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Determinants of Exchange Rates in the Asia-Pacific Region: A Comparison of Japan and Thailand

Kiatnarong Wongsamee

Department of Economics, Doctoral School, SOAS University of London, London, UK
Email: kiatnarong.w@gmail.com

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Abstract

This paper presents a review of previous literature on determinants of exchange rates in two countries in the Asia-Pacific region: Japan and Thailand. These two countries were selected because of their economic similarities, including a floating exchange rate regime. The purpose of the study was to investigate the literature on exchange rate determinants and compare the two countries. A selection of studies for both Japan and Thailand showed that while there were similarities between the two countries, there were also some significant differences. This could indicate a significant difference in the exchange rate dynamics of each country, but it is also representative of a plurality of theoretical models and methodologies used in the studies. Furthermore, the findings showed that there were inconsistencies in studies within the same country, even when the time period was relatively similar. No direct comparisons between Japan and Thailand were identified. The study offers several opportunities for future research.

Keywords

Exchange Rates, Exchange Rate Determinants, Floating Exchange Rates, Japanese Yen, Thai Baht

1. Introduction

Japan and Thailand are two of Asia's most prominent economies. Japan is rated by the International Monetary Fund as a high-income country, with a gross domestic product (GDP) of $46850.10 (PPP) as of 2022 (World Bank, 2024). Thailand is ranked as an upper middle-income country, with a GDP of $20679.10 (PPP) as of 2022 (World Bank, 2024). Despite this obvious difference in economic

productivity, the economies of Japan and Thailand are in some ways very similar. Beginning in the 1970s, Japan pioneered an economic strategy of export-led growth and industry development, which allowed for rapid economic expansion during the 1980s before growth began to slow in the 1990s (Yokokawa, 2020). Thailand's economic policy was also reoriented toward export-led growth in the 1980s and 1990s, although the country suffered a significant economic shock during the 1997 currency crisis, followed by restructuring (Ridzuan et al., 2016). Thus, the two countries have had similar economic policies at least with respect to external trade. There are also similarities in the exchange rate regimes of Japan and Thailand, along with some differences. Both Thailand and Japan use floating exchange rates today (International Monetary Fund, 2023). However, their histories of such exchange rates are different. Japan has used a floating exchange rate since the abandonment of the Bretton Woods agreement in 1973 (Shafer et al., 1983). Thailand, on the other hand, adopted a floating exchange rate in 1997 (Jongwanich, 2008). In fact, it was this rapid policy exchange, which was meant to address a significant misalignment in the real exchange rate, which precipitated the 1997 East Asian economic crisis, which would lead to a restructuring of the Thai economy (Jongwanich, 2008). Thus, while Japan and Thailand have superficially similar exchange rate policies, their histories are different—and as will be shown, so are the factors that contribute to exchange rates under their floating exchange policies. The literature review presented here investigates what is known about the role of macroeconomic indicators in the exchange rates of both Japan and Thailand today, examining to what extent their exchange rates are similar—or different—in their determinants.

1.1. The Exchange Rate Regime

The exchange rate regime refers to the set of policies used by a country's central bank or other monetary authority to control (to the extent preferable) the exchange rate of the country's currency (Klein & Shambaugh, 2012). Exchange rate regimes are formally classified along a continuum from a fixed (or pegged) exchange rate, which is tied to the value of an external reference currency, to a floating exchange rate, which is driven entirely by market demand (Ilzetzki et al., 2022). In between these two extremes are various types of intermediate exchange rate regimes, which use some combination of control and market demand to set exchange rates (Williamson, 2002). Exchange rate regimes are important because they can influence economic growth, although other factors such as financial system development can inhibit this effect in developing countries (Ashour & Chen, 2018; Hadj Fraj et al., 2018). In particular, fixed exchange rate regimes are associated with higher investment, while flexible or floating regimes have higher productivity gains (Hadj Fraj et al., 2018). Thus, selection of the correct exchange rate regime is crucial for achieving long run economic objectives.

