More Integrated than Ever? Long-Term Market and Policy Drivers of Intra-Asian Trade

Alejandro Ayuso-Díaz[+], and Antonio G. Gómez-Plana

INARBE Universidad Pública de Navarra, Spain

Abstract Since the Doha Round stalemate after 2001, trade liberalization has progressed through regional trade agreements (RTAs) and East and Southeast Asia is not unfamiliar with this. Before assessing the effectiveness of recent trade agreements, the long tradition of trade exchange in this region that has lasted for more than 2,000 years necessitates an understanding of the evolution of intra-Asian trade across history. In this regard, this study contributes to the literature examining whether present intra-Asian trade is more or less intense than before 1938. This research outperforms previous studies using a gravity model that controls for changes in GDP and trade costs in the region across four different time periods (between 1840 and 2018). The results show that contemporary regional trade in East and Southeast Asia is slightly less intense than before World War II. A second question addressed is the relevance of trade agreements after the 1985 Plaza Accord on trade integration, compared with market determinants. A second gravity model for regional imports after 1986 is regressed on both policy and market indicators, indicating that the latest wave of intra-Asian trade is characterized by trade complementarities that are fueled by regional foreign direct investment, and free trade agreements are less effective. This result is validated through a network analysis demonstrating the symbiosis between trade and investment flows in the region, which should be considered in RTAs that are in place or in negotiation to take intra-Asian trade beyond its historical limits.

Keywords: regional integration, gravity model, foreign direct investment, free trade areas, network analysis

+Corresponding Author: Alejandro Ayuso-Díaz
Posdoctoral Researcher Juan de la Cierva, Departamento de Economía, INARBE Public University of Navarra, Pamplona, Spain. E-mail: alejandro.ayuso@unavarra.es
Co-Author: Antonio G. Gómez-Plana
Associate Professor, Departamento de Economía, INARBE Public University of Navarra, Pamplona, Spain.
E-mail: agomezgp@unavarra.es

I. Introduction

The stalemate in the World Trade Organization's (WTO) multilateral negotiations during the Doha Round in 2001 opened the way for a proliferation of regional trade agreements (RTAs) to deepen economic integration. East and Southeast Asian countries have been involved in many of these regional negotiations.[1] For example, recent agreements have been implemented among these Asian countries (e.g., the Association of Southeast Asian Nations (ASEAN)[2] and China signed in 2019), between Asian and nearby regions (Indonesia-Australia and China-Australia, signed in 2020) and between Asian and distant developed and developing countries (Viet Nam-European Union in 2020 and China-Mauritius signed in 2021). The most prominent RTA signed within the region is the Regional Comprehensive Economic Partnership (RCEP), which entered into force in 2022. It is the world's largest RTA in terms of population and GDP, among other variables. The RCEP groups the ten member states of the ASEAN plus Australia, China, Japan, New Zealand, and the Republic of Korea, and Bangladesh and Hong Kong have applied for membership.

A proper analysis of Asian economic integration requires a comprehensive understanding of the historical evolution of trade integration within the region and how RTAs have affected intra-Asian trade in the past compared with other variables and determinants. Analyses of the long-term trade dynamics in this region must also consider recent singularities, such as the effect of the 1985 Plaza Accord on yen revaluation and Japanese trade and investment patterns, the preeminent position acquired by the region due to the development of global value chains and China's opening to international trade, especially from in 2001 with its accession into the WTO (Xing 2016; Escaith and Inomata 2011; Morck and Yeung 2016).

Research on regional economic integration processes in Asia is vast, and has largely focused on causalities. Two phenomena of "regionalism" and "regionalization" have been used to explain the seminal reason for regional integration. See Hoshiro (2019, pp. 199-204) for a recent survey of existing research on regionalism and regionalization. Regionalism is considered a top-down integration process in which the political authorities of two or more countries reach a formal agreement to reduce barriers. This can be considered a policy-driven integration process. In contrast, regionalization is a bottom-up process in which private agents lead the growth in regional transactions. In this case, regionalization can be considered a market-driven process.

Intra-Asian trade networks are not a recent phenomenon. They have a 2,000-year history (Hung and Chao 2016) and the relevance of intra-Asian trade has not been uniform. Some researchers have claimed that Southeast Asia experienced an Age of Commerce between the 15th and

---

1) According to the WTO (2022a), East Asia is the second region in the world with more RTAs implemented, only behind Europe.

2) ASEAN was established by Indonesia, Malaysia, The Philippines, Singapore, and Thailand in 1965. Brunei Darussalam entered ASEAN in 1984, Viet Nam in 1995, and Lao PDR and Myanmar in 1997. The most recent member was Cambodia in 1999.

17th centuries (Reid 1988), while others place it even earlier, between the 10th and 14th centuries (Wade 2009). In consequence, this study explores the literature on the history of regional trade in East and Southeast Asia from 1840 to 2018. Two principal streams emerge, one of which argued that present levels of intra-Asian trade have no precedent in history (Sugihara 2019), whereas the other claimed that the intensity in East and Southeast Asian regional trade that was reached prior to World War II (WWII) has never been recovered (Petri 2006). We approach this debate by comparing the intensity of pre-1938 regional trade flows with the regional trade bias inherent to East and Southeast Asian imports from 1948 to 2018, applying a deeper analysis for the 1986-2018 period. We do this by providing a methodological upgrade for quantifying regional trade intensity that examines members' GDP and trade costs between 1840 and 2018 using a gravity model. For an overview of gravity models, see, e.g., Head and Mayer (2014) and Yotov et al. (2016).

In this study we do not seek to determine whether East and Southeast Asian trade integration was caused by variables linked to regionalism that have fueled regionalization or the causality process was the inverse. Instead, we include both policy and market variables with the primary aim of measuring the intensity of regional trade integration in East and Southeast Asia across different historical periods from 1840 to 2018. A second aim is to measure the influence of past RTAs and other policy determinants on intra-Asian trade by comparing their strength with a set of market determinants for the more recent 1986-2018 period, developing a second gravity model for this purpose.

The structure of the remainder of this paper is as follows. Section II first describes the research on the historical evolution of regional trade intensity in East and Southeast Asian territories. Second, the section reviews the literature regarding factors that explain the current intensification of regional trade. Section III describes the main features of intra-Asian trade after WWII. Section IV details the empirical model and data sources employed to evaluate the intensity of intra-Asian trade. Section V analyzes whether the current intensification of intra-Asian imports can primarily be explained by market or policy factors. This section also analyzes the centrality of the import networks of a set of goods to illustrate the influence of the market determinants of regional trade. Finally, Section VI concludes, offering some insights on the future of Asian trade integration.

II. The Intensity of Intra-asian Trade and Its Determinants: Controversial Perspectives

A. A review of controversial studies on the degree of intra-regional trade in East, Southeast, and South Asia throughout history

This section aims to survey the principal studies regarding the evolution of intra-Asian trade across history to contextualize the current trade intensity in East and Southeast Asia trade

integration. Most researchers have noted a continuous increase in Asian regional trade since the 1980s (Athukorala and Kohpaiboon 2009; Ba 2014); however, they disagree about the impact of the East Asian financial crisis on trade in the second half of the 1990s. For example, Chia (2010) asserted that the crisis was the main motivation for this process, whereas Soesastro (2006) contended that Asian trade integration decelerated following the financial crisis.

This study contends that assessment of the degree of intra-regional trade should employ a longer term perspective to determine whether present integration is unprecedented. In this regard, there are two opposing positions. Some authors have concluded that regional trade bias in East and Southeast Asian trade is only a recent phenomenon. For example, arguing that those countries did not share common economic targets until the end of the 1980s (Langhammer 1995). Indeed, before WWII, the region consisted of fragmented colonies and only Japan attempted to build an integrated region (Pempel 2000). Similarly, some studies have concluded that intra-Asian trade during the high colonial period (1883-1928) was smaller than long-distance trade and was mainly driven by Western powers. Moreover, trade between neighboring countries only became a driver of East and Southeast Asian development in the 1970s (Shimada 2019). Finally, Sugihara (2019) demonstrated that intra-Asian trade rose from 27% to 70% of total trade from 1950 to 2014, whereas it only equated to 53% of trade in 1938. The problem with the measurement used is that it did not consider the fact that the economic size of the region is much larger in contemporary times than before WWII, transforming neighboring countries into more attractive partners.

An alternative perspective regarding the evolution of trade regionalization has argued that never in history have East and Southeast Asia reached the levels of intra-regional trade intensity attained before WWII. Frankel (1991) even claimed that intra-Asian trade decreased during the 1980s. Petri (2006) went back further in history, finding that the relative and double relative measures of regional interdependence in Asia were higher in 1938 than in the early 2000s. Both indicators controlled for increases in the economic size of the countries in the region, as they were deflated by the region's share of world trade. Nevertheless, such measures still did not control for the evolution of trade costs within the region across time. According to some authors, the reason that contemporary intra-regional trade is less intense than in the past is that Japanese manufacturers have been unwilling to transfer the production of certain goods. As a result, regional networks are unable to exploit their full labor potential and final products are assembled in the newly industrialized economies (NIES),[3] ASEAN, and China are exported abroad rather than to Japan (Bernard and Ravenhill 1995). In addition, regional integration may have been undermined by the divergence in political regimes that emerged following decolonization (Beeson 2014, pp. 1-21). Other recent studies have covered longer time periods, concluding that East and Southeast Asia was a well-integrated region, with intense trade and migrant exchanges before 1800. After this time, the arrival of Western colonizers fragmented

---

3) NIES include Hong Kong, the Republic of Korea, Singapore, and Taiwan.

economic relations, which only began to reemerge recently (Rana 2012). Finally, regarding financial integration, some scholars have claimed that the intensity of intra-Asia investment was higher in 1938 than in the early 1990s (Hirst et al. 2015).

