Diversifying economic risks: Japan's economic hedging toward China

Lluc Vidal, Angels Pelegrín, Ivan Gonzalez-Pujol

Abstract

International Relations has traditionally identified balancing and band-wagoning as the two predominant strategies adopted by states in re-sponse to a rising power that threatens the status quo. However, recent academic debates have highlighted the emergence of hedging as a middle-ground approach adopted by states facing a rising power with ambiguous intentions, particularly when the stakes are high. Economic hedging forms a critical element of this strategy, as it allows states to maximize economic benefits while minimizing the risks of de-pendency through trade and investment. We present an analytical framework based on Kuik's model, which focuses on the concept of economic diversification in trade and investment. We test its validity through an analysis of the diversification initiatives of the Abe adminis-tration and our central argument is that Japan's diversification efforts re aimed at reducing economic risks and avoiding excessive depen-dency in specific sectors through trade and investment with China.

1. Introduction

The rise of China has become a ubiquitous topic in discussions of global politics in the new millennium, as the question of the US power continues to be debated (Mearsheimer 2001; Medeiros 2009; Foot and Walter 2010; Fels, Kremer, and Kronenberg 2012; Nadkarni and Noonan 2013; Herrick, Gai, and Subramaniam 2016; Kiely 2016; Regilme and Parisot 2017; Chatin and Gallarotti 2019). The resurgence of China as a superpower has had a significant impact on three distinct levels. At a systemic level, it has posed a significant challenge to the USA, the only superpower capable of confronting the rise of China. At a regional level, it has dramatically altered the East Asian region, which is highly economically dependent on China but threatened by its security challenges. At a domestic level, it has significantly influenced the foreign policies of every country in the region. Individual responses to China's resurgence are shaped by historical experiences, geographical proximity, and economic opportunities (Stromseth 2019).

Japan is no exception when it comes to navigating the rise of China. Given its alliance with the USA, one might expect Japan to adopt a strategy that clearly demonstrates its opposition to China's uncertain rise. However, the evidence is unclear on whether Japan follows a balancing or a bandwagoning strategy toward China. Since the end of the Cold War, Japanese elites have debated how Japan should respond to the rise of China. As the relative power of the USA has declined and China's rise has continued, Japan has found it necessary to pursue a middle-ground strategy that involves cooperation with China in multiple areas while also maintaining strong security, economic, and diplomatic ties with other partners. This posture has been coined as a "hedging strategy," a set of policies designed to give insurance against the Japanese position as a declining power in an uncertain world.

In economic matters, Japan is maximizing its profits through cooperation and interdependence. By 2021, Japanese exports to China had increased to 17.984 billion yen, and Japan's total trade with China accounted for almost 23% (exceeding the 14% of the USA) (MOF,

n.d.). Japanese outward Foreign Direct Investment (FDI) to China was 10.02 billion dollars in 2021 (JETRO, n.d.-a). Despite potential diplomatic or political controversies, Japan's goal has been to maintain strong economic ties with a powerful China.

At the same time, Japan is mitigating the risks of over-dependence on trade and investment from China. In June 2020, the Japanese Minister for Economy, Trade, and Industry, Nishimura Yasutoshi, stated that "We have become too dependent on China. We need to strengthen and diversify our supply chains, broadening our sources of supply and increasing domestic production." (Tajitsu, Yamazaki, and Shimitsu 2020). Only a few months later, the government, led by Abe Shinzō, launched a new program to subsidize companies that relocate to Southeast Asian countries or reshore to Japan. In the same vein, on his first day as Prime Minister, Kishida Fumio established the position of Minister in charge of Economic Security to protect sensitive technologies in areas such as semiconductors, cyber security, and intellectual property. This raises the question of whether Japan is diversifying its trade and investment as part of its economic hedge against China.

This article will examine the Abe administration's economic hedging toward China, which has been underrepresented in the literature but is a crucial aspect of Japan's overall hedging strategy. We assert the importance of economic statecraft within the Japanese hedging strategy in addressing the challenge posed by China and we conclude that Japan is diversifying supply chains for its strategic sectors in order to reduce the economic risks and avoid becoming excessively dependent on China. We carry out our study by focusing on Japan's dynamics of diversification in trade and investment, considering that the decision-making process for factory relocations involves multiple factors and firm heterogeneity, making it difficult to disentangle specific motivations. We assert that despite not officially recognizing China as an economic threat, Japan's actions for diversifying its trade and investment with Beijing aim at reducing economic vulnerability. In essence, this article integrates the concept of economic diversification into the analytical framework of Japan's hedging strategy and provides a framework for analyzing the economic hedge through trade and investment.

The article has 2-fold significance. First, it highlights the importance of examining economic hedging as a tool in foreign policy analysis, despite the examination of hedging as a security strategy in the literature.

Second, it delves deeper into the concept of economic diversification, which has been identified by authors, such as Kuik (2008a, 2016) and Liao and Dang (2020), but has not yet explored in depth its relationship with dependence. In this article, we identify key indicators to assess economic hedging and use them to evaluate economic diversification.

We have divided this article into four sections. In the first section, we examine the concept of hedging as a framework in International Relations theory and provide a reinterpretation of Kuik's understanding of economic hedging. In Section 2, we analyze whether Japan is pursuing a diversification strategy away from China in its trade policies by considering the significance of Free Trade Agreements (FTAs) as a general framework for trade diversification and by examining key sectors that are particularly crucial to the Japanese economy. In Section 3, we examine investment flows to China to determine whether Japanese companies are diversifying their risks to other regions as part of a wider strategy to reduce their excessive dependence on China. Finally, we will end the article highlighting some conclusions.

2. Hedging in International Relations theory

The question of how states respond to the emergence of a rising power that challenges the existing international order has been a major area of research in International Relations. Early studies on this topic were predominantly based on realist perspectives, which suggest that states can adopt only two main strategies: balancing and bandwagoning. According to this view, in multipolar systems, powerful states can deter a rising power by either maximizing their military strength (internal balancing) or forming alliances with other powers to contain the threat (external balancing). Arguably, balancing strategies aim to change the relative power of rivals in their attempt to become a hegemonic power.

However, what is the approach taken by weaker states when faced with a rising power? According to (neo)realism (Walz 1979; Mearsheimer 2001), weaker states do not balance, but rather they follow a strategy of bandwagoning by joining forces with a rising power under the assumption that weak states cannot oppose or contain their rivals. As a result, weaker states often choose to side with the rising power for the purpose of gaining advantage (Schweller 1994: 72–107)

or to avoid being targeted (Walt 1987: 17). As Mearsheimer (2001: 163) points out, "The weaker state can only hope that the rising power will be merciful."

Recently, some scholars have considered neorealists approaches theoretically inaccurate because of their parsimony and oversimplification but also because most theories are still focused on certain specific and clear threat characteristics of the bipolar world Cold War period (Ciorciari and Haacke 2019: 367). Given the current structural uncertainty over the future distribution of international power and the lack of an imminent threat, new trends in international politics suggest that small or middle power states do not take a clear position vis-à-vis a rising power. When uncertainty and risks are high, but there is no imminent threat, states tend to hedge (Chung 2004; Medeiros 2005; Roy 2005; Goh 2006; Kuik 2008a; Hornung 2014; Jackson 2014; Lim and Cooper 2015; Kuik 2016; Koga 2018; López i Vidal and Pelegrin 2018; Haacke 2019; Korolev 2019; Kim 2021; Martin and Jenne 2021; Chang 2022; and Marston 2023). As stressed by Martin and Jenne (2021: 206), "hedging appeared a useful category to fill the behavioral gap between outright opposition and alignment." The ultimate goal of a hedger is to not put all their eggs in one basket, and to avoid siding with or against a rising power.

In an effort to better understand the concept of hedging, Kuik conducts a systematic and theoretical examination of hedging as a rational behavior (as seen in Fig. 1). Whenever uncertainty over the future of the international distribution of power entails high risks, small or middle powers are compelled to pursue multiple policy options aimed at simultaneously maximizing options and avoiding risks (Kuik 2008a: 167). To do so, these states adopt risk-contingency strategies that consist of both dominance denial and indirect balancing. Whereas dominance denial is adopted when a country uses diplomatic tools and international

<table>
<tr><td rowspan="3">BALANCING</td><td colspan="5">HEDGING</td><td rowspan="3">BANDWAGO–NING</td></tr>
<tr><td colspan="2">Risk-Contingency Options</td><td colspan="3">Return-Maximizing Options</td></tr>
<tr><td>Indirect balancing</td><td>Dominance denial</td><td>Economic pragmatism
Economic diversification</td><td>Binding-engagement</td><td>Limited-bandwagoning</td></tr>
</table>

Figure 1. Hedging according to Kuik (2016: 502).

institutions to prevent the dominance and hegemonic desire of a rising power in a region, indirect balancing involves balancing militarily (both internally and externally) to a rising state without specifically recognizing it as a military threat. As stated by López i Vidal and Pelegrín (2018: 198): "while pure balancing strategies are a clear-cut military policy of containment against a specific threat, an indirect balancing strategy sees a state acting in preparation for an uncertain situation."

Moreover, states follow return-maximizing strategies, including binding engagement, limited bandwagoning, and economic pragmatism. Binding engagement involves establishing partnerships with a rising power to foster communication and integrate it into the established order as a responsible stakeholder. In turn, limited bandwagoning refers to forming a political alliance to reap current or future benefits while retaining autonomy and without jeopardizing existing relationships with other powers (Kuik 2016: 4).

Additionally, Kuik defines economic pragmatism as an effort to maximize gains through the establishment of direct trade and investment links with a rising power. This approach seeks to profit from the rising power's economic growth, despite any political or security concerns between the two nations (Liao and Dang 2020: 669). However, it is important to view economic pragmatism not just as a return-maximizing strategy, as outlined by Kuik (2008a and 2008b), but also as a risk-contingency strategy. This means that the goal is not only to maximize economic benefits but also to be prepared for potential economic setbacks, effectively balancing the risks and returns. In the following section, we will examine this concept in greater depth and re-conceptualize Kuik's idea of economic pragmatism as economic hedging.

2.1 Economic hedging: reinterpreting Kuik's model

Kuik (2008a, 2008b, 2015, 2016) has thoroughly analyzed the concept of hedging and has also emphasized the economic aspect of hedging through the lens of economic pragmatism. In his initial classification, Kuik (2008a) argues that states engage in economic relationships with other powers with the goal of deriving benefits from trade and investment, regardless of the political environment. Kuik (2016: 502) describes economic pragmatism as an attempt to maximize economic gains by "pragmatically establishing direct trade links."

