can be related to policy events, illustrating the connectedness of policy choices and the potential need for policy coordination. The results also show that correlations between policy uncertainty in China and the other countries in the sample are comparably small but also identifies negative spillover effects of policy uncertainty in China on the real economy of the US.

The last paper in the monetary block is focusing on monetary policy in China. In "China's Monetary Policy and the Loan Market: How Strong is the Credit Channel in China?" the authors Max Breitenlechner and Riikka Nuutilainen study credit supply effects in the transmission of Chinese monetary policy. They show that the credit channel constitutes an important and economically relevant transmission channel for monetary policy in China. Based on zero and sign restrictions in a structural vector autoregressive framework, they identify monetary policy shocks and supply

dynamics in the loan market. Their findings show that policy shocks that coincide with loan supply effects account for roughly 60% of the overall effects of policy induced output dynamics. This illustrates the key relevance of credit supply for monetary policy transmission in China.

The second part of the special issue has a strong focus on real integration of Asia in the world economy. In “Rising Wages and Intra-country Industry Relocation: Evidence from China” Yuting Li, Karsten Mau and Mingzhi Xu present a firm-level study on supply shortages in the labor market when wages and production costs of firms are increasing. Their analysis contributes to the debate revolving around the role of low labor costs for China’s economic success. Among the crucial drivers behind the Chinese export success were low wages and ample supply of labor but this comparative advantage deteriorated over time. The authors argue that there are regional disparities in China with regard to wages and labor supply. The wage growth documented for the whole of China may be more representative for the economic hotspots in China, whereas less developed places in the hinterland lack far behind in this regard. Their analysis aims at shedding light at regional disparities in wage growth based on a firm-level data approach. Their Chinese establishment data covers the period 1999-2007 and contains information about the precise location of the respective firm. This regional information can be used to infer information about the labor cost situation at the respective firm’s local labor market. The results suggest that, after controlling for the local industry’s own wage rate and value added per worker, a higher average wage level in a location reduces production, employment and the number of firms. This result helps explaining why other countries in Asia gained stance in more recent times. Firms become less competitive due to rising labor costs.

Another important initiative with significant impact on countries in Asia and the rest of the world is the EU-South Korea Free Trade Agreement. The study “The Trade Effects of the EU-South Korea Free Trade Agreement: Heterogeneity across Time, Country Pairs, and Directions of Trade within Country Pairs” by Benjamin Jung contributes an analysis on trade effects associated with this free trade agreement to this special issue. The author applies a gravity approach to a novel dataset that includes both inter- and intra-national trade flows. Overall, the author finds some anticipation effects on bilateral trade shortly after the announcement but insignificant effects in the long run. However, a more granular look at the data reveals heterogeneous effects on bilateral trade along several dimensions. The decomposition exercise shows that the EU-South Korea Free Trade Agreement has raised goods exports of EU countries to Korea significantly, but lowered imports from Korea. Moreover, the effects differ across countries. Finally, the results show that the US-South Korea Free Trade Agreement (which entered into force in 2012) significantly raised US imports from Korea, but had no effect on US exports to Korea. Overall, the pattern for trade in services differs substantially from the one for trade in goods.

“Transforming East Asia: Regional integration in a trade war era“ by Karen Jackson and Oleksandr Shepotylo presents a closely related study on trade and welfare implications of the same free trade agreement. However, their paper takes political tensions between the US and China into consideration and their identification

strategy is different from the strategy proposed by Benjamin Jung. The authors employ a structural gravity approach to explore the effects of these cooperative and non-cooperative trade policies. Their results show that the free trade agreement can compensate for continued trade tensions in China. Reductions in tariffs are expected to lead to larger welfare gains compared to those stemming from lower non-tariff barriers to trade. Moreover, a deeper agreement will be more welfare enhancing for all members involved. Overall, East Asian integration appears to be a more appealing prospect in light of tensions with the US.

Another study in this block takes a look at more recent developments in trade between Asia and the rest of the world. In “The COVID-19 pandemic and Chinese trade relations” Jaqueline Hansen, Antonia Kamaliev and Hans-Jörg Schmerer construct a panel containing information about bilateral monthly trade with China and non-pharmaceutical interventions against Covid-19. The authors argue that non-pharmaceutical interventions had an effect on countries’ bilateral trade with China through domestic demand and domestic supply. Their panel regression results suggest a reduction in monthly Chinese exports to countries that introduced more stringent lockdown measures. They extend their analysis by decomposing observed trade flows into gravity and residual trade components. More stringent lockdowns are associated with less residual trade. Moreover, an event study approach reveals a negative effect of the Covid-19 outbreak in China but this effect vanishes after only 2 months.

“The double trap in China - Multiple equilibria in institutions and income and their causal relationship“ by Linda Glawe and Helmut Wagner focuses on the middle income trap in China by discussing multiple equilibria in institutions and income and their causal relationship. Their works aims to add further arguments to this discussion by focusing on the concept of club convergence. They assess whether institutional quality in low-income provincial level administrative divisions converges to the level experienced by relatively highly developed ones or whether multiple institutional clubs exist. Focusing on a sample from 1995 to 2007 they identify multiple institutional clubs within China, three rather small clubs which follow an above-average high institutional quality path and two clubs which find themselves on a relatively low institutional quality path and which together account for the majority of provinces and autonomous regions. They also show that various members of the poor institutional clubs are additionally caught in a low-income trap. Further evidence suggests that institutional traps are important determinants of income traps, giving rise to the recently identified phenomenon of a ‘double trap’. Finally, the results indicate that human capital and urbanization are additional important determinants of income traps, while globalization is decisive for avoiding poor institutional traps.

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**Data Availability** All datasets used in this article are publically available.

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