This study addresses this controversy in Section IV, examining whether intra-Asian trade was more intense than what economic size and trade costs between countries may indicate and in which historical period this intensity was higher.

B. The controversy regarding the determinants of regional trade integration

The nature of the determinants of trade integration in East and Southeast Asia in the most recent decades has also generated discussion among scholars. These arguments can be categorized into two different, though interrelated, forms, including supporters of regionalism as the main reason behind recent increases in the intensity of intra-Asian trade and those advocating the regionalization hypothesis supporting the role of markets. We next present a review of the literature on both factors.

With respect to policy factors, Sapkota and Shuto (2016) argued that the establishment of RTAs among member states is the main engine of the deepening trade relationships within the region. Similarly, Tachiki (2018) asserted that Southeast Asian economic integration is based more on intergovernmental agreements. Others have focused on individual initiatives, concluding that prior to the 1997 financial crisis, East Asian regionalism was advanced through a set of unilateral tariff reductions, and only in the 2000s did negotiations for a China-ASEAN Free Trade Agreement trigger regionalization based on bilateral agreements (Baldwin 2008). Finally, in addition to trade, member states' investment liberalization and market deregulation have reinforced East and Southeast Asia economic integration in the past decades (Yoshimatsu 2002; Trinidad 2010).

Apart from trade or investment agreements and policies, the diversity of political regimes established in East and Southeast Asia after WWII may also have undermined regional integration (Beeson 2014). Thus, Kim (2012) noted that the rivalries between China, Japan, and even the United States (US) have pushed small powers like ASEAN to become leaders in regional initiatives (the RCEP is the most recent example). The inward-looking regional perspective of China has also contributed to ASEAN leadership (Yuzhu 2011). In addition, monetary and exchange rate policies might play a role in the reemergence of intra-Asian trade. Kawai (2008) argued that the process of Asian economic integration would benefit from a harmonization in exchange rate regimes. Finally, Bhattacharyay (2009) and Ando and Kimura (2005) found that increasing investment through public-private partnerships in transportation and communications infrastructure was crucial for deepening East and Southeast Asian integration.

Regarding authors asserting that the recent expansion of intra-Asian trade has primarily been market-driven, Soesastro (2006) argued that it is a result of increased trade complementarity between members. Such complementarity was ignited by the production fragmentation generated by

the rise in Japanese foreign direct investment (FDI) to its neighbors following the 1985 Plaza Accord. As a result, Japan began to focus on exporting capital and intermediate goods to locations where they were assembled and transformed into final products. Initially, the principal destinations were the NIES, then ASEAN, and finally China (Fung et al. 2010; Fung et al. 2013). The NIES and ASEAN have recently followed similar dynamics under a "flying geese" pattern that has reinforced regional trade connections with China as the assembly point.[4] Finally, China has emerged as the principal investor and exporter of intermediate and capital goods to the region (Byeong-Hae 2004; Doner 2007; Sally 2010; Thorbecke and Salike 2013). This process also promoted an intra-Asian division of labor that might have also expanded regional trade (Borrmann and Jungnickel 1992). Other researchers determined that the economic growth experienced by these territories in the past decades is the primary explanation for current intra-regional trade intensity in East and Southeast Asia (Lloyd 1996; Jha 1997). We address this controversy in Section V applying regression and network analyses.

III. A Contextualization of East and Southeast Asian Trade Intergration After WWII

This section presents descriptive statistics that help to address the controversies described above. First, Figure 1 presents an illustration of the evolution of the share of intra-Asian trade over total imports by the territories examined. Regional imports were high during the first wave of globalization (1840-1913), given relatively low levels of GDP and prevailing high trade costs between Asian countries. The natural tendency to trade with neighbors explains this remarkable trade integration, which was upgraded by colonizers' investments in Interwar years, and the emergence of the Japanese Empire (Ayuso-Díaz, 2022). The literature has emphasized trade disintegration in the region following WWII, which is reflected in the data.

After WWII, the two dominant empires collapsed and were replaced by the US as the most influential power. Japanese firms concentrated reconstruction efforts on revitalizing national manufacturing, abandoning investment and trade links in neighboring countries (Lincoln 2004). These efforts, and the economic isolation adopted by the recently created People's Republic of China, established a new framework in which countries in the region looked toward the US and eventually Europe as their primary trade partners (Petri 2006). The first country to consider the US as a preferential trade partner was Japan. In the aftermath of WWII, US officials managed the recovery in Japan, providing supplies and technology and promoting Japanese

---

4) The flying geese paradigm was developed by Akamatsu (1962) in the 1930s in Japan, and was popularized among Western scholars by Cumings (1984) when describing the development process of East and Southeast Asian countries. Japanese industrialization in the interwar years engaged a process in which latecomers initially replicate the developmental experience of countries ahead of them, just as geese do when flying in a group (Bernard and Ravenhill 1995).

imports to the US. In addition, the export-led strategies initiated by the NIES depended on US willingness to accept the imports of these countries, along with considerable trade deficits (Ikenberry 2004). In contrast to these countries, China and India opted for import substitution strategies to establish self-sufficiency (Sugihara 2019). The disparities in political and economic regimes found in East and Southeast Asia after colonies' independence also seems to have contributed to reductions in regional trade immediately following WWII.

The tendency in favor of regional trade reemerged with the development of Japan in the 1960s, and continued in the 1970s with the rise of NIES. A turning point took place in the 1980s, when China opened, inviting trade and cooperation with other East Asian economies (Wong 2004; Jha 1997). During this decade, Japanese multinationals began to invest heavily in other countries in the region, guided by the revaluation of the yen after the signing of the Plaza Accord in 1985. These investments fueled trade liberalization in these countries by boosting confidence in the outward orientation of economies (Nicolas 2016). Figure 1 demonstrates that the contemporary share of regional trade is still slightly below that of the Interwar years.

Figure 1. Share of regional imports in East and Southeast Asia (1840-2018)
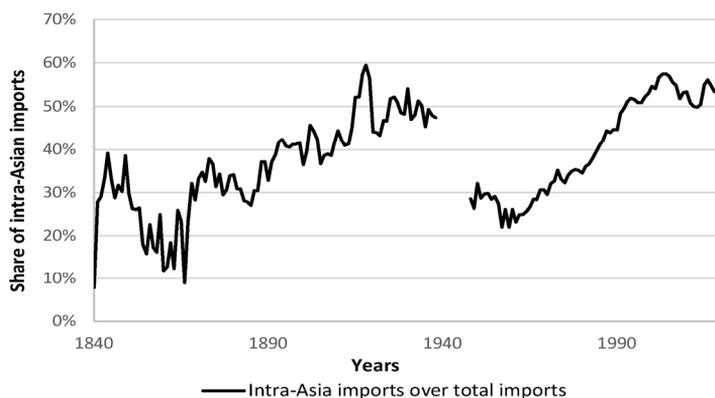
(Source) 1840-1938: Author's elaboration from Statistical Abstract for The Principal and Other Foreign Countries (various annual volumes from 1880 to 1899): Annual Returns of the foreign trade of Japan (various volumes); Returns of the Trade of Taiwan for Forty Years (1896-1935); Annual return of trade of Taiwan (Formosa) (1936-1942); Commercial Reports from H.M. Consuls in China (1864-1869); Statistical Abstract for The Principal and Other Foreign Countries (1870-1906); Report on the trade of China, and Abstract of Statistics. Foreign Trade of China (1908-1938); Statistical Abstract for British India (1840-1938) and Statistical Abstract for the Several Colonial Possessions of the United Kingdom (1877-1891); An Outline of the Commercial Statistics of Ceylon 1840; Reports On The Finance And Commerce Of The Island Of Ceylon 1847; Statistical tables relating to the colonial and other possessions of the United Kingdom (1854-1866); Statistical Abstract for the several Colonial and Other Possessions of the United Kingdom (1870-1891); Statistical Abstract for the several British Colonies, Possessions and Protectorates (1892-1906); Statistical Abstract for the several British Overseas Dominions and Protectorates (1909-1923) and Statistical Abstract for the British Empire (1925-1938); Census of the Philippine Islands (1954) and Annual Report of the Bureau of Customs (various years, data summarized and accessible at http://www.ier.hit-u.ac.jp/COE/Japanese/discussionpapers/DP97.28/table3.htm); Commercial Reports of H.M. Consuls in Siam (1864-1895); Statistical Abstract of foreign countries, Parts I-III; Statistics of foreign commerce. October 1909 (1896-1909); the Foreign Trade and Navigation of the Port of Bangkok (1910-1927) and Statistical Yearbook Thailand (1928-1938); Annuarie Statistique de la France (1882-1930) and Annuarie Statistique de L'Indochine (1931-1938); Dedinger and Girard (2017), Korthals Altes (1991), Ohkawa et al. (1967-1989), Fouquin (2016), and Barbieri & Keshk (2016). 1948-2018: Author's elaboration from International Monetary Fund (2021b) and Barbieri & Keshk (2016).