The choice of exchange rate regimes depends on the country's economic position and goals, for example whether stability or growth is the prime driver of

economic policy (MacDonald, 2007). However, there are also other factors in play in exchange rate regimes, such as cultural preferences (Cao et al., 2020). It has been noted that comparing exchange rates across exchange rate regimes is very difficult, in part because the determinants of exchange rates can be very different (Rose, 2011). Furthermore, there is a difference between formal de jure exchange rate regimes and de facto exchange rate regimes; for example, countries may claim to have a floating exchange rate regime but may in fact have policies that manage the exchange rate to some extent (Levy-Yeyati & Sturzenegger, 2005). Therefore, when considering the determinants and the effects of exchange rate regimes, it is appropriate to directly compare countries with similar exchange rates, as is done in this research.

1.2. Theories of Exchange Rate Determination in Floating Regimes

It has long been known that exchange rates show stochastic patterns of change in response to different determinants, which themselves also show stochastic patterns (Mussa, 1984). This stochastic behaviour results in random variations in empirical observation, which make it difficult to formulate a general theory of exchange rate determination that applies in all circumstances (MacDonald, 2007). However, there are several general theories of exchange rate determination, which can explain at least some exchange rate behaviour within a floating exchange rate regime (MacDonald, 2007).

The oldest theory of exchange rate determination is the theory of purchasing power parity (PPP) (Williamson, 2009). The PPP theory is based on the so-called Law of One Price (LOOP), which argues briefly that within a within a perfectly competitive market, a commodity will be sold for the same price (barring transport costs) (McChesney et al., 2004). By extension, the LOOP implies that in the absence of trade barriers, the price of the same good sold in two international markets will in the long run reach equilibrium, as producers choose to sell into the market with the higher price in a process of price arbitrage and reallocation of resources (Vo & Vo, 2023) until supply and demand have equalized (Williamson, 2009). This can be formalized as:

$$P_t^i = S_t P_t^{(i*)}$$

where P^i represents the price of the good, S represents the nominal exchange rate, and * represents the foreign magnitude (MacDonald, 2007). By extension, it can be defined that there is a homogenous overall price level n in each country, which represents the sum of homogenous goods and demand. The absolute PPP (APPP) theory argues that therefore, the nominal exchange rate is determined by changes in nominal prices of goods between countries (MacDonald, 2007). This theory does not account for factors like inflation; instead, this is addressed in relative PPP (RPPP) theory, which argues that differences in inflation relative to the individual market causes changes in exchange rates (Williamson, 2009). As increases in the money supply can drive inflation, it also follows that money supply increases can change exchange rates; this can lead to a vicious circle, in which exchange rate

movements shift demand for money, which influences inflation and causes further change in the exchange rate (Öñiş & Özmucur, 1990). The PPP theory of exchange rate determination does have some significant flaws, including a long-standing problem of poor empirical support (Krugman, 1978). Despite these flaws, there has been increased interest in the PPP theory of exchange rate determination in recent years, particularly for investigation of long-run exchange rate movements (Vo & Vo, 2023). At the same time, there are many other factors that may influence exchange rates in floating exchange rate economies, for example macroeconomic factors like interest rates, inflation rates, balance of payments, tax rates, and trade flows among others (MacDonald, 2007). Additionally, the factors that influence exchange rates may be different between developed and developing countries and countries with different economic structures (Adjei et al., 2019). For example, Adjei et al.'s (2019) study of exchange rate determinants in Ghana found that the main factors that influenced the exchange rate included GDP and trade openness; factors such as terms of trade, political stability, and public debt did have an effect, but this effect was statistically significant. This varies from studies in developed countries and in other developing countries, where any or all of these factors could be relevant (Adjei et al., 2019). There are some possible differences in economic structures and capital accumulation which may explain differences in exchange rate determinants even under nominally similar exchange rate regimes (de Carvalho & Gabriel, 2024). De Carvalho and Gabriel (2024) used post-Keynesian theory to propose a model that in the long run differed depending on whether growth in the economy was income-led or capital accumulation (profit) led, which resulted in different factors in the exchange rate. These studies, taken together, suggest that there are a variety of ways that economies may differ depending on their characteristics of capital accumulation, development levels, and so on. Therefore, it is worth investigating what factors have been observed for Thailand and Japan.