In Kuik's original 2008 model, economic hedging, referred to as economic pragmatism, is classified as a return-maximizing strategy but not a risk-contingent option. However, in his review of the model in 2016, Kuik positioned the economic pragmatism aspect of hedging as being situated somewhere between risk-contingency and return-maximizing, which is still a vague definition that decreases its analytical precision (as seen in Fig. 1). To advance the study of economic hedging, we build on Kuik's extensive research on hedging and its critiques (Chang 2022; Marston 2023) and propose a clearer approach. Re-interpreting Kuik's understanding of hedging as a policy that encompasses both risk-contingency and return-maximizing behaviors in security and diplomacy, we apply a similar concept in the economic sphere. As depicted in Fig. 2, it is more precise to distinguish between economic dependence as a "return-maximizing" strategy and economic diversification as a "risk-reduction" strategy. Both elements are viewed as opposing one another, providing a more coherent examination of economic hedging (Gonzalez Pujol 2019: 137). We will now look more closely at our understanding of the situation.

First, economic dependence, as a profit maximization strategy, aims to increase benefits through enhancing trade and investment connections with economic partners. This concept is similar to what Kuik

	Return-maximizing	**Risk-Reduction**
Economic Hedge	Economic dependence in Trade and Investment *Tools/Policy:* Trade and investment data, policies for strengthening Japan's supply chains and developing strategic industries. *Indicators:* Trade Dependency Indicator, Trade Intensity Change and Investment Intensity Change indicators	Economic diversification in Trade and Investment *Tools/Policy:* Japan's Revitalization Strategy, Japan's growth strategy, Strategy for semiconductors and the digital industry, Program for promoting investment in Japan to strengthen the supply chain, Program for strengthening the overseas supply chain, *Indicators:* Trade Intensity Change and Investment Intensity Change indicators
Political Hedge	Binding engagement	Dominance denial
Security Hedge	Limited bandwagoning	Indirect balancing

Figure 2. Proposed analytical approach of economic hedging.

(2008a) refers to as economic pragmatism, as both focus on strengthening economic ties between states. By renaming economic pragmatism as economic dependence, we can connect the theory of hedging in International Relations to existing research on interdependencies and dependencies among states in the field of International Political Economy (Nye and Keohane 1977; Armstrong 1981; Blanchard and Ripsman 1996, 2001; Oneal and Russett 1997; Gartzke, Li and Boehmer 2001; Hegre, Oneal, and Russett 2010). Second, economic diversification as a risk-contingency strategy seeks to reduce dependence on trade and investment from a single partner. By spreading investment and trade among a variety of partners, a state can reduce its vulnerability to external pressures (Armstrong 1981). Through this approach, economic dependence is diminished, providing a more robust and secure economic foundation. This aligns with Kuik's (2016) perspective on economic hedging and supports the idea of spreading risk across multiple partners.

2.2 Methodology to analyze economic diversification

In this section, we present a method to quantify economic diversification through the use of two sets of indicators: the Trade Dependency Indicator (TDI) and indicators of intensity change, such as Trade Intensity Change (TIC) and Investment Intensity Change (IIC). To gain a comprehensive understanding of Japan's economic diversification efforts, we will compare these indicators with China, as well as with Japan's other major partners, including ASEAN, the USA, and the EU. Additionally, we will examine political actions aimed at mitigating potential supply chain disruptions in the future.

First, the TDI measures the significance of bilateral trade (exports plus imports) as a proportion of a country's Gross Domestic Product (GDP) (Oneal and Russett 1997). This indicator reveals the bilateral trade (T) with a selected partner (j) compared with a country's (i) GDP. The TDI also represents the potential economic impact on the country (i) in the event of cutting off ties with its partner (j).[1] Thus, a decrease in the TDI over time may indicate a move toward diversification (Equation 1).

1 In our study, "i" is Japan and "j" are Japan's major economic partners: China, ASEAN, the US, and the EU.

$$Trade\ Dependency\ Indicator\ (TDI) = \frac{T_{ij}}{GDP} \tag{1}$$

Second, the TIC measures the growth or decline of bilateral trade with a partner (j) as a percentage of a country's (i) total trade with the world (w) over a period of time. A value less than 100 indicates a relative decrease in bilateral trade. We will use the TIC to analyze sectorized trade data between 2012–2015 and between 2016–2019. Likewise, we will calculate the IIC for sectorized FDI data by replacing trade with investment in the calculation (Equations 2 and 3).

$$TIC = \frac{\frac{T_{ij2019}}{T_{ij2016}}}{\frac{T_{iw2019}}{T_{iw2016}}} * 100 \tag{2}$$

$$IIC = \frac{\frac{FDI_{ij2019}}{FDI_{ij2016}}}{\frac{FDI_{iw2019}}{FDI_{iw2016}}} * 100 \tag{3}$$

To ensure the validity of the intensity change indicators, we have established three conditions. First, we selected the most recent data that was not impacted by external factors that could alter trends in trade and investment, such as the coronavirus disease 2019 (COVID-19) pandemic. Second, to facilitate comparison between trade and investment, we ensured that data on trade (classified using the harmonized system) and investment (grouped by economic sector as per the Japanese government) were equivalent. Lastly, we selected data from sectors in which the total amount of investment between Japan and China was substantial. Based on these criteria, we selected data from the period of 2012–9 for the following sectors: chemical and pharmaceuticals (HS 28–38); rubber and leather (HS 40–43); glass and ceramics (HS 69 and 70); iron, non-ferrous and metals (HS 7106–83); general machinery (HS 84); electric machinery (HS 85); transportation equipment (HS 86–89), and precision machinery (HS 90–91). In this study, we have excluded data on re-exports and FDI from Japan to China via Hong Kong. Trade and investment activities between Japan and China through Hong Kong have shown a stable pattern, leading to a diminishing weight of Hong Kong in the trade and investment relationship between Japan and China. In contrast, our study focuses on analyzing changes in data. Additionally, less reliable and

accessible data on re-exports and reinvestment also cautioned us against including it in our study.

In our comprehensive examination of various sectors using our indicators, it is imperative to discern which sectors merit classification as strategic. The ongoing debate centers on defining what qualifies as a strategic sector or product. According to Bortolotti and Siniscalco (2004: 91), "A sector is considered strategic if a broad national interest could be identified in the operating activity of its companies." However, achieving consensus on this definition remains a challenge, as exemplified by the perspectives of other scholars. Polachek (1980), for instance, has historically conceptualized strategic sectors based on their potential to contribute to national welfare gains. Furthermore, Reuveny and Kang (1998) contend that machinery and transport may hold limited strategic value, while Goenner (2010) advocates for the inclusion of nuclear materials and chemicals in the realm of strategic considerations.

In our analysis, we have considered that a list of strategic sectors may encompass defense, raw materials, energy, electronics, manufacturing, telecommunications, and transport. Essentially, while strategic sectors are inherently linked to national security and economic robustness, disagreements over the specific sectors and products to be included arise from evolving national interests and priorities over time, space, and in the context of the relationships under study. In this article, we use strategic sectors and products to illustrate our claims. Some of the strategic sectors we have chosen are recognized by the Japanese government as especially important goods, including semiconductors, certain types of medicines, and specific general and electrical machinery (Cabinet Office, n.d.). Others, such as transportation or COVID-19 protection goods, have been chosen due to their pivotal roles in the Japanese economy and their alignment with the aforementioned criteria for being recognized as strategic—considering aspects of time, space, and relationships. In other words, these sectors have recently carried substantial significance in both Japan's national interests and the bilateral relationship between Japan and China.

3. Economic diversification since the Abe administration

In this section, we will examine the policies of the Abe administration to determine the extent of Japan's economic diversification from China in

terms of trade and investment. First, we will discuss the significance of supply chain resilience for Japan's economic security. Then, we will analyze Japan's FTA strategy as a means of redirecting trade toward new partners by reducing barriers. We will then examine the diversification efforts in strategic sectors and commodities, such as COVID-19-related goods, semiconductors, and automobiles. Second, we will review Japanese FDI in China from 2012 to 2019. Finally, we will analyze geographical diversification based on our indicators and information provided by the Japan External Trade Organization (JETRO) and the Ministry of Economy, Trade and Industry (METI).

3.1 Economic diversification in trade during the Abe administration

3.1.1 Japan needs supply chain resilience

In a highly globalized and interdependent world, enhancing trade flows and ensuring the stability of supply chains (comprising the exchange of raw materials, components, and finished goods) is pivotal to a nation's economic prosperity. Neglecting either of these imperatives entails forgoing a portion of the economic benefits associated with trade. Ideally, the simultaneous pursuit of trade maximization and supply chain robustness would be attainable. However, trade is susceptible to supply chain disruptions when maximizing trade requires excessive dependence on a single partner. To mitigate this risk, countries may need to make tradeoffs between the advantages of maximizing trade and the stability of supply chains, necessitating the implementation of diversification strategies to mitigate potential losses. For the past 15 years, China has been Japan's main trading partner, accounting for over 20% of Japan's total trade (United Nations, n.d.). This relationship provides Japan with a range of economic benefits, such as access to lower labor costs and the vast Chinese market. Bilateral trade between Japan and China experienced rapid growth from 2000 to 2008. However, from 2008 to 2021, the trend has been moderate, with intermittent periods of decline, coinciding with the economic and political crisis between the two countries and worldwide (Fig. 3). Japan's trade dependence has also highlighted the potential risks associated with supply chain disruption.

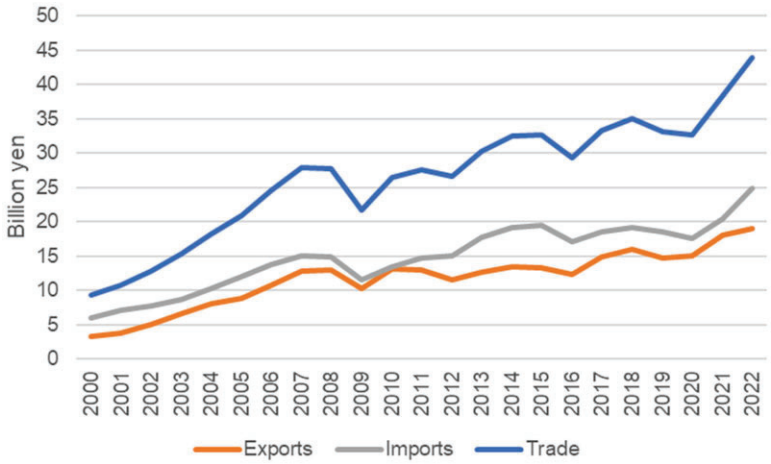

Figure 3. Japan's exports, imports and total trade with China.

Since the late 2000s, China has threatened to disrupt Japan's supply chain for political reasons on multiple occasions, exposing the vulnerability of the supply chain in three distinct cases.

First, from the late 2000s to 2015, China significantly tightened its export quotas of rare earths and imposed restrictions on Japan in 2010 as a response to the arrest of a Chinese captain by the Japanese Coast Guard near the Senkaku Islands (Maeda and Mogi 2010), bringing to light the potential threat of losing access to China, the main global supplier of rare earths. Second, in 2012, following Japan's nationalization of some of the Senkaku Islands, an anti-Japanese movement in China targeted Japanese products, particularly automobiles, one of Japan's largest industries, resulting in a decline in Japanese automobile sales in China for several months (Barwick et al. 2019). While boycotting primarily affects market share losses rather than supply chains, the events of 2012 evinced how economic dependence can be played for political reasons. Third, the outbreak of the COVID-19 pandemic further exacerbated the situation, causing substantial disruptions in the procurement of medical products, protective gear, and automobile parts. China's suspension of business activities to control the spread of COVID-19 resulted in an irregular supply of goods for human protection and disruption in the supply chain of automobile parts intended for assembly in Japan (JETRO 2020b).