Regarding the determinants of the most recent expansions in intra-Asian trade, in Section II.B we have seen authors remarking the determinant role played by FDI (Soesastro, 2006). Hence, FDI contributed to the development of global value chains to East and Southeast Asia, as investments implied the relocation of aspects of the production process by Japanese companies to neighboring territories. Such investment paralleled Japanese exports of intermediate and capital goods to FDI host countries to complete the production process, with Japan then importing the final product. Figure 2 demonstrates the positive correlation between FDI growth rate and the proportion of regional trade between East and Southeast Asia partners, both of which grew remarkably from 1986 until the 2008 financial crisis and then stagnated.

Figure 2. Regional FDI (left) and Intra-Asian trade (right) (1986-2018)
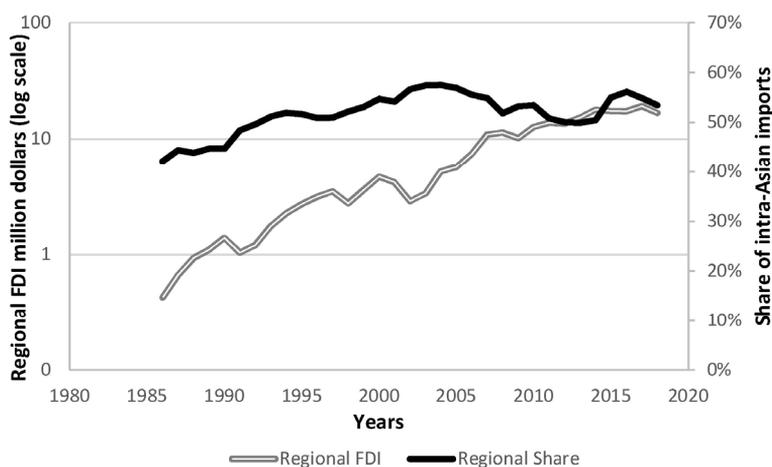
(Source) Author's elaboration from International Monetary Fund (2021a, 2021b), Barbieri & Keshk (2016), and the Organization for Economic Cooperation and Development (2022a).

Figure 2 supports research defending market-driven Asian integration from the 1980s. The opposite perspective applies to the establishment of the ASEAN Free Trade Area (AFTA) in 1992, wherein the main political initiative was to deepen Southeast Asian regional economic integration, which did not significantly affect intra-Asian trade flows in the years following its signing (Elliot and Ikemoto 2004). Figure 3 illustrates this phenomenon, as the bars indicate the share of regional trade among members of ASEAN in five-year averages, suggesting that the relevance of intra-Asian trade rose faster before the agreement than afterward. Long run tendencies confirm this intuition, demonstrating that the share of intra-Asian trade over these countries' total imports rose an average of 2.41% annually from 1948 to the signing of AFTA in 1992 and only 0.68% since then, although it did start from low levels.[5]

---

5) This comparison is biased by the big growth in regional trade right after 1948, as intra-Asian trade started from very low levels. Nonetheless, if we exclude this first period (1948-1952), the growth in the relevance of intra-Asian

Figure 3. Average annual growth rate of intra-Asian trade among ASEAN members (1948-2018)
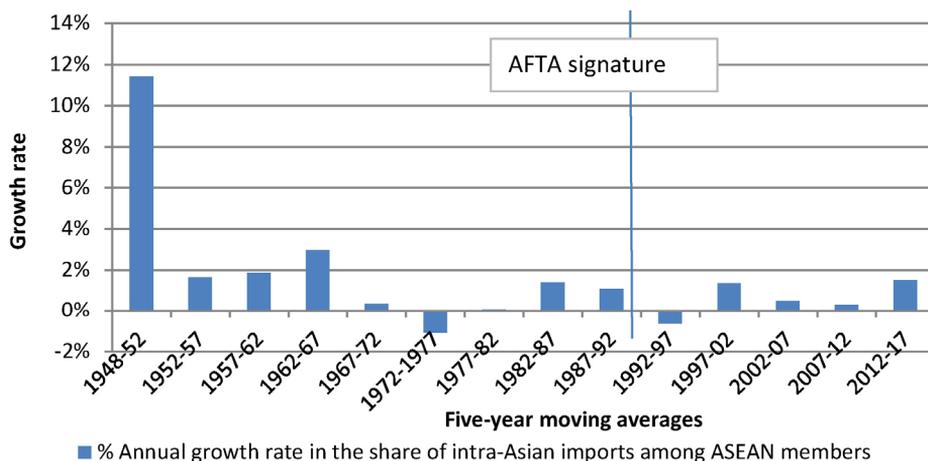
■ % Annual growth rate in the share of intra-Asian imports among ASEAN members
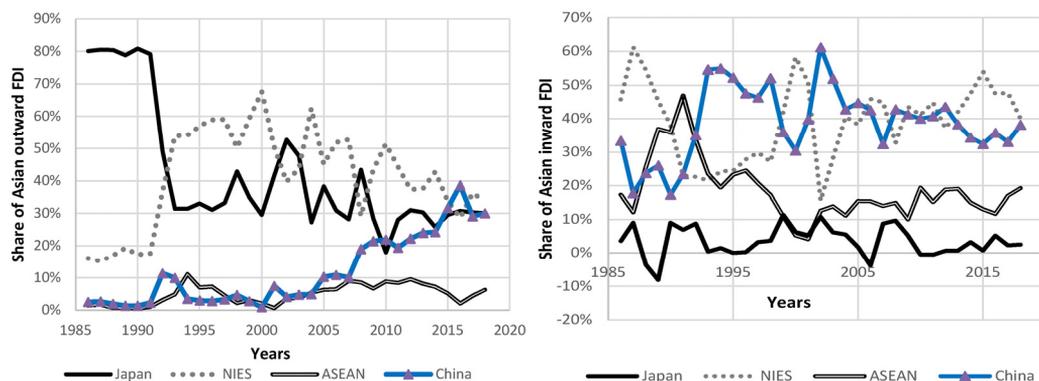
(Source) Author's elaboration from International Monetary Fund (2021b) and Barbieri & Keshk (2016).

A closer look at the direction of FDI flows reveals that they were parallel to trade in intermediate and capital goods between regional partners many times. Figure 4 depicts the direction of FDI flows according to their main origin and destination. Following the 1985 Plaza Accord, Japan was the main source of FDI, which was mainly concentrated in the NIES. The four "Asian tigers" surpassed Japan as primary investors in the mid-1990s, and FDI to ASEAN and China gained relevance as a result of generalized rises in labor costs in the NIES. Japan and the NIES alternated as the main source of regional FDI flows, which are increasingly hosted by China, alternating with the NIES as the main beneficiary of regional FDI. The flow of FDI displayed in Figure 4 mirrors that of capital and intermediate goods described in the literature, as will be demonstrated in the network analysis in Section V. Japan primarily exported goods to the four Asian tigers between the late 1980s and early 1990s. Those exports then moved to ASEAN, where both Japan and the NIES relocated part of their production processes. Finally, China progressed until matching the principal importers and exporters of both products (Byeong-Hae 2004).[6]

---

trade by ASEAN countries was still higher before AFTA (1.28%) than after (0.68%).

6) India is not included in Figure 4 because its relevance as a source of FDI is less than 1% until 2000 and did not reach 9%. Its share in receiving FDI is slightly higher but only reaches 5% in 2005, with a maximum of 15%.

Figure 4. East and Southeast Asia Outward FDI by principal origin (left) and
Net Inward FDI by principal destination (right) (1986-2018)

(Source) Author's elaboration from International Monetary Fund (2021a) and Organization for Economic Cooperation and Development (2022a).

Overall, it seems that intra-Asian FDI has generated a network in which East and Southeast Asia exploit trade complementarities and exchange capital, intermediate, and final goods. These networks represent another element in favor of regionalization or the market-driven Asian integration hypothesis (Eichengreen and Bayoumi 2006). This thesis contrasts with findings in the pre-WWII period, during which intra-Asian imports were primarily attracted by the imperial policies of the British and Japanese Empires (Ayuso-Díaz 2022). It also contrasts with other researchers who have argued that policy variables like the proliferation of RTAs among the studied countries after the establishment of the AFTA in 1992 better explain the increases observed in intra-Asian trade (Sapkota and Shuto 2016).

IV. Evaluating the Intensity of Intra-Asian Trade across History

This section evaluates the intensity of intra-Asian trade across four different historical periods from 1840 to 2018, addressing the controversy described in Section II.A about when trade integration was more intense in this region.

Ayuso-Díaz (2022) demonstrated that during the first wave of globalization, intra-regional trade in East and Southeast Asia was more intense than what economic size, distance, and trade costs between countries indicate. Moreover, the magnitude of this bias rose during the Interwar years. The present research constructs a similar gravity model for a better comparison between the degree of intra-regional trade before and after WWII. The model uses the same variables across four different historical periods, including First Globalization (1840-1913), Interwar (1914-1938), the Golden Age (1948-1985, covering the years of the oil crisis), and

the Great Moderation (1986-2018, including the Great Recession and its aftermath). In this exercise, we acknowledge the inferior quality of pre-WWII trade statistics compared with those gathered following Bretton Woods, and for that reason Ayuso-Díaz's (2022) 1840-1938 database is upgraded with data from other sources presented in Table 1.