2. Methodology

The research used a systematic literature review methodology. Systematic literature reviews select previously published research based on pre-established criteria for inclusion and exclusion, then review the sources identified that relate to the research questions (Boland et al., 2017). The stages of the systematic review included: selecting databases, establishing inclusion and exclusion criteria, search, selection, and review.

Source selection was conducted in three databases, including Taylor & Francis, Elsevier, and Google Scholar. Both Taylor & Francis and Elsevier databases are associated with academic publishers who publish a significant number of economics and business journals, but they only index their own works, meaning that a significant number of sources could be excluded. Therefore, Google Scholar was used to select sources that are not published by these groups.

Initial inclusion criteria were set for source selection, including publication date

(2004 to 2024) and publication in a peer-reviewed journal. These criteria were selected to ensure that the articles were relatively current and that the journal articles are a basic level of quality. were selected using a series of keywords, including: *exchange rate*, *exchange rate factors*, *exchange rate determinants*, *exchange rate prediction*, *Japan*, *Thailand.*

Following the initial source selection, exclusion criteria were applied. These criteria included article type, relevance, and depth of coverage. With respect to article type, only empirical research and review articles that drew on empirical research were included, while articles such as book reviews, editorials, and so on were excluded. This exclusion criterion was set to minimize the amount of potential reporting bias that could occur through other types of articles (Boland et al., 2017). Additionally, relevance and depth of the coverage was considered, meaning that brief research letters and articles where the central issue of exchange rate determinants in Japan and Thailand were excluded, which preserved the focus of the research.

3. Findings

3.1. Exchange Rate Determinants in Japan

Empirical studies on the determinants of the exchange rate in Japan are summarized in Table 1. As this shows, there are two different directions of inquiry that research has gone—the substantive effect of macroeconomic factors themselves, and the effect of announcements relating to macroeconomic factors.

Table 1. Summary of studies on determinants of the Japanese exchange rate.

Authors	Objective	Time Period	Methodology	Findings
Ariff and Zarei (2016)	Investigation of nominal exchange rate behaviour of Canada, Japan, UK, and USA	1960 to 2014	Dynamic OLS	Authors evaluated all four countries simultaneously. Long-run factors in exchange rates included ln(Prices), Total imports and exports, GDP per capita (−), and the ratio of total reserves and total imports (−). Short-run factors include change in total imports and exports (+) and change in total reserves/total imports (+). Significance of factors depended on model used.
Bagliano and Morana (2009)	Investigation of dynamic co-movement of macroeconomic indicators in Canada, Europe, Japan, US, and UK	1980 to 2005	Factor VAR	Unlike other countries, Japan's macroeconomic indicators did not co-move with common economic shocks. Japanese price levels also did not respond in the same direction to positive global output shocks as other countries.
Ca'Zorzi and Rubaszek (2023)	Investigation of the number of fundamentals that should be included in equilibrium exchange rate models	1991 to 2018	VAR	Authors note that the large behavioural equilibrium exchange rate (BEER) models, which include a large number of factors, may underperform parsimonious EER models, which include only fundamentals including PPP-adjusted GDP growth rates and interest rates,
Engel and West (2005)	Investigation of factors in movements of exchange rates of G-7 currencies against USD	1974 to 2002	VAR	Significant factors in JPY-USD exchange rate included relative changes in real GDP, consumer prices, M1 money supply, and short-term debt.