All three of these events raised awareness among the Japanese government and business circles of the risk of supply chain disruption and its

implications for procuring strategic products (METI 2021d). While they acknowledge that complete elimination of these risks is unfeasible, as solely relying on internal production is not only unrealistic but also poses a risk of disruption in times of national crisis or natural disasters (METI 2021d), their aim is to find a balance between internal and external production and improve the resilience of Japan's supply chains.

3.1.2 Trade with China under Abe's administration

Since 2012, Abenomics, a set of economic policies initiated by Prime Minister Abe Shinzō, has been the cornerstone of Japan's efforts to stimulate economic growth. Comprising three key components, often referred to as "three arrows," Abenomics seeks to achieve inflation through monetary base expansion, fiscal consolidation to manage expenditure and stabilize debt, and structural reforms aimed at bringing about lasting changes in Japan's socioeconomic structure. In particular, monetary base expansion and certain structural reforms have had a significant impact on trade through currency depreciation, promotion of FTAs, and domestic liberalization.

These initiatives, while increasing Japan's exports overall, did not have a significant impact on trade with China. In comparison to other trade partners, the Trade Dependence Index (TDI) with China has remained relatively stable since 2013, whereas it has significantly increased with the United States and the EU (as depicted in Fig. 4). In contrast to the first decade of the 2000s, when Japan's TDI with China grew at a faster rate than with any other major partner, since

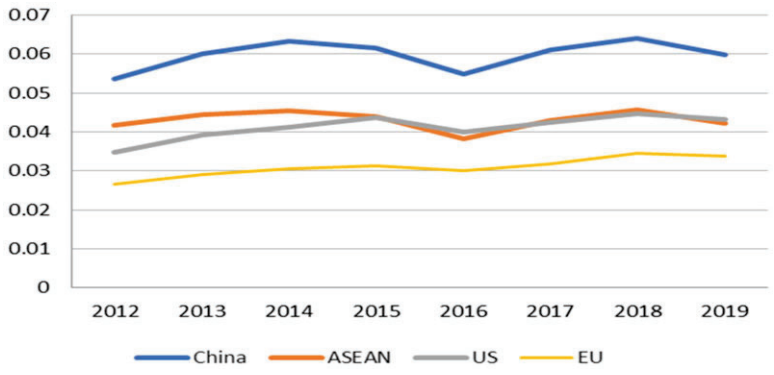

Figure 4. Japan's TDI with its major partners.

2013, Japan's TDI has seen the greatest increase with the USA and EU.

As part of its structural reforms, the Japanese government approved the Revitalization Strategy in 2013, with the aim of increasing the trade ratio covered by FTAs from 19% to 70% by 2018 (Cabinet of Japan 2013). In line with this goal, the Abe administration actively pursued mega-FTAs such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the Japan–EU Economic Partnership Agreement, as well as bilateral FTAs with countries such as Australia and the UK. The focus of these FTAs was to offer businesses alternative trade options in the Asia-Pacific region, and to partly exclude China from regional liberalization. However, despite its efforts, by 2019, Japan's FTA coverage had only reached 52.4% (Cabinet of Japan 2020), as it failed to secure either the US participation in the CPTPP or a bilateral US–Japan FTA. As a result, Japan had to reconsider its stance on excluding China from its FTA policy in order to increase its trade coverage.

Since 2019, Japan has continued its push for trade liberalization through FTAs but has taken a more inclusive approach that includes China in its FTA policy. This shift was demonstrated by Japan's leadership role in the Regional Comprehensive Economic Partnership (RCEP), where it entered into FTAs with China, South Korea, and New Zealand, leading to a projected increase in its FTA coverage to 79% (Cabinet of Japan 2020). This move has strengthened Japan's trade relationships with its partners and is expected to bring significant benefits for Japanese exports, particularly through the elimination or reduction of a significant portion of the 4.75% weighted average tariff on Japanese exports to China in 2019 (The World Bank, n.d.). As a result, Japan–China trade may see renewed growth, reinvigorating their interdependence after a period of FTA exclusion that lasted from 2013 to 2018.

In conclusion, Japan's FTA policy until 2019 aimed to diversify its trade away from China by promoting trade with countries such as the EU and USA, as indicated by the increase in TDI values with these countries. However, since 2019, Japan has reversed this trend by incorporating China into its FTA policy. It is important to note that this change in policy provides only a partial view of Japan's diversification initiatives. Further analysis is needed to consider any

sector-specific diversification efforts. In the following section, we will examine in greater depth Japan's sectoral trade diversification initiatives.

3.1.3 Japanese diversification in sectorized trade

In this section, we will examine the prioritization of Japanese trade in various strategic sectors and regions, as well as the political initiatives implemented to accomplish it. We define strategic sectors as those related to COVID-19 protection, such as medical and protective garments, as they have become crucial in the fight against the pandemic. Additionally, we include semiconductors as a strategic sector, as they play a vital role in most electrical products and are a significant contributor to the trade volume between China and Japan. Lastly, we consider the automobile and its parts sector, which is one of the largest segments of the Japanese economy.

Looking at the TIC indicator (Fig. 5) between Japan and China, many sectors show a reverse trend in 2016–9 if compared with the data from 2012 to 2015. There is certainly a significant increase in trade intensity for general machinery and transportation and a decrease for electric machinery, rubber and leather, and precision

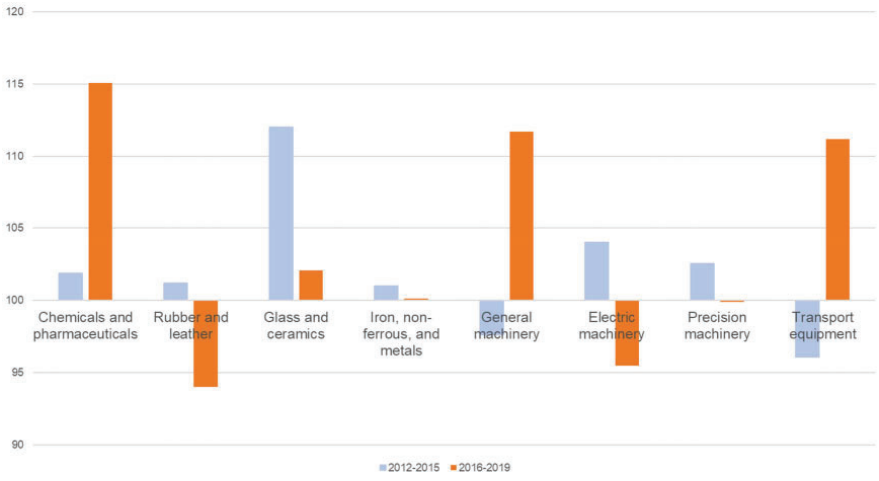

Figure 5. TIC between Japan and China by sector 2012–15 and 2016–19.

Note: TIC = ((Japanese trade by sector to China in 2019)/(Japanese trade by sector to China in 2016))/((Japanese trade by sector to the world in 2019)/(Japanese trade by sector to the world in 2016))*100.

machinery, which has mainly shifted to ASEAN and Europe. The fluctuation of the TIC across sectors highlights the notion that if diversification is taking place, it would likely be limited to specific sectors, especially those that have experienced decreases in the TIC.

Focusing on the largest sectors with drops in TIC, on the one hand, the trade reorientation of electric machinery is led by Japanese imports from ASEAN and Europe, showing a gradual reduction of Japan's need for Chinese products. In the case of ASEAN, this is a consequence of some countries such as Malaysia and Singapore positioning themselves higher in value-added products, while others such as the Philippines, Thailand, and Vietnam as cheap labor countries (ASEAN-Japan Centre 2021). In contrast, with the EU, the implementation of the Japan–EU EPA has increased transparency, eased regulatory norms, and reduced other soft barriers that had previously played a hindering role in Japan–EU trade.

Despite the recent trend of redirecting trade toward ASEAN and Europe, China continues to be the primary trading partner for Japan in the electric machinery sector, accounting for one-third of Japan's total trade in this sector. Meanwhile, Japan's trade in precision machinery is dominated by China, the USA, and the EU. During the period of 2016–9, Japan's trade with the EU, fueled by the Japan–EU EPA, has been growing at a faster pace than with China or the USA, solidifying the EU's position as one of Japan's key partners for precision goods.

In addition to the abovementioned sectorized data, there are several strategic sectors of crucial importance to Japan that require closer examination. These include COVID-19 protection goods, semiconductors, and automobiles. With regard to the first category, Japan heavily relied on China for essential commodities needed to combat the COVID-19 pandemic, such as face masks, hand sanitizers, thermometers, protective clothing, and filtration or purification machinery. These goods are neither high value-added goods nor are they among the most imported (in total value) from China (International Trade Centre, n.d.), but have proven to be essential to counter the COVID-19 pandemic. Hence, in the midst of the COVID-19-induced supply chain disruptions of COVID-19 protection goods, the Abe administration, recognizing the need to strengthen Japan's supply chains, initiated a series of subsidies aimed at diversifying production. Two types of

subsidies were launched[2]: one targeted at production in ASEAN and one aimed at bringing production back to Japan. Both subsidies provided financial support to reduce dependence on China for these goods and strengthen supply chains with ASEAN and within Japan. These subsidies were initially introduced as a response to COVID-related shortages but were soon extended to other industries, particularly semiconductors and automobiles.

The Japanese semiconductor industry reached its peak in the 1990s, accounting for about 50% of the world's semiconductor sales. However, as of 2021, many of the plants have become outdated and have struggled to remain competitive globally, leading to a decrease in Japan's share of the world's sales to less than 10% (METI 2021a). This trend is in contrast to the rising share of US, South Korean, Taiwanese, and Chinese companies in the global semiconductor market since the 1990s. In response, the Japanese government has taken steps to address the country's competitiveness gap and revive its semiconductor industry.

Since the end of 2021, the semiconductor industry has received 55% of the subsidized projects to reshore to Japan and has been the third most subsidized industry to relocate to ASEAN (just after automobiles and COVID-19 protective goods). In addition, in June of 2021, Japan approved its "Strategy for Semiconductors and the Digital Industry" (METI 2021a), reaffirming the strategic value of the industry to ensure economic security, national security, and the effective realization of the Japanese digital transformation toward a "Society 5.0." Japan's goal is to strengthen its domestic industry and promote partnerships and cooperation with companies from countries with closer strategic objectives, such as the USA, EU, and Taiwan (METI 2021a) to face China's growing relevance in the semiconductor industry. Additionally, it is worth highlighting that Japan will join the USA in enacting export restrictions starting in July 2023, which will restrict China's access to semiconductor manufacturing equipment (Kelly and Uranaka 2023). Therefore, these subsidies for reshoring to Japan and diversifying to ASEAN, export restrictions, and partnering with other countries are

2 Starting in 2022, Japan launched a subsidy program as part of the trilateral Supply Chain Resilience Initiative, which was established in collaboration with India and Australia. However, the amount of these subsidies is noticeably smaller compared to the subsidies aimed at reshoring to Japan or relocating to ASEAN countries.

political–economic efforts aimed at reducing the risk of supply chain disruptions from China before they become a reality.