A. Model and data sources

The dependent variable is imports rather than exports because their origin was more precisely reported before WWII (Federico and Tena 1991). Moreover, the inclusion of exports would present a smaller regional bias today compared with the past due to China's growing reliance on extra-regional markets for its exports (Ng and Yeats 2003). For harmonization purposes, each sub-period studied covers the same territory. Notably, the process of decolonization after WWII provoked the fragmentation of former colonies into independent territorial units; thus, the 13 reporting countries employed in the pre-WWII analysis become 20 in the post-WWII analysis.[7]

For the independent variables, we expand Ayuso-Díaz's (2022) gravity model with additional controls to enhance representativeness. The data are organized into a panel to mitigate multicollinearity among variables based on the incorporation of variability across countries in each time period (Baltagi 1995). The model includes importer (β_i) and time (β_t) fixed effects for a better control of multilateral trade resistance. Except for dummies, all the independent variables are logged so we can interpret their coefficients as elasticities. The model is estimated using Poisson pseudo-maximum likelihood or (PPML), referencing Silva and Tenreyro (2006). The different variables composing the model are used in in Equation (1) as follows:

$$
\begin{aligned}
Imports_{ij,t} = \beta_0 &+ \beta_1 GDP_{ijt} + \beta_2 TC_{ijt} + \beta_3 Region_{ijt} + \beta_4 Colony_{ijt} \\
&+ \beta_5 Shared\ Colonizer_{ijt} + \beta_6 Cultural\,Proximity_{ijt} + \beta_7 USA_{ijt} \\
&+ \beta_i + \beta_t
\end{aligned}
\tag{1}
$$

where $Imports_{ijt}$ represents the imports of country i from country j in year t; GDP_{ijt} is the aggregation of GDP for countries i and j in year t;[8] TC_{ijt} denotes transport costs, which are

---

7) The territorial space covered in both stages remains the same and includes Dutch East Indies (Indonesia after 1948), British India (India, Pakistan, and Bangladesh), The Philippines, and Ceylon (Sri Lanka). Data are available since 1840 for the previous countries. For China (People's Republic of China, Hong Kong), Siam (Thailand), British Malaya (Malaysia and Singapore), and Japan data collection began in 1864. For French Indochina (Viet Nam, Lao PDR, and Cambodia after independence), Korea (the Republic of Korea and North Korea), Taiwan, and British Borneo (Brunei Darussalam) information is available from 1880. Finally, Burma (Myanmar) has collected data since 1937.

8) Referencing Egger (2002), this sum is used instead of a separate GDP. We repeat the procedure for the remaining bilateral variables to avoid duplications. We also performed the regression following the usual procedure of separately accounting reporting and partner's GDP and the results were very similar.

represented by the distance between countries i and j in year t as well as barriers to trade in the form of the average tariff protection levels imposed by importing countries.[9] The variable of interest in this first analysis is $Region_{ijt}$, which is a dummy variable that takes a value of 1 when trade occurred between countries inside East and Southeast Asia and 0 otherwise. A positive and significant coefficient indicates that trade inside the region was more intense than what GDP and trade costs might indicate. The remaining variables are also dummies that measure the intensity of imports coming from the colonizer country ($Colony_{ijt}$) and from countries that shared a common colonizer ($Shared\ Colonizer_{ijt}$); for example, Viet Nam and Algeria, which were both part of the French Empire. Both variables reflect potential cultural similarities with origins in the Age of Empires (starting in the 19th Century). To capture long-term cultural proximity, we employ $Cultural Proximity_{ijt}$, which includes two kinds of dummies for controlling whether two trading partners share a native language or a principal religion. The last bias we control refers to exports from the US (USA_{ijt}). Table 1 presents the main characteristics of these variables.

Table 1. *Variables in Equation (1): Main Characteristics and Data Sources*

Variable	Characteristics	Sources
$Imports_{ij,t}$	Annual imports in current dollars.	**1840-1938:** Ayuso-Díaz (2022), upgraded with data from Dedinger and Girard (2017), Fouquin and Hugot (2016), and Barbieri & Keshk (2016).[*] **1948-2018:** IMF (2021b) and Barbieri & Keshk (2016).
GDP_{ijt}	Annual GDP in millions, 1990 GK dollars.	Bolt and van Zanden (2020).
TC_{ijt}	**Distance:** Great Circle Distance (in km) between capital cities. **Tariffs:** Import duties collected by the importer as a percentage of total imports.	**Distance:** Mayer and Zignago (2011). **Tariffs:** Blatman et al. (2003), Mitchell (2003), IMF (2019), and OECD (2022b).
$Cultural Proximity_{ijt}$	Dummies equal to 1 when two countries share a native language or most practiced religions.	**Common Native Language:** Melitz and Toubal (2014). **Most practiced religion:** Wormald (2015).

Note. Ayuso-Diaz's data comes from the primary souces described in the foot of Figure 1 source notes.

B. Results

Table 2 presents the results of the estimations. We confirm that intra-Asian trade since 1840 has been more intense than what economic size and trade costs indicate, as the Region dummy is positive and significant. Consequently, contemporary regional trade intensity is actually not unprecedented. This pattern is consistent with Petri (2006), who revealed an increase in Asian trade integration prior to WWII as a result of British and Japanese colonial policies, regional

---

9) This representation is less precise than the tariffs applied by each country, but is the only method to have coherent information for the pre- and post-WWII periods.

disintegration during the decolonization process (coefficient for Region$_{ijt}$ takes a value of 0.154 and is insignificant), and a resurgence of intra-Asian trade intensity since the 1980s (0.939), which still does not surpass the level attained before 1938 (0.941).

The remaining variables reveal the expected results, as the GDP of trading pairs positively attracted trade between them and its coefficient for most of the periods is close to the 0.8-1.2 interval that is considered normal in the literature (Carrere 2006). Distance between countries undermined trade and its coefficient is also close to the usual levels for most of the analysis. For instance, Frankel (1997, pp. 62-63) found distance coefficients between -0.4 and -0.7. In addition, non-transport trade costs like tariffs also significantly reduced trade in every period, with coefficients decreasing in absolute value, which is consistent with the worldwide reduction of tariffs in the post-WWII period.

The results also demonstrate that trade links with colonies became insignificant after independence (variable Colony), while longer term cultural links like common religion are found to be relevant in determining modern Asian imports.[10] In contrast, trade bias between countries that were colonized by the same empire (Shared Colonizer) was only significant during the Interwar years, as colonial networks during the First Globalization formed direct connections between colonies and colonizers. Furthermore, trade diversion occurred after independence with respect to former colonies that shared common colonizers, likely as a result of conflicts and crises frequently experienced by these territories, which were mainly in Africa. Finally, the magnitude of imports from the US was also higher than what gravitational forces suggest, rising after WWII with US intervention securing Japanese recovery. The relative stability of the US coefficient for the Golden Age and the Great Moderation indicates no decoupling from the US economy, as Davidson (2022) also found.

The results reflect the growing significance of market-driven considerations such as GDP and trade costs after WWII, as GDP changed from a coefficient of 0.829 in the Interwar years to 1.254 in the last period examined, while distance changed from -0.161 to -0.694. At the same time, policy-driven variables such as tariffs and colonial connections decreased in relevance, as the tariffs coefficient declined from -0.330 in Interwar years to -0.0689 during the Great Moderation. This initial evidence appears to favor supporters of a market-driven integration in East and Southeast Asia after WWII, but to confirm this hypothesis, Section V will compare the coefficients of market and political variables in the determination of intra-Asian imports between 1986 and 2018, answering the question: Has regionalization had a higher influence than regionalism?

---

10) Notably, colonial links are significant if we do not account for common language or religion, suggesting that the final two characteristics are more powerful determinants of modern Asian imports.

Table 2. *Gravity Model for East and Southeast Asia Total Trade 1840-2018 (PPML with Fixed Effects)*

Variables	(1) First Globalization (1840-1913)	(2) Interwar (1914-1938)	(3) Golden Age (1948-1985)	(4) Great Moderation (1986-2018)
Constant	6.790***	6.693***	9.674***	5.220***
	(0.864)	(0.985)	(0.668)	(0.335)
GDP	0.696***	0.829***	1.154***	1.254***
	(0.0639)	(0.0764)	(0.0342)	(0.0194)
Distance	-0.162***	-0.161***	-0.895***	-0.694***
	(0.0276)	(0.0301)	(0.0472)	(0.0263)
Tariffs	-0.187*	-0.330***	-0.0943*	-0.0689***
	(0.0961)	(0.0799)	(0.0520)	(0.0196)
Region	0.530***	0.941***	0.154	0.939***
	(0.0499)	(0.0617)	(0.0973)	(0.0453)
Colony	3.120***	1.913***	-0.0751	0.0838
	(0.0774)	(0.158)	(0.0836)	(0.0548)
Shared Colonizer	-0.0648	0.256*	-0.834***	-0.416***
	(0.0635)	(0.151)	(0.0936)	(0.0579)
Common Language	0.557***	0.237**	-0.267***	0.110
	(0.0666)	(0.101)	(0.0808)	(0.0689)
Common Religion	-0.656***	0.191	-0.0154	0.275***
	(0.151)	(0.133)	(0.0753)	(0.0545)
US	-0.0381	1.227***	1.574***	1.536***
	(0.159)	(0.164)	(0.165)	(0.0928)
Observations	9,296	8,161	28,998	75,183
Adj. R-squared	0.626	0.308	0.454	0.571

Note. Robust standard errors are in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

V. An Analysis of the Determinants of Recent Integration (1986-2018)

Following our comparison of the levels of trade integration in East and Southeast Asia across time (1840-2018), we next analyze the strength of the determinants of the integration in recent times (1986-2018). The Section contrasts the significance and impact of different variables that can be cataloged as market-driven with policy-driven determinants to determine whether some are more powerful for explaining recent regional flows. In this case, the sample is limited to covering trade between Asian countries during the last stage of trade integration, which started in 1986 after the Plaza Accord, according to authors like Nicolas (2016). As described in Section II.B, there is a lack of consensus regarding the determinants of the intensification of intra-Asian trade experienced in the past decades.