Continued

Fatum et al. (2012)	Investigation of macroeconomic effects on JPY/USD exchange rates	1999 to 2006	Event study	There were several US and Japanese macroeconomic announcements that affected JPY/USD exchange rates. These effects were asymmetric, with some US announcements having an effect that Japanese announcements did not. Authors did not investigate the substantive effect of these factors on exchange rates.
Hashimoto and Ito (2010)	Investigation of macroeconomic announcements on JPY/USD exchange rates	2001 to 2005	Event study	Macroeconomic announcements that routinely affected JPY/USD exchange rates included GDP, industrial production, price indexes, balance of payments, and Tankan business surveys. However, authors did not investigate the substantive effect of these factors on exchange rates.
Ishii (2023)	Investigation of yield curves and their relationship to JPY/GBP, JPY/CAD, and JPY/USD exchange rates	1994 to 2020	VAR	Authors found significant variations in the yield curve of the three currency pairs, which were more explanatory for exchange rate variations than the uncovered interest rate parity model.
Jamil et al. (2023)	Cross-market investigation of determinants of exchange rate regime	1970 to 2020	ML-Binary logit	Japan was included in the authors' developed markets data. Significant factors in exchange rate included debt (−), exports, imports (−), FDI, GDP (−), per capita GDP growth, and reserves (−).
Kurita (2014)	Investigation of daily JPY/USD exchange rate	2007 to 2011	GARCH VAR	Lagged JPY/USD exchange rates were a significant factor in daily rates, providing evidence that technical trading is itself a determinant of the JPY-USD exchange rate.
Lobo (2002)	Investigation of factors in movement of large currencies against USD	1990 to 1998	Event study	Significant political events caused most big changes in JPY/USD exchange rates, including 1994 failure of trade talks and the 1995 bilateral trade dispute.
Williams and Prasad (2019)	Investigation of exchange rate determinants in India, Japan, China, and South Korea	2000 to 2018	OLS	Significant determinants of exchange rate for Japan included current account balance (−), net trade, and personal remittances.
Yuan (2011)	Investigation of time-varying dynamics in four bilateral exchange rates (Australia, Canada, UK, and Japan)	1977 to 2007	ARCH	The only significant macroeconomic factor in the exchange rate was the change in M1 money supply.

Many of the macroeconomic studies identified expected relationships between macroeconomic factors and exchange rates, including factors like GDP and GDP per capita, short-term debt, exports and imports, GDP growth, financial reserves, balance of payments, and current account (Ariff & Zarei, 2016; Engel & West, 2005; Jamil et al., 2023; Williams & Prasad, 2019). However, other factors were less commonly identified, such as the M1 money supply, which despite its theoretical importance in the PPP model (Williamson, 2009) was identified as significant in only two studies (Engel & West, 2005; Yuan, 2011). Some studies also identified subtler factors in exchange rates. One comparative study, for example, showed that Japan's exchange rate did not display the same co-movement with

global macroeconomic factors as countries like Canada, the US, UK, or Eurozone did (Bagliano & Morana, 2009). Instead, Japan was more responsive to idiosyncratic shocks, which did not affect the other countries. Another study demonstrated that lagged exchange rates were a significant factor in daily exchange rates, providing evidence that technical trading for exchange rates itself influenced the JPY/USD exchange rate (Kurita, 2014). Overall, these studies do support the impact of macroeconomic factors on exchange rates, but also suggest that Japan's exchange rates may not be consistent in terms of co-movement or response to money supply as is seen in other economies. However, the research is hampered by a significant research gap, which is that many of the studies identified combined Japan with other countries to investigate exchange rates, rather than focusing on only Japan or breaking out country series. Therefore, there is limited evidence for how Japan is different from other countries in its exchange rate's response to macroeconomic indicators.