Lastly, the automobile industry has been the most subsidized for relocation to ASEAN (accounting for approximately 40% of all projects) and the second-most for reshoring to Japan since September 2020. This is not surprising, as automobiles were among the sectors hardest hit by supply chain disruptions, such as during the onset of the COVID-19 pandemic. Japan–China bilateral trade plays a significant role in the entire Japanese automobile industry as there are critical components produced in either China or Japan, leaving both countries dependent on each other for automobile manufacturing. In early 2020, shortages of automobile parts from China—due to either the halt of production to prevent COVID-19 spread, a shortage of labor, or difficulties in ensuring trade of some crucial parts—paralyzed the production of Japanese automobiles, which usually maintain low inventory levels. As a result, the production of Japanese automobiles declined more than any other industry during the first few months of 2020 (METI 2021d).

To understand the impact of Japan–China trade on the automobile industry, it is important to distinguish between automobiles and their components. By 2019, Japan imported very few automobiles from China. However, China had become the second largest market for both Japanese automobiles and their components, surpassed only by the USA. Furthermore, China was also Japan's top source of automobile components. This highlights the strategic significance of the Chinese market for Japanese automobile companies, both as a destination for both components and final products and as a source of components for Japanese automobile production (Fig. 6).

On the one hand, with regard to automobiles (classified under HS 8703), Japanese exports to China increased between 2017 and 2019, while exports to the USA decreased. The opposite trend was observed for Japanese imports from China and the USA. These trends can be attributed to the trade balance strategy implemented by former President Trump, who expressed criticism and threats toward Japan's automobile exports to the USA, which significantly contributed to the US trade deficit. This led to a shift toward diversification from the USA for automobile imports and an increase in dependence on exports to China. (JETRO 2020c).

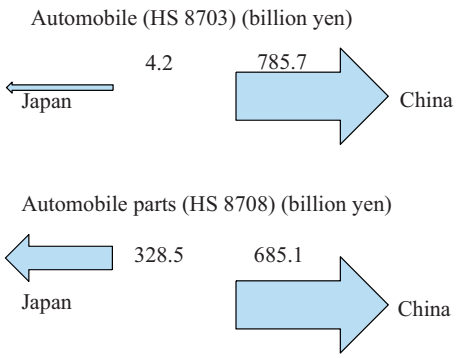

Figure 6. Japan–China trade of automobile and parts (2019).

Source: Trade Map (International Trade Centre, n.d.).

On the other hand, the trade of automobile parts (HS 8708) has seen growth in both the EU and ASEAN regions. The Japan–EU EPA, which came into effect in 2019, has played a significant role in boosting trade of automobile parts between Japan and the EU by reducing tariffs and promoting bilateral cooperation on regulatory matters. However, it is important to note that Japanese subsidiaries in China primarily produce automobiles for the domestic and regional markets, not for the EU (JETRO 2020b). Therefore, growing trade between Japan and the EU for automobile parts does not necessarily indicate diversification from China. In contrast, diversification toward ASEAN, particularly Thailand, Malaysia, and Vietnam, is more clearly evident. This is due to the entry into force of the CPTPP, ASEAN's growing presence in the value chain, and increased regional integration in ASEAN (ASEAN-Japan Centre 2020). It is important to mention that Japan's FTA goes beyond merely liberalizing trade. These agreements also include clauses aiming at reducing investment barriers, minimizing costs, and ensuring fair and equitable treatment for investors. As a result, Japan has been setting up a framework that eases the redirection of trade and investment, if necessary.

In conclusion, to address the risks posed by trade dependence on China and economic shocks such as COVID-19, Japan has sought to diversify its trade relationships. Prior to 2019, this diversification effort was driven by political factors, including the signing of an FTA with economic partners outside of China. However, since 2019, this strategy has also included China, and the focus has shifted to specific strategic

sectors such as COVID-19 protective goods, semiconductors, and automobile parts. These sectors have received subsidies for relocation to Japan or ASEAN and have been targeted by new policies aimed at reindustrializing Japan and forming alliances with non-Chinese partners. Although China continues to play a significant role in Japanese trade, the government has focused on these strategic sectors to promote diversification and reduce the risk of over-dependence on China. Although determining at which stage of the diversification process Japanese companies may be challenging, it is evident that they have responded positively and eagerly to the political drive for diversification. Despite multiple rounds of subsidies for relocation or reshoring, companies have consistently exceeded the granted amount in their applications, resulting in the Administration rejecting some projects and prompting further rounds of subsidies.

3.2 Economic diversification in FDI during the Abe administration

During the spring of 2020, the Abe Shinzō government announced a subsidy package with the aim of stimulating the relocation of Japanese companies to China. According to METI (2020a), the objective of these subsidies was to reduce "the vulnerability of those supply chains caused by the high degree of concentration of production bases/manufacturing plants." The result was the launching of three packages (July and November 2020, and July 2021) of approximately 514.7 billion yen (METI 2020a, 2020b, 2021b) received by a notable 374 companies. Meanwhile, the Japanese External Trade Organization (JETRO, n.d.-b) has been supporting projects for diversification of overseas supply chains mainly to ASEAN, subsidizing part of the expenses for equipment introduction "to reduce the risk of supply chain disruption."

As COVID-19 has shown, there is excessive dependence, on the part of many Japanese companies, on supplies from their production subsidiaries in China. The breaking of the supply chain, especially of crucial goods for Japan such as information tech products for example, highlights the need for alternative locations in other parts of the Asia-Pacific area (Kuo 2020). In this section, we will try to ascertain whether subsidiaries of Japanese companies in China are diversifying activities to other areas as a part of a broader strategy to reduce

excessive economic dependence on China. To do this, we will first review Japanese FDI in China in recent years and, subsequently, we will analyze the potential geographical diversification based on our indicators and using the information provided by the JETRO and METI statistics.

3.2.1 Japanese FDI in China during the Abe administration (2012–20)

When China joined the WTO (late 2001), the liberalization of its market and its rapid growth attracted large quantities of foreign capital and increased the procurement of imports from Japan. The Chinese procurement boom created opportunities for Japanese exports at a time when Japanese industry had been facing a stagnant domestic market for more than a decade. Japanese steelmakers, shipbuilders, oil refineries, shippers, construction equipment, and automobile manufacturers all saw a surge in their sales to China. Most of these industries offshored plants to China to reduce production costs and access the large and growing local market (López i Vidal and Pelegrín 2018).

Figure 7 illustrates the share of total Japan's outward FDI that goes to China and to Hong Kong. The chart reveals a notable increase in the share of FDI from 2001 to 2005, primarily attributed to the significant momentum generated by China's entry into the World Trade Organization. However, after a sharp decline in 2008 during the global financial crisis, and a partial recovery in 2009, the share of Japan's outward FDI to China experienced a notable decrease. It dropped from representing 12.67 percent in 2010 to 5.23 percent of Japan's total outward FDI to China in 2022. Following the example of existing

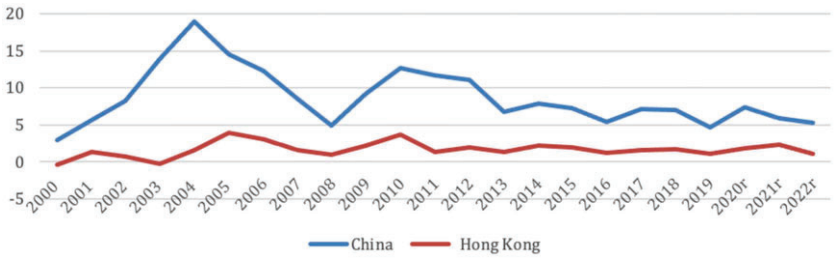

Figure 7. Share of total Japan's outward FDI to China and to Hong Kong (percentage).

Source: JETRO (n.d.-a).

research (Zeng, Xu, and Xie 2023), this article specifically focuses on FDI in China, excluding any FDI directed toward Hong Kong. This distinction is necessary because determining the proportion of FDI specifically targeted at China within the broader FDI directed toward Hong Kong poses a challenge. Figure 7 also highlights the relatively small proportion of Japanese FDI in Hong Kong when compared to the overall investment in China. This emphasizes a primary focus on investment directly in China rather than in its Special Administrative Region of Hong Kong.

China's share as a production location remains large. According to METI (2020c), the worldwide number of Japanese affiliates in FY2019 was 25,693, with China representing 29.7%, in total of 7,639 companies. China is the most important destination for Japanese FDI. However, since 2013, there has been an acceleration of Japanese FDI into ASEAN exceeding its FDI in China. According to JETRO (2020c), due to the increase in Chinese manufacturing costs, Japanese companies are relocating some activities in ASEAN area countries, including Thailand, Indonesia, and Vietnam. For example, in 2018 the FDI in ASEAN represented 18.7% of all Japanese FDI and this tendency has become more accentuated with the trade conflict between the USA and China (2018–20). As METI (2021c) states "the number of establishments in China hit the ceiling." Figure 8 shows Japan's manufacturing outward FDI to China during the period 2012–19. Between 2012 and 2019, the manufacturing FDI in China has grown notably, multiplying by 1.4 and reaching a value of 1,036 billion yen in 2019. As can be seen in the figure, the sectors that account for the highest concentration of FDI are transportation equipment, general machinery, electric machinery, and chemicals and pharmaceuticals, all of which have experienced remarkable growth during the period. In contrast, the scale of non-manufacturing FDI appears considerably more restrained, with over 50% of investments concentrated in the wholesale and retail sectors.