With respect to the period 1840-1938, Ayuso-Díaz (2022) previously demonstrated that Asian countries share specific economic and geographic characteristics that make them more likely to trade with one another. Nonetheless, the rise in intra-regional trade experienced by countries during the First Globalization and Interwar years was primarily explained by the imperial policies promoted by the British Empire in the late 19th century and the Japanese Empire after World War I. Regionalism was the main force driving economic integration.

A. Model and data sources

The model compares the significance of market and policy determinants of intra-Asian trade after 1986, and is estimated four times using different techniques. First, through PPML, using importer, partner, and time fixed effects, the model is presented as PPML FE. According to Fally (2015) this is the proper method to control for multilateral resistance to trade. In contrast, other researchers have claimed that country fixed effects must be time variant, so the second estimation uses panel techniques, interacting country and time fixed effects (Yang and Martínez-Zarzoso 2014). This model is denoted as Panel FE. Two additional methods are developed to avoid reverse causality in which imports affect the rest of the independent variables. The first is called the Dynamic Model, which includes a lag of the dependent variable among potential regressors. The second estimates the first differences (Leszczensky and Wolbring 2019). The variable structure is the same for all the models, as shown in Equation (2).

$$RegionalImports_{ij,t} = \beta_0 + \beta_1 GDP_{ijt} + \beta_2 Distance_{ijt} + \beta_3 TCI_{ijt} + \beta_4 FDI_{ijt}$$
$$+ \beta_5 FTA_{ijt} + \beta_6 ExchRate_{ijt} + \beta_7 TradeBarriers_{ijt}$$
$$+ \beta_8 PublicInvestment_{ijt} + \beta_i + \beta_j + \beta_t \qquad (2)$$

where the first four variables represent the relevance of market-driven determinants, and the last four denote policy-driven determinants. It is difficult to identify variables that are purely linked to market or policy features, as both dimensions frequently interact, but we contend that the chosen variables at least differentiate between determinants that are more shaped by market conditions and those that are more influenced by political decisions. In addition, aiming to make both kinds of determinants as comparable as possible, we use the same number of variables to represent each side that share similar numerical characteristics. Hence, at least one large numerical variable, one dummy (or at least index variable that moves between 0 and 1), and one small numerical variable represent both market and policy determinants.

The market variables include GDP and Distance, which were explained in Equation 1. We also measure the extent to which one country's imports overlap with what the other country

exports through the Trade Complementarity Index in year t (TCI_{ijt}), as introduced by Michaely (1996). The last market determinant of intra-Asian trade is FDI flows (FDI_{ijt}), which captures the role of multinationals in Asian trade integration. The variable is constructed by adding importer inward FDI to partner outward flows, given that trade is expected to be more likely between a country that receives high FDI inflows and a country that has large FDI outflows.

Regarding policy determinants, the model controls for the presence of a free trade agreement between countries i and j in year t (FTA_{ijt}). The evolution of bilateral exchange rates between country pairs ($ExchRate_{ijt}$) measures the influence of monetary policies and the selection of specific exchange rate regimes in intra-Asian trade. Barriers to trade ($TradeBarriers_{ijt}$) includes two variables of the effectively applied tariffs imposed by the reporting country on exports from every partner, and non-tariff obstacles to trade and costs of compliance. This last indicator is an index that is not bilateral, so it only controls for regulatory trade barriers in importer countries. Regardless, it provides a plausible complement to the bilateral tariffs established between countries. Finally, the model accounts for public investments in transport infrastructure ($PublicInvestment_{ijt}$), which equals the sum of investment flows from public-private partnerships in transport in both the reporting country and the corresponding partner. Table 3 presents the main features of these variables and their sources.

Table 3. *Variables in Equation (2): Main Characteristics and Data Sources*

Variable	Characteristics	Sources
TCI_{ijt}	Trade Complexity Index from 0 (no complementarity) to 1 (complementarity). Disaggregation at the 2-digit level of the SITC Rev 1.	World Integrated Trade Solution (WITS 2022).[*]
FDI_{ijt}	FDI flows in millions (current US dollars).	IMF (2021a), OECD (2022a).
FTA_{ijt}	Dummy: 1 after the implementation of a FTA between the importer and partner; 0 otherwise.	WTO (2022b).
$ExchRate_{ijt}$	Importer's local currency per US dollar divided by the exporter's exchange rate with the dollar.	IMF (2021a), OECD (2022c), FXTop (2022), Focus Economics (2022).
$TradeBarriers_{ijt}$	**Tariffs:** Importer's weighted average of the Applied Tariff (%) to each partner. **Non-tariff barriers:** KOF Regulatory Barriers: Average non-tariff trade barriers and cost of compliance indices (1 to 10, from less to more trade facilitation).	**Tariffs:** World Integrated Trade Solution (WITS 2022). **Non-tariff barriers:** Gwartney et al. (2021), Gygli et al. (2019).
$PublicInvestment_{ijt}$	Investment flows from public-private partnerships in transport in millions (current US dollars).	World Bank (2022) and ITF (2021).

*Note. Data for some small countries are not available and they are excluded from the analysis, as it does not imply any significant increase in the variables' precision.[11][12]

---

11) In periods for which no information is available, it is assumed that the exchange rate of some specific countries evolved following the same path as close countries for which there is data.

12) It is assumed that periods for which no information is available correspond to the absence of investment. In

B. Results

Table 4 presents the results of the estimations. First, Equation (2) seems adequate to represent the determinants of regional trade in East and Southeast Asia, as the adjusted R-squared indicates that the chosen variables explain between 76% and 86% of changes in intra-Asian imports.

The absolute size and significance of variables' coefficients in each estimation method imply that the determinants of regional integration that refer to the region's market determinants were more relevant than those related to policies. Hence, complementarities between members' trade structures (TCI) are the single most relevant determinant of contemporary regional trade in East and Southeast Asia. This variable has the highest coefficient levels (always larger than 2.328). Note that the relevance of the TCI coefficients reinforces the potential of the welfare gains through intra-Asia trade. Moreover, the remaining economic variables, like GDP (with coefficients between 0.791 and 0.935), distance or transport costs (always higher than -0.662), and FDI (between 0.312 and 0.511) also present larger coefficients than policy variables. For example, the FTA coefficient has a maximum of 0.387; the selection of specific exchange rate regimes is around -0.025; the establishment of tariffs has a maximum of -0.182; regulatory barriers to protect national producers are not significant; and public-private partnership in transport infrastructure has a minimal negative impact. Several of these variables exhibited high levels of multicollinearity after performing a variance inflation factor test. Nonetheless, we reach the same conclusions after eliminating them, confirming that economic variables still have higher coefficients than policy ones. This exercise adds robustness to our conclusions.

Table 4. *Determinants of Intra-Asian Imports (1986-2018)*

Variables	(1) PPML FE	(2) Panel FE	(3) Dynamic Model	(4) First Differences
Constant	11.80***	-56.73	11.88***	6.411***
	(0.562)	(112.7)	(0.564)	(0.796)
Market variables				
GDP	0.935***	0.791***	0.910***	0.850***
	(0.0354)	(0.0452)	(0.0352)	(0.0830)
Distance	-0.702***	-0.734***	-0.662***	-0.783***
	(0.0284)	(0.0448)	(0.0276)	(0.0886)
TCI	2.735***	2.486***	2.688***	2.328***
	(0.0897)	(0.0405)	(0.0870)	(0.0610)
FDI	0.338***	0.460***	0.312***	0.511***
	(0.0286)	(0.0301)	(0.0279)	(0.0433)

the case of Japan and the Republic of Korea for which there is no information at any period, we estimate figures using a close country like China as a reference and the evolution of this variable is dependent on investment in road infrastructure.