Moreover, we can conduct an analysis of the dynamism of the Japanese FDI in China by industry. To do so, we calculate an indicator known as IIC (Investment Intensity Change), which aims to compare the Japanese FDI in China with the Japanese FDI in the rest of the world, as can be seen in Fig. 9. As Equation (3) shows, values greater than 100 indicate that the FDI from Japan to China in a given industry has been higher than the FDI from Japan to the rest of the

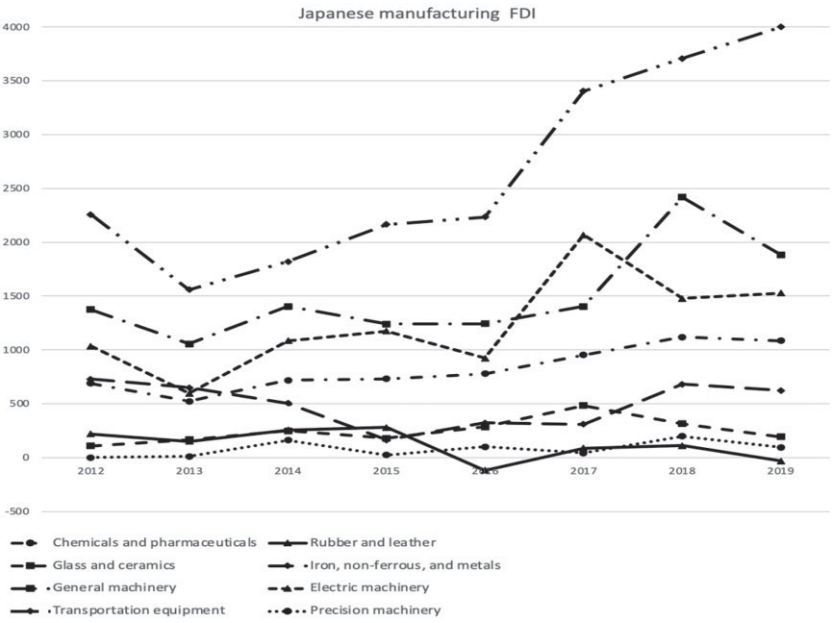

Figure 8. Japanese manufacturing FDI in China (100 million yen), 2012–19.

Source: Balance of Payment Statistics (Bank of Japan).

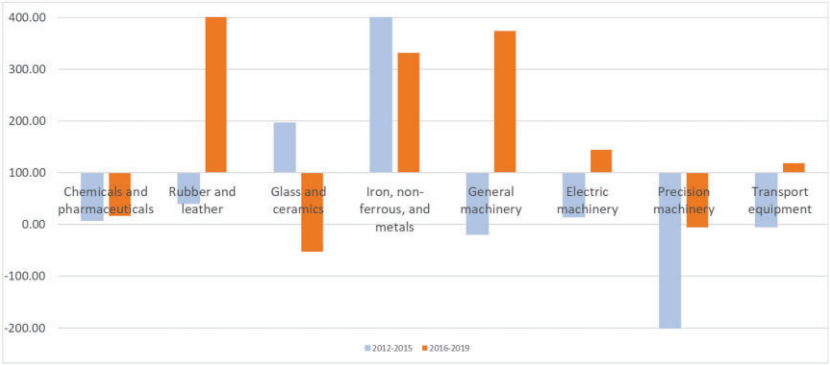

Figure 9. IIC between Japan and China by sector 2012–15 and 2016–19.

Source: Prepared by the authors based on the Balance of Payment Statistics (Bank of Japan).

Note: IIC = ((Japanese FDI by sector to China in 2019)/(Japanese FDI by sector to China in 2016))/((Japanese FDI by sector to the world in 2019)/(Japanese FDI by sector to a region in 2016))*100.

world in the same industry, which indicates greater dynamism of Japanese FDI in China than in the rest of the world.[3]

In Figs 8 and 9, we observe that the transport equipment, the electric machinery and the general machinery industries received the most FDI from Japan to China in absolute terms and have also shown greater dynamism compared to the Japanese FDI to the rest of the world during the period 2016–19. Ando (2006) already showed that the importance of intra-industry trade increased sharply for machinery trade in general, but especially so in the case of the vertical intra-industry trade of machinery parts and components. This increase was mainly due to the international fragmentation of the production processes occurring primarily through foreign-invested enterprises. For instance, in 2007, Japanese foreign-invested enterprises accounted for 86.9% of processing exports to Japan.[4] As China has emerged as one of the main destinations of Japanese FDI, intra-firm trade between Japanese parent companies and their affiliates in China has reinforced intra-industry trade between China and Japan.[5]

The transportation equipment is the industry that has received the most Japanese FDI in absolute terms (Fig. 8), but it is not as dynamic in China as general machinery and electric machinery during the period 2016–19 (Fig. 9). During 2019, the EU, a traditionally popular destination for Japanese FDI, recorded a strong increase, receiving almost 48% of all Japanese FDI abroad. In Europe, these increases focused on the transport equipment and chemicals and pharmaceuticals sectors.

As Sako (2018) states, the increase in FDI in the electrical and general machinery sectors was largely driven by investments in transportation equipment (see Fig. 8). With China becoming the world's largest automotive market, there was a surge in investment, particularly among Japanese cars, as they were approaching to their production capacity limits. This FDI aimed at strengthening production, expanding assembly lines, and shifting toward electric power to manufacture China's subsidized new energy vehicles, including electric cars. Furthermore, the 13th Five-Year Plan (2016–20) focused on promoting the manufacturing of machine tools

3 The indicator has been calculated for 2 periods 2012-2015 and 2016-2019 to collect the latest trends.

4 International fragmentation of the production process refers to the international division of a product process into two or more production blocks.

5 Intra-industry trade refers to trade between firms that belong to the same industry.

and related machinery, contributing to attracting Japanese manufacturers to invest in China (Sako 2018).

It is also interesting to compare Figs 8 and 9 with some results obtained in Section 2 for Japan's foreign trade with China. In foreign trade, the TIC indicator (Fig. 4) shows that general machinery and transportation equipment are the industries that recorded a higher level of growth and also receive most of the Japanese FDI in China (Fig. 8). These figures show that, in the case of some industries, trade and investment may be linked to each other. The Chinese procurement boom created opportunities that increased bilateral trade and FDI from Japan to China. Japanese industries of transportation equipment, general machinery, electric machinery, chemicals, and pharmaceuticals offshored plants to China to reduce production costs and access the large and growing local market. In short, exporting parts and components to China, processing and assembling the finished goods in China, and then re-exporting them to Japan and third countries has increased Japanese economic efficiency, but at the same time, the concentration of production activities in China has augmented dependence on China, with Japanese subsidiaries in China being the main actors of this process.

3.2.2 Japanese risk diversification in China

Trade frictions between the USA and China are having consequences for Japan's FDI in China. The reaction to the growing trade friction between China and the USA by the Japanese companies (headquarters and local affiliates) has been to take a cautious stance. In the case of having to transfer or relocate production, JETRO's survey on Business Conditions of Japanese Companies operating Overseas, Asia and Oceania in 2020 (hereinafter, JETRO 2020 survey) asserts that the Japanese foreign-affiliated companies in China listed Southeast Asia as a candidate location.

There is a notable increase in the Japanese FDI to ASEAN to diversify production plants risk. According to data from Japan's balance of payments, between 2017 and 2019, the FDI in ASEAN rose from 12.4% to 13.8% of total Japanese FDI, while FDI in China fell from 7.3% in 2017 to 5.7% in 2019. Among them, Vietnam stands out among the most attractive countries in ASEAN for diversifying

production risks and supply chains for several reasons. First, between 2018 and 2019, Japanese FDI in ASEAN increased by 15%, compared to 27% in Vietnam (Balance of Payment Statistics, Bank of Japan). According to JETRO's surveys in 2019 and 2020 (JETRO 2019, 2020a), in 2019, out of the 618 Japanese subsidiaries in China that responded to the survey, 35.4% rated the impact of trade friction very negatively, this proportion came to account for 38.4% of 783 Japanese subsidiaries in 2020. Thus, the perception of the negative impact of trade friction between China and the USA is increasing in Japanese subsidiaries. Second, supply chain restructuring from China to ASEAN, especially Vietnam, is slowly taking place. Benefiting from the existing production bases in China, some companies are partially transferring production to ASEAN in search of an optimal supply strategy and creating or reinforcing the Vietnamese plants.

The Japanese subsidiaries surveyed in China that answered that they had plans to reduce or transfer production to a third country increased from 6.6% of 752 subsidiaries in 2018, to 7.7% of the 876 of the subsidiaries in 2020. At the same time, the Japanese subsidiaries surveyed in China that answered that they had plans to expand their activities in China fell from 48.7% in 2018 to 43.2% in 2019 and to 36.6% in 2020 (JETRO 2019, 2020a). As the companies confirm, the main reasons are the commercial friction between China and the USA and the COVID-19 pandemic. However, the survey conducted by JETRO in 2019 and 2020 revealed that a significant proportion of Japanese businesses cited the "increase of costs" as a primary reason for business reduction, transfer, or withdrawal in the next one or two years. In 2019, 56.4% of respondents indicated this as a key factor, which decreased to 36.1% in 2020 (JETRO 2020a).

This raises an important question regarding the main drivers behind the increase in Japanese FDI to ASEAN. It is crucial to find out whether this rise is predominantly determined by commercial frictions, protectionist measures, or the escalating costs in China. While factors such as the spread of COVID-19 and change in the trade environment were identified as reasons for the change, the percentage of Japanese subsidiaries in China pointing to "wage hikes" as the primary management concern increased from 63.3% in 2020 to 72.4% in 2021 (JETRO 2021). These findings suggest that while various factors play a role in the decision-making process, the increasing costs in China, particularly

in terms of wage hikes, have become a significant consideration for Japanese subsidiaries operating in the country.

In the literature on the determinants of multinational activity, Dunning's "Eclectic Paradigm" suggests that an enterprise's FDI is determined by three types of potential advantages: ownership, location, and internalization (OLI) (Dunning 1981). In other words, FDI is determined, first, by the extent to which the enterprise possesses net ownership advantages (Hymer 1960); second, by the profitability of locating its production units either at home or abroad (Vernon 1966); and, third, the extent to which it is able to internalize these advantages or, on the contrary, must leave them for other enterprises to exploit (Buckley and Casson 1976). As Görg, Greenaway, and Kneller (2008) point out, the basic principle is the relocation of activity on the basis of cost, so location is an important variable for cost minimization strategies (Pelegrín and Bolance 2008).

These wage increases are one of the factors that contribute to the overall cost dynamics in China. Indeed, the average annual wage of persons employed in urban private units in China has seen various rates of increase over the years. According to data from the National Bureau of Statistics of China (2021), there was a notable rise of 17.1% in 2012, followed by 13.8% in 2013 and 11.3% in 2014. From 2015 to 2021, the average annual wage increased slightly over 8% each year.

The decision-making process for factory relocations involves multiple factors, making it difficult to disentangle each individually. The relocation of factories from China to ASEAN or back to Japan is determined by a combination of factors that can vary across industries and companies. On one hand, economic reasons have played a significant role in driving relocation decisions, particularly in terms of cost mitigation. Canon, for example, chose to move production back to Japan due to the depreciation of the Yen, as highlighted by Canon Chairman and CEO Fujio Mitarai (The Japan Times 2022). Similarly, JVC Kenwood Corp, a manufacturer of car navigation systems and audio equipment, relocated production from Indonesia to Nagano prefecture (Japan) citing the depreciation of the yen (The Japan Times 2022).

Other companies, such as Shiseido Co. and World Co., opted to move production back to Japan in order to maintain the high-quality standards of their products (The Asahi Shimbun 2022). In 2020, office equipment maker Oki ceased the production of ATMs and printers in China and shifted the Japanese market production to Japan, while

output for global markets was moved to Vietnam. Oki stated that their overseas operations would focus on products capable of competing on a global scale (Wang 2021).

On the other hand, some companies are driven by the goal of reducing dependence, particularly in relation to risk mitigation. For instance, Masanori Togawa, president and CEO of air conditioner maker Daikin Industries, is transferring production to Japan to decrease risks associated with overreliance on overseas production (The Japan Times 2022). Similarly, companies like Panasonic Corp., Yaskawa Electric Corp., and Mazda Motor Corp. suspended operations at some of their Shanghai plants and opted to move production to Japan due to supply problems caused by the Shanghai lockdown (The Asahi Shimbun 2022; India Blooms News Service 2022). Murata Manufacturing, a Japanese tech supplier will duplicate the supply of its plant in China opening a new plant in Thailand in October 2023 and also will increase production in Vietnam by August 2023 (Obe 2022).

In certain cases, a combination of both factors, cost and risk mitigation, have contributed to the decision-making process. Sharp Corp., for example, planned to shift the production of computers from China to Vietnam and Taiwan after the USA imposed tariffs on Chinese laptop computers, as stated by Sharp's CEO and Chairman, Tai Jeng (The Japan Times 2019). Additionally, Sharp's executive vice president, Masahiro Okitsu, mentioned the possibility of transferring the production of cooking appliances back to Japan if it led to cost improvements (The Japan Times 2022).

It is important to acknowledge that there are cases where companies choose not to relocate production. Toyota and Mitsubishi Heavy Industries, for instance, face significant challenges in moving their production plants from China due to high costs, and rebuilding a reliable supply chain would require substantial time and resources. Toyota's executive Vice President, Kenta Kon, highlighted the difficulty of shifting production facilities based on short-term foreign exchange fluctuations (The Japan Times 2022).

Existing research on the factors influencing relocation is limited. Luo, Si, and Zhang (2022) conducted a firm-level analysis focusing on the withdrawal of Japanese multinational enterprises (MNEs) in China. Using a unique dataset that spans from 1995 to 2016 and includes information on 9,909 Japanese affiliates in China, the authors

found out that the conflict surrounding the Senkaku/Diaoyu Islands, as well as an increase in the minimum wage in China, substantially increased the likelihood of Japanese divestment.

Zeng, Xu, and Xie (2023) focus on multinational corporations (MNCs) and their perspectives on the US–China trade war. The authors conducted an original survey targeting China-based MNC subsidiaries in the manufacturing industry. Regarding the firms' country of origin, the survey revealed that out of the total sample, 124 firms (27.13%) were headquartered in Japan. The authors' findings suggest that the decision to relocate production can be explained by the level of integration within local supplier networks. Specifically, firms that rely heavily on the Chinese market for sourcing activities or have a significant proportion of their products subject to supplier certification face substantial sunk costs. Consequently, these costs reduce their inclination to relocate away from the Chinese market.

Despite the fact that Japanese manufacturing companies have developed strong intra-regional supply chains, China is still the most relevant location. The following example shows the high concentration of procurement activities and sales of Japanese affiliates in China. In the information and communication equipment industry, 44.2% of the value of procurement sources of Japanese subsidiaries in China, was from China (14.1% from China local companies and 21.5% from Japanese affiliates in China, and the remaining 8.6% was from other foreign-affiliated companies) (METI 2020b). These data show us that local content, either from local Chinese companies or from Japanese subsidiaries in China, is a decisive factor in the decision to transfer production.[6]

Regarding the geographical destination of the sales of Japanese affiliates in China in the information and communication equipment sector in FY2017, 35.0% of the sales remained in the Chinese market (about 18% was directed to China local companies and 17% to Japanese affiliates in China) (METI 2021d). The current high concentration of procurement and sales in this sector reveals that any disruption in the supply chain (be it a trade war or the COVID-19 pandemic)

6 In the case of the transportation machinery industry, in FY2017 procurement from China accounted for 75.7% of the overall value of procurement of Japanese subsidiaries in China (42.3% from China local companies and 28.5% from China–Japanese affiliates) (METI 2021).

in China not only directly impacts Japanese subsidiaries in the country but also the Japanese companies that supply or buy products from subsidiaries in China.

As the high level of concentration of procurement and sales activities in China entails risks for the Japanese economy, diversification is required. Diversification is not an easy process, although 17.3% of the 503 Japanese subsidiaries surveyed in China expressed their desire to change the origin of their supplies, their local content increased from 63.7% in 2017, to 69.5% in 2021 (45.6% from Chinese local companies, 19.9% from Japanese affiliates in China and the remaining 4% from other foreign-affiliated companies) (JETRO 2021). When we consider the destination of sales, similar features are found. The domestic sales of Japanese subsidiaries in China represented 67.6% of total sales in 2019 and also in 2020 and 2021. However, 14.5% of the 856 Japanese subsidiaries surveyed in China in 2020 expressed their desire to change the destination of their sales[7] (JETRO 2020a, 2021).

The COVID-19 pandemic and the trade friction between China and the USA have increased concentration risks and, in reaction to this, since then Japanese companies have been trying to diversify the supply chain and sales markets while increasing their FDI location in ASEAN countries. Nevertheless, this restructuring is still small as China is the most influential location in Asia. The high concentration of procurement activities of the Japanese subsidiaries in China entails risks for the Japanese production system, as any disruption in the supply chain in China impacts both the Japanese subsidiaries in China and their parent companies in Japan.

An illustrative example of economic hedging occurred during the G-7 summit in Hiroshima in May 2023, where Japanese Prime Minister Fumio Kishida advocated for increased investment in Japan's chip industry. During meetings with executives from major semiconductor companies in South Korea, Taiwan, the USA, and Europe, he expressed the government's commitment to expanding direct investment in Japan and supporting the semiconductor sector. While Samsung is already building a development facility in Yokohama, Kishida's objective is to further stimulate investment from chipmakers by providing sustained support

7 The main reasons for change were "the COVID-19 pandemic and friction trade between China and the US" (JETRO, 2020a).

through subsidies. The positive impact of these initiatives is evident with major players like Taiwan Semiconductor Manufacturing Co., which plans to invest billions of dollars in Kumamoto for chip production, and Micron Technology, a US chipmaker, expanding its facility in Hiroshima (Nagao, Kitado, and Obe 2023).

Conclusions

This article has analyzed Abe Shinzo's economic strategy on China as an essential dimension of the overall hedging strategy adopted by the Japanese government. After exploring the concept of hedging in the context of International Relations and analyzing Kuik's model along with its critiques (Chang 2022, and Marston 2023), we have re-interpreted the concept of economic hedging by making a more accurate distinction between economic dependence as a "return-maximizing" strategy and economic diversification as a "risk-reduction" strategy. Considering these elements as opposing each other, enhances the coherence of our analysis of economic hedging. As we have explained in detail, one of the primary outcomes of economic diversification is to avoid dependencies on rising powers and reduce associated risks. However, we discovered that the motives for economic diversification can be either economic and/or political, with the latter constituting the essence of hedging. Therefore, it is important to acknowledge that the toolbox for mitigating the undesired political effects of economic dependence is multifaceted. Factors such as institutional agreements, diplomatic engagement, and proactive foreign policy can also play substantial roles in managing and reducing these effects. While diversification is a primary strategy, we recognize the presence of complementary measures that can collectively contribute to a comprehensive approach to minimizing the risks associated with economic dependence.

This article has highlighted the delicate balance between the economic benefits and risks of Japan's dependence on China. As we have seen, the Chinese market offers various opportunities for Japanese companies in terms of exports and imports. However, our analysis has demonstrated how excessive dependence on China also brings various challenges with it. Over the past decade, a number of incidents in China, such as import restrictions on rare earths, automobile boycotts, and the COVID-19 pandemic, have disrupted the supply chains of

crucial Japanese sectors and goods, leading to significant impacts on the Japanese economy. These incidents have served as a wake-up call for the Japanese government and businesses, highlighting the dangers of excessive dependence on China.

Under the leadership of Abe Shinzo, the Japanese government sought to strike a balance between taking advantage of the opportunities presented by the Chinese market and mitigating the associated risks. Rather than engaging in a trade conflict with China, as was seen between China and the USA, the Abe administration pursued large-scale FTAs that did not include China, such as the CPTPP and the Japan–EU EPA. However, with the USA withdrawing from the Trans-Pacific Partnership (TPP) due to mercantilist policies under the Trump administration, Japan shifted its approach in 2019 and actively pursued the Regional Comprehensive Economic Partnership (RCEP), which marked the first FTA that included both China and Japan.

Our examination of the Japanese FTA policy would have led us to expect clear trade diversification prior to 2019. However, our analysis of specific sectors revealed conflicting trends. Upon examining trade changes between 2016 and 2019, we noticed that only a few sectors, such as electric machinery and precision machinery, were diversifying from China, primarily toward ASEAN and the EU. Conversely, other important economic sectors for Japan, such as general machinery and transportation, saw an increase in trade with China. To some extent, this trend highlights the limited impact of FTA policies on trade diversification, but we must also acknowledge that FTAs in Japan will allow an easier redirection of trade and investment if companies decide to engage in a diversification strategy. Instead, targeted political initiatives, focused on industries like COVID-19 protective goods, automobile parts, and semiconductors, may prove more effective in promoting diversification. In the case of the first two of these products, Japan already has a deep dependence on China and experienced supply chain disruptions during the first half of 2020 as a result of the COVID-19 crisis. In the case of semiconductors, they became key for producing a broad range of products and are increasingly important for the Japanese economy. Not surprisingly, the Japanese government has provided subsidies to these three industries in order to diversify to ASEAN or reshore to Japan. Despite there been many rounds for subsidies put out by JETRO and METI, in every round, applications have well exceeded the total number of subsidies granted; thus showing a

clear interest by Japanese companies for making use of this government-led initiative for diversification purposes.

The withdrawal of the USA from the TPP has accentuated the relevance of the hedging strategy for Japan, as it prompted a careful examination of the equilibrium between return-maximizing and risk-reduction in its relations with China. Upon scrutinizing Japanese trade, several insights emerge. First, Japan's economic strategy transcends a mere pursuit of FTA diversification. Rather, it encompasses sector- and product-specific diversification policies that operate in parallel to FTA frameworks. Second, the shift in Japan's FTA policies to embracing the RCEP and a closer China substantiates our argument—drawing from Kuik's work—that hedging is inherently constituted by an interplay of counteracting policies. Third, economic hedging, while driven by explicit objectives of risk limitation and benefit maximization, is an adaptive strategy susceptible to implementation through policies that evolve over time.

However, supply chain restructuring from China to ASEAN has remained slow, with China still being one of the most influential locations. The high concentration of both procurement activities (67.7% of local content in 2020) and domestic sales (67.6% of total sales in 2020) hinders Japanese decisions on relocation. The decision-making process for factory relocations involves multiple factors and firm heterogeneity matters, making it difficult to disentangle each individually. Some examples illustrated the diverse economic and political factors influencing relocation decisions, ranging from cost considerations like changes in labor costs and currency depreciation to risk mitigation and supply chain resilience. Resource dependency may be another important factor explaining firms' organizational inertia and hence propensity to engage in relocation. All of these drivers function in an environment of an extensive network of FTAs that ease redirecting exports and investment.