Table 4. *Continued*

Variables	(1) PPML FE	(2) Panel FE	(3) Dynamic Model	(4) First Differences
Policy variables				
FTA	-0.062	0.387***	-0.070	0.358***
	(0.0548)	(0.0721)	(0.0547)	(0.0905)
Exchange rate	-0.026***	-0.007	-0.028***	0.025*
	(0.00739)	(0.00885)	(0.00711)	(0.0128)
Tariffs	0.024	-0.093***	0.031	-0.182***
	(0.0225)	(0.0261)	(0.0226)	(0.0332)
Non-tariff-barriers	0.028	83.31	0.054	0.074
	(0.202)	(133.4)	(0.200)	(2.639)
Public Investment	-0.058***	-0.042*	-0.034*	-0.129***
	(0.0188)	(0.0250)	(0.0190)	(0.0388)
Observations	2,838	2,838	2,838	1,742
Adj. R-squared	0.855	0.794	0.857	0.758

Note. Robust standard errors are in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

These results align with research arguing that the expansion of regional FDI after 1986 has reinforced trade complementarities within the region. According to these studies, today's East and Southeast Asia regional trade takes the shape of a network in which the principal foreign investors are also the principal providers of intermediate and capital goods, while host economies are the primary assemblers of final goods. The next subsection summarizes the findings of this research, and examines this phenomenon through a network analysis, aiming to demonstrate that the direction of trade flows matches the evolution of centrality in the exchange of intermediate and capital goods, value added (VA), and FDI flows.

C. A visualization of intra-Asian trade networks and their centrality

Scholars surveying regional integration in the 1990s agreed on the Japanese network's centrality established by its growing intra-Asian FDI (Doner, 1992; Borrmann and Jungickel 1992; Bernard and Ravenhill 1995; Jha 1997; Sazanami 1997; Pempel 2000). However, after the 1997 East Asian financial crisis, the dominion of regional trade shifted toward the NIES (Byeong-Hae 2004), and more recently, toward China (Morck and Yeung 2016; Park and Pasierbiak 2018).

From this perspective, an analysis of the direction of import flows within the region, as well as networks of intermediate goods, capital goods, VA, and FDI flows in 1986 and 2018 can garner further evidence of the existence and relevance of trade complementarities that are correlated with FDI flows among East and Southeast Asian countries. First, Figure 5 presents an illustration of the regional networks in 1986 and 2018, considering the two principal exporters

for each reporting country (left) and the two main importers (right), referencing De Benedictis et al. (2014). The size of the dots represents total trade (exports when measuring origin centrality and imports for destination) by each country to determine which connection is most relevant. At the start of this period, Japan was at the center of this network, both as the principal origin and destination of goods, whereas, by 2018, China had assumed this preeminent position, which, according to Ayuso-Díaz (2022), was held by Japan since the Interwar years.

This change in leadership paralleled changes in the centrality of the networks of VA, capital, and intermediate goods as depicted by Table 5. This indicator measures the centrality of a network by summing the number of connections that each country has.[13] See De Benedictis et al. (2014) for further information regarding the construction of this index. The calculation of the index covers the principal importers and exporters, representing how many times a country is among the two principal trade partners in each of the networks.

The results corroborate Japanese leadership in 1986, mainly relying on its role as the region's principal exporter of intermediate and capital goods (with coefficients of 0.929 and 1.000, respectively) and importer of VA (0.900). Inputs were principally exported to the NIES (0.429 and 0.500), where they were finally assembled and exported again to Japan, as demonstrated by the NIES centrality as origins of VA (0.750). Studies have also noted that this pattern has evolved, and first the NIES, then ASEAN, and finally China, also emerged as exporters of intermediate and capital goods. As a result, in 2018, China held the greatest centrality as an exporter of intermediate and capital goods, as well as a destination of VA (each showing maximum coefficients of 1.000). This placed China at the center of contemporary intra-Asian trade networks. Apart from China, intermediate and capital goods primarily finish in the NIES and Japan, where they are assembled and exported as final goods (VA origins coefficients are 0.500 and 0.400, respectively). Moreover, Table 5 corroborates the existence of regional trade complementarities, demonstrating that some territories export capital and intermediate goods, while others assemble them and export final products with higher VA. Such complementarities have evolved in parallel to the region's trade leadership.

---

13) We reach the same conclusions after calculating Eigenvector centrality, which weights each country's connections according to its principal associates' number of connections.

Figure 5. East and Southeast Asia regional exports network centrality (left) and imports centrality (right), by principal two partners 1986 and 2018

a) 1986

b) 2018
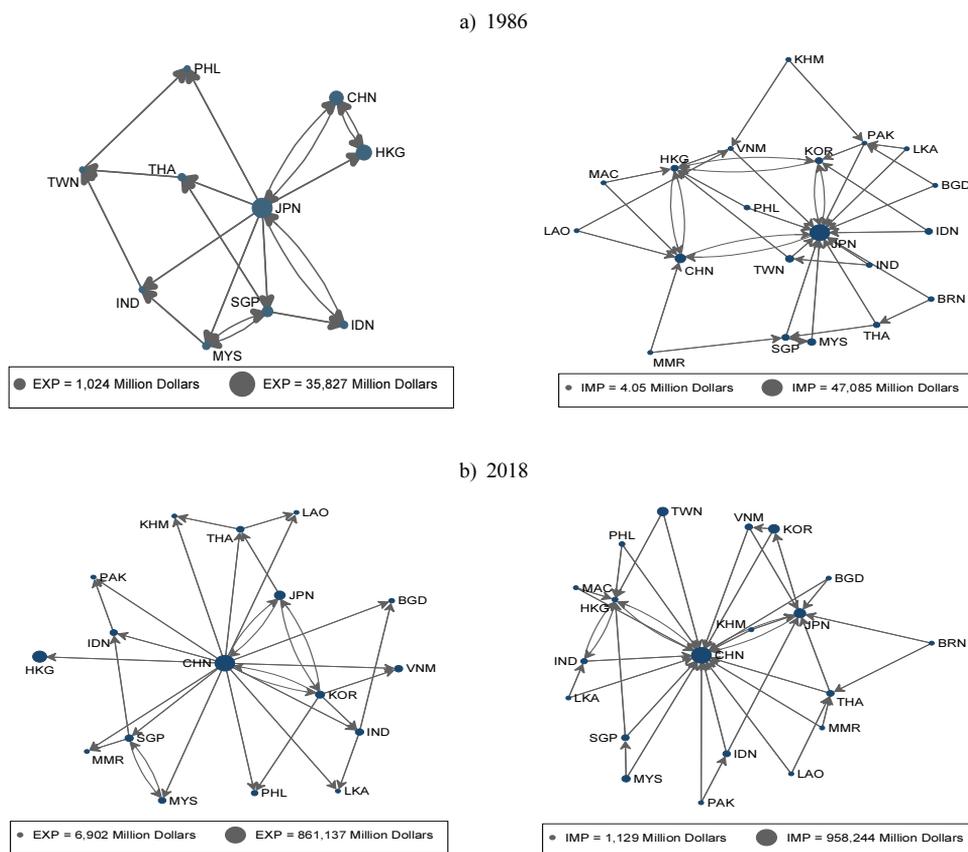
Note. The abbreviations for countries follow ISO 3166 international standards. The size of the dots represents total trade value.

(Source) Author's elaboration from International Monetary Fund (2021b) and Barbieri & Keshk (2016).

Table 5. *Degree Centrality by Principal Locations in East and Southeast Asian value Added, Intermediate, and Capital Goods Imports, 1986 and 2018*

Year	1986					2018				
Sector/Country	China	Japan	NIES	ASEAN	South Asia	China	Japan	NIES	ASEAN	South Asia
Intermediate Origin	0.214	0.929	0.357	0.357	0.000	1.000	0.389	0.167	0.100	0.100
Capital Origin	0.071	1.000	0.429	0.071	0.071	1.000	0.556	0.111	0.222	0.111
VA Destination	0.250	0.900	0.750	0.050	0.100	1.000	0.550	0.100	0.100	0.150
Intermediate Destination	0.429	0.714	0.429	0.071	0.071	0.889	0.389	0.111	0.222	0.222
Capital Destination	0.214	0.214	0.500	0.214	0.143	0.650	0.250	0.500	0.100	0.200
VA Origin	0.050	0.550	0.750	0.150	0.000	0.650	0.400	0.500	0.150	0.000

(Source) Author's elaboration from Casella et al. (2019) and World Integrated Trade Solution (2022).

Finally, the results in Table 6 suggest that the trade complementarities that have driven the most recent surge in intra-Asian trade have been fueled by regional FDI flows. China was the most central recipient of FDI within the region in 2018, which transformed the nation into the main recipient of intermediate and capital goods (0.889 and 0.650, respectively) and the principal exporter of VA (0.650).[14] The NIES match Chinese centrality as FDI recipients and are the second highest importer of capital goods and exporter of VA (0.500 each).

Table 6. *Degree Centrality by Principal Locations in East and Southeast Asian Value Added, Intermediate, Capital Goods, and FDI Inflows, 2018*

Year			2018		
Sector/Country	China	Japan	NIES	ASEAN	South Asia
VA Origin	0.650	0.400	0.500	0.150	0.000
Intermediate Destination	0.889	0.389	0.111	0.222	0.222
Capital Destination	0.650	0.250	0.500	0.100	0.200
FDI Destination	0.571	0.500	0.571	0.071	0.000

(Source) Author's elaboration from Casella et al. (2019), World Integrated Trade Solution (2022), and the United Nations Conference on Trade and Development (UNCTAD 2022).

In conclusion, this section confirms the significance of market-driven variables in the latest (1986-2018) increase in intra-Asian imports. It shows that centrality in the regional imports' network has evolved in parallel with complementarities in trade in intermediate and capital goods and VA. Furthermore, it has shown that centrality in FDI regional flows also matches those complementarities.

VI. Conclusions and Final Remarks

This study offers a historical perspective in the analysis of the intensity of regional trade in East and Southeast Asia which could illuminate policymakers' decision-making regarding current and future regionalization strategies. The results of the gravity model for bilateral imports (1840-2018) show that the intensity of trade among the Asian countries examined with respect to GDP and trade costs is currently below its historical maximum. Consequently, recently signed RTAs like the RCEP have room for further expanding intra-Asian trade.

The results indicate that by the second half of the 19th century, intra-Asian trade was already more intense than what economic size and distance between those countries predicted. The bias increased during the Interwar years, but disappeared after WWII as a result of US intervention in Japan and cooperation with the Asian tigers, as well as Chinese and Indian

---

14) We are unable to calculate the centrality of FDI inflows in 1986 because bilateral data only starts in 1995.

self-isolation. Intra-Asian trade intensified again with Japanese and NIES economic achievements in the 1960s and 1970s, and experienced a sustained growth from the second half of the 1980s thanks to China's opening to international markets, and, above all FDI from Japanese multinationals that started a transformation of these countries into the "Asian factory." Despite these successes, one of the major findings of this article is that the size of the regional bias in the period 1986-2018 remains slightly below that identified in the Interwar period.

The second part of the analysis assesses the impact in intra-Asian policy-driven trade variables (such as FTAs signed since 1986) by comparing their magnitude with those of market-driven variables. The results show that this integration has been primarily market-driven, while policy factors have been quantitatively less influential. We observe this phenomenon in the superior size of the coefficients of economic variables like GDP, transport costs, trade complementarities, and multinationals' FDI in comparison with policy determinants like the establishment of Free Trade Areas, reduction of barriers to trade, the selection of exchange rate regimes, and public investment in transport infrastructure. In fact, the relevance of the trade complementarities variable supports the potential of the welfare gains based on comparative advantage through intra-Asian trade.

Finally, the network analysis reveals how FDI has upgraded trade complementarities intrinsic to the region to create a pattern in which investors export intermediate and capital goods, whereas recipient countries export VA. We argue that such mutual feedback between FDI and trade is the most relevant explanation for the present intensity of intra-Asian imports, in contrast to trade integration prior to WWII, which was fostered by British and Japanese imperial policies. Conversely, RTAs have not been as effective in promoting regional exchanges in East and Southeast Asia. The lessons that can be extracted from this study are that RTAs currently under negotiation, adopted, or in place have the capacity to push intra-Asian trade intensity beyond its historical maximums. Such agreements should emphasize upgrading the symbiosis between regional FDI and trade complementarities that exist in the region. This suggests a step toward deep trade agreements that include clauses on trade, as well as FDI, labor movements, and related considerations.

Lastly, we recognize the limitations of this study solving the debate between supporters of regionalism versus regionalization in East and Southeast Asia in the most recent decades. At least it describes the relevance of the different variables associated to each of these hypothesis across history, facilitating the distinction between both processes.

References

Akamatsu, K. (1962). A historical pattern of economic growth in developing countries. *The Developing*

Economies, 1, 3-25.

Athukorala, P. C., & Kohpaiboon, A. (2009). *Intra-regional trade in East Asia: The decoupling fallacy, crisis, and policy challenges* (ADBI Working Paper, No. 177). Asian Development Bank Institute.

Ayuso-Díaz, A. (2022). Natural trading partners versus empires in East and Southeast Asia regional integration (1840-1938). *Journal of the Japanese and International Economies, 63*, 101184.

Ando, M., & Kimura, F. (2005). The formation of international production and distribution networks in East Asia. *International Trade in East Asia, 14*, 177-216.

Ba, A. D. (2014). Is China leading? China, Southeast Asia and East Asian integration. *Political Science, 66*(2), 143-165.

Baldwin, R. E. (2008). The East Asian noodle bowl syndrome. In Hiratsuka, D., & Kimura, F. (Eds.), *East Asia's Economic Integration. IDE-JETRO Series* (pp. 45-81). Palgrave Macmillan.

Baltagi, B. H., & Baltagi, B. H. (2008). *Econometric analysis of panel data* (Vol. 4). Chichester: John Wiley & Sons.

Barbieri, K., & Keshk, O.M.G. (2016). *Correlates of War Project Trade Data Set Codebook, Version 4.0.* Correlatesofwar. Available from: http://correlatesofwar.org

Beeson, M. (2014). *Regionalism and globalization in East Asia: politics, security and economic development*. Macmillan International Higher Education.

Bernard, M., & Ravenhill, J. (1995). Beyond product cycles and flying geese: regionalization, hierarchy, and the industrialization of East Asia. *World Politics, 47*(2), 171-209.

Bhattacharyay, B. N. (2009). *Infrastructure development for ASEAN economic integration* (ADBI Working Paper, No. 138). Asian Development Bank Institute.

Blattman, C., Clemens, M. A., & Williamson, J. G. (2003). *Who Protected and Why? Tariffs the World Around 1870-1938* (Working Paper, No. 2010). Harvard-Institute of Economic Research.

Bolt, J., & Van Zanden, J. L. (2020). *Maddison style estimates of the evolution of the world economy*. A new 2020 update (Maddison-Project Working Paper WP-15). University of Groningen, Groningen, The Netherlands.

Borrmann, A., & Jungnickel, R. (1992). Foreign investment as a factor in Asian Pacific integration. *Intereconomics, 27*(6), 282-288.

Byeong-hae, S. (2004). Towards a new regionalism in east Asia. *Journal of Economic Integration, 19*, 499-518.

Carrere, C. (2006). Revisiting the effects of regional trade agreements on trade flows with proper specification of the gravity model. *European Economic Review, 50*(2), 223-247.

Casella, B., Bolwijn, R., Moran, D., & Kanemoto, K. (2019). Improving the analysis of global value chains: the UNCTAD-Eora Database. *Transnational Corporations, 26*(3), 115-142.

Chia, S. Y. (2010). *Regional trade policy cooperation and architecture in East Asia* (ADBI Working Paper, No. 191). Asian Development Bank Institute.

Cumings, B. (1984). The origins and development of the Northeast Asian political economy: Industrial sectors, product cycles, and political consequences. *International Organization, 38*(1), 1-40.

Davidson, S.N. (2022). Regional Integration and Decoupling in the Asia Pacific: A Bayesian Panel VAR Approach. *IMF Economic Review, 70*, 773-807.

De Benedictis, L., Nenci, S., Santoni, G., Tajoli, L., & Vicarelli, C. (2014). Network Analysis of World Trade using the BACI-CEPII Dataset. *Global Economy Journal, 14*(3-4), 1-57.

Dedinger, B., & Girard, P. (2017). Exploring trade globalization in the long run: The RICardo project. *Historical Methods: A Journal of Quantitative and Interdisciplinary History, 50*(1), 30-48.

Doner, R. F. (2007). 5. Japanese Foreign Investment and the Creation of a Pacific Asian Region. In Frankel, J. A. & Kahler, M. (Eds.), *Regionalism and Rivalry* (pp. 159-216). University of Chicago Press.

Egger, P. (2002). An econometric view on the estimation of gravity models and the calculation of trade potentials. *World Economy, 25*(2), 297-312.

Eichengreen, B., & Bayoumi, T. (1996). *Is Asia an Optimum Currency Area? Can It Become One? Regional, Global and Historical Perspectiveson Asian Monetary Relations* (Working Paper, No. C96-081). Center for International and Development Economics Research (CIDER), University of California at Berkeley.

Elliott, R. J., & Ikemoto, K. (2004). AFTA and the Asian crisis: Help or hindrance to ASEAN intra-regional trade? *Asian Economic Journal, 18*(1), 1-23.

Escaith, H., & Inomata, S. (eds.). (2011). *Trade patterns and global value chains in East Asia: From trade in goods to trade in tasks*. Geneva: World Trade Organization.

Fally, T. (2015). Structural gravity and fixed effects. *Journal of International Economics, 97*(1), 76-85.

Focus Economics. (2022). *Exchange rates in Vietnam*. Available from: https://www.focus-economics.com/country-indicator/vietnam/exchange-rate (accessed on March 8, 2022).

Federico, G., & Tena, A. (1991). On the accuracy of foreign trade statistics (1909-1935): Morgenstern revisited. *Explorations in Economic History, 28*(3), 259-273.

Fouquin, M., & Hugot, J. (2016). *Two centuries of bilateral trade and gravity data: 1827-2014* (Working Paper, No. 015129). Universidad Javeriana-Bogotá.

Frankel, J. A. (1997). *Regional Trading Blocs in the World Economic System*. Peterson Institute for International Economics.

Fung, K. C., Iizaka, H., & Siu, A. (2010). United States, Japanese, and Korean FDI and Intra-East Asian Trade. *Asian Economic Papers, 9*(3), 129-154.

Fung, K. C., Aminian, N., Garcia-Herrero, A., Iizaka, H., & Ng, F. (2013). French, German, and Japanese FDI on Intra-East Asian Trade. *Journal of Economic Integration, 28*(2),327-353.

FxTop. (2022). *Historical exchange rates from 1953 with graphs and charts*. Available from: https://fxtop.com/en/historical-exchange-rates.php?A=1&C1=USD&C2=TWD&YA=1&DD1=01&MM1=01&YYYY1=1953&B=1&P=&I=1&DD2=07&MM2=03&YYYY2=2022&btnOK=Go%21 (accessed on March 8, 2022).