The study enhances our comprehension of the drivers of relocation activities, contributing to a better understanding of their decision-making processes and the factors that influence their strategic choices. Our results indicate that while rising global political and economic uncertainty has increased the call for value chain relocation, a relatively small proportion of firms have relocated production out of China. Statistics show an increase in FDI in the transportation equipment, electrical and general machinery sectors (Figs 8 and 9) aimed at strengthening production and attracted by China's manufacturing promotion (Sako 2018).

Moreover, a survey conducted by JETRO revealed that for 56.4% of respondents in 2019 the "increase in costs" was the main reason for the business reduction, transfer, or withdrawal in the next one or two years (JETRO 2020a). Also, Japanese subsidiaries in China pointing to "wage hikes" as the primary management concern increased from 63.3% in 2020 to 72.4% in 2021 (JETRO 2021). These findings suggest that while various factors play a role in the decision-making process, the increasing costs in China, particularly wage hikes, are of significant consideration for Japanese subsidiaries operating in the country.

The study of cases of Japanese companies relocating production from China to other areas shows that cost, decreasing political risks and a mixture of both appear very relevant. We believe that a much higher sample of cases and a deeper study is needed. Last, the empirical research does not shed light enough, but we can assert that costs (sunk costs in the case of Zeng, Xu, and Xie 2023) and labor costs in the case of Luo, Si and Zhang (2022) appear more determinant than hedging. The current empirical research on the determinants of relocation falls short in understanding the significance of different motives (economic or political) to move the production to another site.

The strategic use of subsidies presents an opportunity for Japan to diversify its trade and investment relations, aiming to reduce overreliance on China in certain sectors. While subsidies alone may not be the sole determining factor for companies to relocate from China to ASEAN countries or back to Japan, they can certainly play a role in facilitating or implementing such decisions by providing financial incentives and support.

The international fragmentation of production was favorable in terms of increasing production efficiency, proving intra-regional supply chains to be one of the best instruments for generating regional growth and upgrading local production systems. However, the trade frictions between the USA and China and the COVID-19 pandemic have revealed excessive dependency on the international supply chain. As METI (2021d) claims, it is important to develop resilient supply chain networks able to strike a balance between economic rationality and efficiency, even if that means securing redundancies to deal with supply disruption risk.

In conclusion, this article has examined Abe administration's economic diversification strategy vis-a-vis China. By redefining economic hedging through a nuanced lens of economic diversification as part of a "risk-reduction" strategy, the study revealed a delicate balance in

Japan's pursuit of economic benefits and risk mitigation in its relations with China. Our study underscores Japan's deliberate efforts to diversify supply chains in key sectors, aiming to mitigate economic risks and prevent overreliance on China in trade and investment. Nevertheless, the complexity of the decision-making process for relocating factories incorporates various factors, and the heterogeneity among firms adds further intricacy, making it challenging to isolate the distinct impacts of these elements.

References

Ando, M. (2006) 'Fragmentation and Vertical Intra-industry Trade in East Asia', *The North American Journal of Economics and Finance*, 17: 257–81.

Armstrong, A. (1981) 'The Political Consequences of Economic Dependence', *The Journal of Conflict Resolution*, 25: 401–28.

ASEAN-Japan Centre. (2020). *Global Value Chains in ASEAN: Automobiles*, Paper 12. https://www.asean.or.jp/en/centre-wide-info/gvc_database_paper12/, Accessed 5 Jan. 2024.

ASEAN-Japan Centre. (2021). *Global Value Chains in ASEAN: Electronics*. https://www.asean.or.jp/ja/wp-content/uploads/sites/2/GVCs_Electronics_Paper-13_full_web.pdf, Accessed 7 Jan. 2024.

Barwick, P.J., Li, S., Wallace, J., and Weiss, J.C. (2019). 'Commercial casualties: Political boycotts and international disputes'. *SSRN*. https://doi.org/10.2139/ssrn.3417194

Blanchard, J.F., and Ripsman, N.M. (1996) 'Measuring Economic Interdependence: A Geopolitical Perspective', *Geopolitics and International Boundaries*, 1: 225–46.

Blanchard, J.F., and Ripsman, N.M. (2001) 'Rethinking Sensitivity Interdependence: Assessing the Trade, Financial, and Monetary Links between States', *International Interactions*, 27: 95–128.

Bortolotti, B., and Siniscalco, D. (2004). *The Challenges of Privatization: An International Analysis*. London: Oxford University Press.

Buckley, P.J., and Casson, M. (1976). *The Future of the Multinational Enterprise*. New York: Macmillan Press.

Cabinet of Japan (2013). *Japan revitalization strategy —JAPAN is BACK—*. http://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/en_saikou_jpn_hon.pdf, Accessed 4 Feb. 2024.

Cabinet of Japan. (2020). *Seichō senryaku forōappu [Growth strategy follow-up]*. https://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/fu2020.pdf, Accessed 2 Feb. 2024.

Cabinet Office. (n.d.). Jūyō busshi no antei-tekina kyōkyū no kakuho ni kansuru seido [System for ensuring stable supply of important supplies]. https://www.cao.go.jp/keizai_anzen_hosho/supply_chain.html, Accessed 2 Feb. 2024.

Chatin, M., and Gallarotti, G. (2019). *Emerging Powers in International Politics: The BRICS and Soft Power*. New York: Routledge.

Chang, J.Y. (2022) 'Not between the Devil and the Deep Blue Sea: Singapore's Hedging', *International Studies Quarterly*, 66: 1–12.

Chung, C.-P. (2004). 'Southeast Asia-China relations: Dialectics of 'Hedging' and 'Counter-hedging' in Singh, D. and Chin, K. W. (eds), *Southeast Asian Affairs*, pp. 35–53. Singapore: Institute of Southeast Asian Studies.

Ciorciari, J.D., and Haacke, J. (2019) 'Hedging in International Relations: An Introduction', *International Relations of the Asia-Pacific*, 19: 367–74.

Dunning, J.H. (1981) 'Explaining the International Direct Investment Position of Countries: Towards a Dynamic or Developmental Approach', *Weltwirtschaftliches Archiv*, 117: 30–64.

Fels, E., Kremer, J.F., and Kronenberg, K. (2012). *Power in the 21st Century: International Security and International Political Economy in a Changing World*. New York: Springer Science & Business Media.

Foot, R., and Walter, A. (2010) *China, the United States, and Global Order*. Cambridge: Cambridge University Press.

Gartzke, E., Li, Q., and Boehmer, C. (2001) 'Investing in the Peace: Economic Interdependence and International Conflict', *International Organization*, 55: 391–438.

Goenner, C.F. (2010) 'From Toys to Warships: Interdependence and the Effects of Disaggregated Trade on Militarized Disputes', *Journal of Peace Research*, 47: 547–59.

Goh, E. (2006) 'Understanding "Hedging" in Asia-Pacific Security', *PacNet*, 43: 31.

Gonzalez Pujol, I. (2019). Teoría y práctica de la estrategia hedging: Descifrando la política exterior japonesa ante la incertidumbre del ascenso de China [Theory and practice of hedging strategy: Deciphering Japanese foreign policy in the face of the uncertainty of China's rise]. [PhD. Thesis], Universitat Oberta de Catalunya.

Görg, H., Greenaway, D., and Kneller, R. (2008). 'The Economic Impact of Offshoring'. *GEP Research Report*, Leverhulme Centre for Research on Globalization and Economic Policy, University of Nottingham.

Haacke, J. (2019) 'The Concept of Hedging and its Application to Southeast Asia: A Critique and a Proposal for a Modified Conceptual and Methodological Framework', *International Relations of the Asia-Pacific*, 19: 375–417.

Hegre, H., Oneal, J.R., and Russett, B. (2010) 'Trade Does Promote Peace: New Simultaneous Estimates of the Reciprocal Effects of Trade and Conflict', *Journal of Peace Research*, 47: 763–74.

Herrick, C., Gai, Z., and Subramaniam, S. (2016). *China's Peaceful Rise: Perceptions, Policy and Misperceptions*. Manchester: Manchester University Press.

Hymer, S. (1960). The International Operations of National Firms: A Study of Direct Foreign Investment. [PhD. Thesis], Massachusetts Institute of Technology.

Hornung, J.W. (2014) 'Japan's Growing Hard Hedge against China', *Asian Security*, 10: 97–122.

India Blooms News Service (2022, September 02). 'Japanese companies slowly moving out of China amid growing crisis'. https://www.indiablooms.com/world-details/SA/35948/japanese-companies-slowly-moving-out-of-china-amid-growing-crisis.html, Accessed 3 Jan. 2024.

International Trade Centre. (n.d.). *Trade Map*. https://www.trademap.org/Index.aspx, Accessed 3 Jan. 2024.

Jackson, V. (2014) 'Power, Trust, and Network Complexity: Three Logics of Hedging in Asian Security', *International Relations of the Asia-Pacific*, 14: 331–56.

Bank of Japan. *Balance of Payments Related Statistics* (Data Based on the BPM6 [Data from January 2014 onward]) https://www.boj.or.jp/en/statistics/br/bop_06/index.htm, Accessed 3 Jan. 2024.

JETRO. (n.d.-a). *Japanese Trade and Investment Statistics*. https://www.jetro.go.jp/en/reports/statistics.html, Accessed 3 Jan. 2024.

JETRO. (n.d.-b). Kaigai sapuraichēn tagen-ka-tō shien jigyō [Business support for overseas supply chains diversification]. https://www.jetro.go.jp/services/supplychain/, Accessed 3 Jan. 2024.

JETRO. (2019). *2019 JETRO Survey on Business Conditions of Japanese Companies in Asia and Oceania*. Japan External Trade Organization. https://www.jetro.go.jp/ext_images/en/reports/survey/pdf/rp_firms_asia_oceania2019.pdf, Accessed 3 Jan. 2024.

JETRO. (2020a). *2020 JETRO Survey on Business Conditions of Japanese Companies Operating Overseas (Asia and Oceania)*. Japan External Trade Organization. https://www.jetro.go.jp/ext_images/_News/releases/2021/69b41fe59a5b2299/rp_firms_asia_oceania2020.pdf, Accessed 3 Jan. 2024.

JETRO. (2020b) *Impact of COVID-19 on Supply Chains in the ASEAN Plus Three Region, with Policy Recommendations ASEAN Plus Three Joint Study—Sub-report of Japan-*. Japan External Trade Organization. https://www.jetro.go.jp/ext_images/en/reports/survey/pdf/COVID-19_202011.pdf, Accessed 3 Jan. 2024.

JETRO. (2020c) *JETRO Global Trade and Investment Report 2020: A Global Economy with Increasing Uncertainty and the Future of Digitalization*

-*Overview*-. Japan External Trade Organization. https://www.jetro.go.jp/ext_images/en/reports/white_paper/trade_invest_2020_overview.pdf, Accessed 3 Jan. 2024.