Gwartney, J., Lawson, R., Hall, J., & Murphy, R. (2021). *Economic Freedom of the World: 2021 Annual Report*. Fraser Institute.

Gygli, S., Haelg, F., Potrafke, N., & Sturm, J. E. (2019). The KOF globalisation index-revisited. *The Review of International Organizations, 14*(3), 543-574.

Head, K., & Mayer, T. (2014). Gravity Equations: Workhorse, Toolkit, and Cookbook. In Gopinath, G., Helpman, E., & Rogoff, K. (Eds.), *Handbook of International Economics* (Vol. 4, pp. 131-195). North-Holland Elsevier.

Hirst, P., Thompson, G., & Bromley, S. (2015). *Globalization in question*. John Wiley & Sons.

Hoshiro, H. (2019). Does regionalization promote regionalism? Evidence from East Asia. *Journal of Contemporary East Asia Studies, 8*(2), 199-219.

Hung, H. C., & Chao, C. Y. (2016). Taiwan's early metal age and southeast Asian trading systems. *Antiquity, 90*(354), 1537-1551.

Ikenberry, G. J. (2004). American hegemony and East Asian order. *Australian Journal of International Affairs, 58*(3), 353-367.

IMF. (2019). *Government Finance Statistics Manual*. Data retrieved on February 2022.

IMF. (2021a). *International Financial Statistics*. Available from: https://data.worldbank.org/indicator/PA.NUS. FCRF (accessed on February, 2022).

IMF. (2021b). *DOTS database, Direction of Trade Statistics*. Data retrieved on February, 2022.

ITF. (2021). *ITF Transport Outlook 2021.* Paris: OECD Publishing, https://doi.org/10.1787/16826a30-en. (accessed on February, 2022).

Jha, S. C. (1997). Changing Pattern of Intra-regional Trade in Asia. *Indian Economic Journal, 44*(3), 44-59.

Kawai, M. (2008). Toward a regional exchange rate regime in East Asia. *Pacific Economic Review, 13*(1), 83-103.

Kim, M. H. (2012). Why Does A Small Power Lead? ASEAN Leadership in Asia-Pacific Regionalism. *Pacific Focus, 27*(1), 111-134.

Korthals Altes, W. L. (1991). *Changing Economy in Indonesia, Vol. 12A: General Trade Statistics 1822-1940*. Amsterdam: Royal Tropical Institute.

Langhammer, R. J. (1995). Regional integration in East Asia. From market-driven regionalisation to institutionalised regionalism? *Weltwirtschaftliches Archiv, 131*(1), 167-201.

Leszczensky, L., & Wolbring, T. (2019). How to deal with reverse causality using panel data? Recommendations for researchers based on a simulation study. *Sociological Methods & Research*, 0049124119882473.

Lincoln, E. J. (2004). *East Asian economic regionalism*. Brookings Institution Press.

Lloyd, P. J. (1996). The role of foreign investment in the success of Asian industrialization. *Journal of Asian Economics, 7*(3), 407-433.

Mayer, T., & Zignago, S. (2011). *Notes on CEPII's distances measures: The GeoDist Database* (CEPII Working Paper, No. 2011-25). CEPII.

Melitz, J., & Toubal, F. (2014). Native language, spoken language, translation and trade. *Journal of International Economics, 93*(2), 351-363.

Michaely, M. (1996). *Trade Preferential Agreements in Latin America. An Ex-Ante Assessment* (Policy Research Working Paper, No. 1583). Washington, D.C.: The World Bank.

Mitchell, B. R. (Ed.). (2003). *International Historical Statistics: Africa, Asia & Oceania, 1750-2000*. Basingstoke & New York: Palgrave Macmillan.

Morck, R., & Yeung, B. (2016). China in Asia. *China Economic Review, 40*, 297-308.

Ng, F., & Yeats, A. J. (2003). *Major trade trends in East Asia: What are their implications for regional cooperation and growth?* (Policy Research Working Paper, No. 3084). Washington, DC.: World Bank.

Nicolas, F. (2016). De Facto Trade Integration and Exchange Rate Policies in East Asia. In Andreosso-O'Callaghan, B., & Bruna Zolin, M. (Eds.), *Current Issues in Economic Integration* (pp. 91-110). Routledge.

OECD. (2022a). *FDI flows* (indicator). https://doi.org/10.1787/9a523b18-en

OECD. (2022b). *Tax Database.* Retrieved form https://www.oecd.org/ctp/tax-policy/tax-database/ (accessed on March, 2022).

OECD. (2022c). *Exchange rates* (indicator). https://doi.org/10.1787/067eb6ec-en

Ohkawa, K., Shinohara, M., & Umemura, M. (1967-89). *Long-Term Economic Statistics (LTES).* Tokyo: Toyo Keizai Shinposha.

Park, S. C., & Pasierbiak, P. (2018). Japan's Role in East Asian Economic Regionalism. *Institutions and Economies, 10*(2), 121-145.

Pempel, T. J. (2000). International finance and Asian regionalism. *The Pacific Review, 13*(1), 57-72.

Petri, P. A. (2006). Is East Asia becoming more interdependent? *Journal of Asian Economics, 17*(3), 381-394.

Rana, P. B. (2012). Regional Economic Integration in Asia: Historical and Contemporary Perspectives. *Renaissance of Asia: Evolving Economic Relations Between South Asia and East Asia* (p. 13). World Scientific.

Reid, A. (1988). *Southeast Asia in the Age of Commerce, 1450-1680: Expansion and Crisis* (Vol. 2). Yale University Press.

Sally, R. (2010). *Regional economic integration in Asia: The track record and prospects* (ECIPE Occasional Paper, No. 2/2010). ECIPE.

Sazanami, Y. (1997). Globalization and regionalization: Japanese multinational enterprises in the Asia-Pacific. *Journal of Asian Economics, 8*(1), 1-13.

Sapkota, J. B., & Shuto, M. (2016). *Is Pan-Asian Economic Integration Moving Forward? Evidence from Regional Trade Statistics* (MPRA Paper, No. 106075). Germany: University Library of Munich.

Shimada, R. (2019). Southeast Asia and International Trade: Continuity and Change in Historical Perspective. In Otsuka, K., & Sugihara, K. (Eds.), *Paths to the Emerging State in Asia and Africa* (pp. 55-71). Singapore: Springer.

Silva, J. S., & Tenreyro, S. (2006). The log of gravity. *The Review of Economics and Statistics, 88*(4), 641-658.

Soesastro, H. (2006). Regional integration in East Asia: Achievements and future prospects. *Asian Economic Policy Review, 1*(2), 215-234.

Sugihara, K. (2019). The Asian Path of Economic Development: Intra-regional Trade, Industrialization and the Developmental State. In Shiraishi, T. & Sonobe, T. (Eds.), *Emerging States and Economies* (pp. 73-99). Singapore: Springer.

Tachiki, D. (2018). 6. Between Foreign Direct Investment and Regionalism: The Role of Japanese Production Networks. In Pempel, J. (Ed.), *Remapping East Asia* (pp. 149-169). Cornell University Press.

Thorbecke, W., & Salike, N. (2013). *Foreign direct investment in East Asia.* RIETI. http://www.rieti.go.jp/jp/publications/pdp/13p003.pdf

Trinidad, D. D. (2010). Domestic actors, market reform and regional integration in Southeast Asia. *Asia Pacific World, 1*(1), 95-115.

UNCTAD. (2022). *Division on Investment and Enterprise, World Investment Report, Statistical Annex.* Available from: http://unctad.org/en/Pages/DIAE/World%20Investment%20Report/World_Investment_Report.aspx

Wade, G. (2009). An early age of commerce in Southeast Asia, 900-1300 CE. *Journal of Southeast Asian Studies, 40*(2), 221-265.

WITS. (2022). *UN Comtrade trade data*. Available from: https://wits.worldbank.org (accessed on March, 2022).

Wong, J. (2004). China's economic rise: implications for East Asian growth and integration. *Bulletin on Asia-Pacific Perspectives*, 2005.

World Bank. (2022). *Private Participation in Infrastructure Project Database*.

Wormald, B. (2015). *The Future of World Religions: Population Growth Projections, 2010-2050*. Pew Research Center's Religion & Public Life Project.

WTO. (2022a). *Regional Trade Agreements: Facts and Figures, 1st Semester 2022*. Geneva.

WTO. (2022b). *Regional Trade Agreements database*. Available from: https://rtais.wto.org/UI/PublicMaint ainRTAHome.aspx (accessed on March, 2022).

Xing, Y. (2016). Global Value Chains and China's Exports to High-income Countries. *International Economic Journal, 30*(2), 191-203.

Yang, S., & Martinez-Zarzoso, I. (2014). A panel data analysis of trade creation and trade diversion effects: The case of ASEAN-China Free Trade Area. *China Economic Review, 29*, 138-151.

Yoshimatsu, H. (2002). Preferences, interests, and regional integration: the development of the ASEAN industrial cooperation arrangement. *Review of International Political Economy, 9*(1), 123-149.

Yotov Y. V., Piermartini, R., Monteiro, J. A., & Larch, M. (2016). *An Advanced Guide to Trade Policy Analysis: The Structural Gravity Model*. World Trade Organization and UNCTAD.

Yuzhu, W. (2011). China, economic regionalism, and East Asian integration. *Japanese Journal of Political Science, 12*(2), 195-212.