JETRO. (2021). *2021 JETRO Survey on Business Conditions of Japanese Companies Operating Overseas (Asia and Oceania)*. Japan External Trade Organization. https://www.jetro.go.jp/ext_images/en/reports/survey/pdf/EN_Asia_and_Oceania_2021.pdf, Accessed 3 Jan. 2024.

Kelly, T., and Uranaka, M. (2023, March 31). 'Japan Restricts Chipmaking Equipment Exports as It Aligns with US China Curbs', *Reuters*. https://www.reuters.com/technology/japan-restrict-chipmaking-equipment-exports-aligning-it-with-us-china-curbs-2023-03-31/, Accessed 3 Jan. 2024.

Kiely, R. (2016). *The Rise and Fall of Emerging Powers: Globalisation, US Power and the Global North-South Divide*. New York: Springer.

Kim, M. (2021) 'Hedging between the United States and China? South Korea's Ideology-driven Behavior and its Implications for National Security', *International Relations of the Asia-Pacific*, 23: 129–158.

Koga, K. (2018) 'The Concept of "Hedging" Revisited: the Case of Japan's Foreign Policy Strategy in East Asia's power shift', *International Studies Review*, 20: 633–60.

Korolev, A. (2019) 'Russia in the South China Sea: balancing and hedging', *Foreign Policy Analysis*, 15: 263–282.

Kuik, C.-C. (2008a) 'The Essence of Hedging: Malaysia and Singapore's Response to a rising China', *Contemporary Southeast Asia*, 30: 159–85.

Kuik, C.-C. (2008b) 'Rising Dragon, Crouching Tigers. Comparing the Foreign Policy Responses of Malaysia and Singapore Toward a Re-emerging China, 1990-2005', *Biblioasia*, 3: 5–13.

Kuik, C.-C. (2015). 'Variations on a (Hedging) Theme: Comparing ASEAN Core States' Alignment Behaviour' in Rozman, G. (ed.), *Joint U.S.-Korea Academic Studies*, pp. 11–26. Korea Economic Institute of America.

Kuik, C.-C. (2016) 'How Do Weaker States Hedge? Unpacking ASEAN States' Alignment Behavior towards China', *Journal of Contemporary China*, 25: 500–14.

Kuo, M.A. (2020, May 5). 'Tokyo Prods Japanese Firms to Leave China'. *The Diplomat*, https://thediplomat.com/2020/05/tokyo-prods-japanese-firms-to-leave-china/, Accessed 7 Jan. 2024.

Liao, J.C., and Dang, N.-T. (2020) 'The Nexus of Security and Economic Hedging: Vietnam's Strategic Response to Japan–China Infrastructure Financing Competition', *The Pacific Review*, 33: 669–96.

Lim, D.J., and Cooper, Z. (2015) 'Reassessing Hedging: The Logic of Alignment in East Asia', *Security Studies*, 24: 696–727.

López i Vidal, L., and Pelegrín, À. (2018) 'Hedging against China: Japanese Strategy towards a Rising Power', *Asian Security*, 14: 193–211.

Luo, C., Si, C., and Zhang, H. (2022). 'Moving Out of China? Evidence from Japanese Multinational Firms'(Revised). *RIETI Discussion Paper Series 20-E-077*. https://www.rieti.go.jp/en/publications/summary/20100002.html, Accessed 5 Feb. 2024.

Maeda, R., and Mogi, C. (2010, September 24) 'Japan trade min hears China rare earth exports halted'. *Reuters*. https://www.reuters.com/article/us-japan-china-trade-idUSTRE68N0T720100924, Accessed 5 Feb. 2024.

Marston, S.H. (2023) 'Abandoning Hedging: Reconsidering Southeast Asian Alignment Choices', *Contemporary Southeast Asia*, 45: 55–81.

Martin, D., and Jenne, N. (2021) 'Hedging and Grand Strategy in Southeast Asian Foreign Policy', *International Relations of the Asia-Pacific*, 22: 205–35.

Mearsheimer, J.J. (2001). *The tragedy of Great Power Politics*. New York: Norton.

Medeiros, E.S. (2005) 'Strategic Hedging and the Future of Asia-Pacific Stability', *The Washington Quarterly*, 29: 145–67.

Medeiros, E.S. (2009). *China's international behavior: Activism, Opportunism, and Diversification*. New York: Rand Corporation.

METI (2020a). Successful Applicants Selected for the Program for Promoting Investment in Japan to Strengthen Supply Chains. https://www.meti.go.jp/english/press/2020/0717_002.html, Accessed 5 Feb. 2024.

METI (2020b). Successful Applicants Selected for the Program for Promoting Investment in Japan to Strengthen Supply Chains. https://www.meti.go.jp/english/press/2020/1120_001.html, Accessed 9 Feb. 2024.

METI (2020c). *Summary of the 50th Basic Survey on Overseas Business Activities*. Ministry of Economy, Trade and Industry. https://www.meti.go.jp/english/statistics/tyo/kaigaizi/pdf/h2c413je.pdf, Accessed 5 Feb. 2024.

METI (2021a). *Handōtai·Dejitaru Sangyō Senryaku [Semiconductor/Digital Industry Strategy]*. Ministry of Economy, Trade and Industry. https://www.meti.go.jp/press/2021/06/20210604008/20210603008-1.pdf, Accessed 5 Feb. 2024.

METI (2021b). Successful Applicants Selected for the Program for Promoting Investment in Japan to Strengthen Supply Chains (Second Call). https://www.meti.go.jp/english/press/2021/0702_003.html, Accessed 5 Feb. 2024.

METI (2021c). *Summary of the White Paper on International Economy and Trade 2021*. Ministry of Economy, Trade and Industry. https://www.meti.go.jp/english/press/2021/pdf/0629_001b.pdf, Accessed 5 Feb. 2024.

METI. (2021d). *White Paper on International Economy and Trade 2020*. Ministry of Economy, Trade and Industry. https://www.meti.go.jp/english/report/data/wp2020/wp2020.html, Accessed 5 Feb. 2024.

Nadkarni, V., and Noonan, N.C. (2013). *Emerging Powers in a Comparative Perspective: The Political and Economic Rise of the BRIC countries*. New York: A&C Black.

National Bureau of Statistics of China. (2022). The Average Annual Wage of Persons Employed in Urban Private Units In 2021. http://www.stats.gov.cn/english/PressRelease/202205/t20220523_1857682.html, Accessed 5 Feb. 2024.

Obe, M. (2022, October 18) 'Japan tech supplier Murata warns over rapid U.S.-China decoupling', Nikkei Asia. https://asia.nikkei.com/Spotlight/Supply-Chain/Japan-tech-supplier-Murata-warns-over-rapid-U.S.-China-decoupling, Accessed 5 Feb. 2024.

Nagao, R., Kitado, A., and Obe, M. (2023, May 18) 'Chips at center of G-7 discussion of how to counter China's rise', Nikkei Asia. https://asia.nikkei.com/Business/Tech/Semiconductors/Chips-at-center-of-G-7-discussion-of-how-to-counter-China-s-rise, Accessed 5 Feb. 2024.

Nye, J.S., and Keohane, R.O. (1977). *Power and interdependence*. New York: Pearson.

Oneal, J.R., and Russet, B.M. (1997) 'The Classical Liberals Were Right: Democracy, Interdependence, and Conflict 1950–1985', *International Studies Quarterly*, 41: 267–94.

Pelegrín, A., and Bolance, C. (2008) 'Regional Foreign Direct Investment in Manufacturing. Do Agglomeration Economies Matter?', *Regional Studies*, 42: 505–22.

Polachek, S.W. (1980) 'Conflict and Trade', *The Journal of Conflict Resolution*, 24: 55–78.

Regilme, S.S.F., and Parisot, J. (2017). *American Hegemony and the Rise of Emerging Powers: Cooperation or Conflict*. New York: Routledge.

Roy, D. (2005) 'Southeast Asia and China: Balancing or Bandwagoning', *Contemporary Southeast Asia*, 27: 305–22.

Reuveny, R., and Kang, H. (1998) 'Bilateral Trade and Political Conflict/Cooperation: Do Goods Matter?', *Journal of Peace Research*, 35: 581–602.

Sako, K. (2018). *'Japan's Foreign Direct Investment Trends in Asia: Investment Growth in the Field of Next-Generation Automobiles'*. Mizuho Economic Outlook & Analysis. https://www.mizuhogroup.com/binaries/content/assets/pdf/information-and-research/insights/mhri/mea181218.pdf, Accessed 5 Feb. 2024.

Schweller, R. (1994) 'Bandwagoning for Profit: Bringing the Revisionist State Back in', *International Security*, 19: 72–107.

Stromseth, J. (2019). *The Testing Ground: China's Rising Influence in Southeast Asia and Regional Responses*. The Brookings Institution. https://www.brookings.edu/wp-content/uploads/2019/11/FP_20191119_china_se_asia_stromseth.pdf, Accessed 5 Feb. 2024.

Tajitsu, N., Yamazaki, M., and Shimizu, R. (2020, June 9). 'Japan wants manufacturing back from China, but breaking up supply chains is hard to do'.

Reuters, https://www.reuters.com/article/us-health-coronavirus-japan-production-a-idUSKBN23F2ZO, Accessed 3 Jan. 2024.

The Asahi Shimbun (2022, August 25). 'For some Japan firms, era of cheap production in China is over'. https://www.asahi.com/ajw/articles/14702937, Accessed 3 Jan. 2024.

The Japan Times (2019, June12). 'Sharp calls US–China trade war an 'opportunity' to expand business'. https://www.japantimes.co.jp/news/2019/06/12/business/corporate-business/sharp-calls-u-s-china-trade-war-opportunity-expand-business/, Accessed 3 Jan. 2024.

The Japan Times (2022, November 18). 'Japanese manufacturers slowly shifting to domestic production'. https://www.japantimes.co.jp/news/2022/11/18/business/corporate-business/overseas-production-transfer/, Accessed 3 Jan. 2024.

The World Bank. (n.d.). *World Integrated Trade Solution*. https://wits.worldbank.org/, Accessed 3 Jan. 2024.

United Nations. (n.d.). *UN Comtrade Database*. https://comtrade.un.org/, Accessed 3 Jan. 2024.

Vernon, R. (1966). 'International Investment and International Trade in the Product Circle', in Dunning, J. H. (ed.), *International Investment*, pp. 305–25. London: Penguin

Walt, S. (1987). *The Origins of Alliance*. Ithaca: Cornell University Press

Wang, M. (2021, September 7). 'OKI Shifts Printer Production from China to Thailand', RT. https://www.rtmworld.com/news/oki-shifts-printer-production-from-china-to-thailand/, Accessed 4 Jan. 2024.

Zeng, K., Xu, Y., and Xie, Z. (2023) 'Local Sourcing Embeddedness, Manufacturing Relocation, and Firm Attitudes toward the US-China Trade War: A Survey Analysis of China-based MNC Subsidiaries', *Business and Politics*, 25: 91–116.