The oldest of the event studies investigated the factors in USD exchange rates with several major currencies during the 1990s, including the USD/JPY exchange rate (Lobo, 2002). The authors found that the events with the most significant impact on the USD/JPY exchange rate were political events, including the 1994 trade talks failure and 1995 bilateral trade dispute. However, economic events did not have as much of an impact as they did for other major currencies (Lobo, 2002). The next event study was a high-frequency event study investigating the effect of macroeconomic announcements on JPY/USD exchange rates (2001-2005) (Hashimoto & Ito, 2010). The authors found that macroeconomic announcements of several types, including announcements relating to GDP, industrial production, price indexes, balance of payments, and Tankan (routine business surveys), had a short-run effect on exchange rates (Hashimoto & Ito, 2010). These findings were supported by a slightly later event study, which also investigated the effect of macroeconomic announcements on JPY/USD exchange rates (1999-2006) (Fatum et al., 2012). Unsurprisingly, these authors also found that the factors identified by Hashimoto and Ito influenced short-run exchange rates. However, Fatum et al. (2012) included a broader number of factors in their study, as well as investigating US equivalent announcements. They also found that consumer price index and spending announcements from Japan influenced the short run exchange rate, along with several factors from the US. They also found that there were asymmetric relationships, meaning that some US announcements had an effect where Japanese announcements did not and vice versa (Fatum et al., 2012). Taken together, these studies show that political factors and macroeconomic news can have a short run effect on the spot exchange rate, but that not all such announcements have an influence and that there may be asymmetries in announcements of trade partners. At the same time, more recent studies which have included Japan in its list of countries included in global studies suggest that the large number of factors that are included in these models do not necessarily predict exchange rates better in the

long run than simple models that include only economic fundamentals like PPP-adjusted GDP growth (Ca'Zorzi & Rubaszek, 2023). Therefore, these large numbers of factors should not necessarily be considered predictive. Furthermore, a comparison study of the Japanese yen's exchange rate with three currencies has suggested that the commonly used uncovered interest rate parity model may not be as predictive as a yield curve model, creating another methodological challenge to understanding what factors actually influence the exchange rate (Ishii, 2023). Thus, even though there have been a large number of factors uncovered, these factors do not necessarily fully explain the exchange rate.

3.2. Exchange Rate Determinants in Thailand

Studies on determinants of the exchange rate in Thailand are summarized in **Table 2**. These studies have taken a slightly different turn than those conducted in Japan, with more emphasis on exchange rates during crisis periods and less emphasis on Thailand as part of a global economy. These studies can still be grouped by the effects of macroeconomic indicators and the effects of macroeconomic announcements and other shocks.

Some macroeconomic factors have been found to consistently have an effect on short run exchange rates, though the effect is uncertain. Some factors were generally consistent between studies. The basic uncovered interest rate parity (UIP) and purchasing power parity (PPP) models are only weakly predictive for Thailand (Koukouritakis, 2023), but they did have an effect. Various productivity measures also had an effect on the exchange rate in several of the studies, though these effects were again inconsistent (Bouraoui & Phisuthtiwatcharavong, 2015; Jongwanich & Kohpaiboon, 2013; Liew et al., 2009). Balance of payments was also a significant factor in one study (Tulasombat et al., 2015). However, other factors were not. For example, while some studies have shown that increases in foreign reserves cause exchange rate appreciation in a positive relationship (Bouraoui & Phisuthtiwatcharavong, 2015; Kraipornsak, 2020), other studies that investigated a substantially similar time period, but different exchange rates, found that foreign reserves caused exchange rate depreciation (Tulasombat et al., 2015; Vithessonthi, 2014). Terms of trade had a depreciating effect on the exchange rate in two studies (Bouraoui & Phisuthtiwatcharavong, 2015; Jongwanich & Kohpaiboon, 2013). However, while money supply was insignificant in one study (Bouraoui & Phisuthtiwatcharavong, 2015), it was significant in another (Liew et al., 2009). The exchange rate in Thailand is best fitted to a random walk model rather than one of the fixed or flexible price models (Wongpunya, 2015), which may be an explanation of the inconsistencies in findings between these studies. However, few studies included more than a small number of macroeconomic variables. Additionally, these studies used a wide variety of different analytical models, which makes it difficult to compare the results directly between studies. Thus, there are still questions about which macroeconomic factors (if any) can influence Thailand's exchange rate.

Table 2. Summary of studies on the determinants of the Thai exchange rate.

Authors	Objective	Time Period	Methodology	Findings
Bouraoui and Phisuthtiwatcharavong (2015)	Investigation of THB/USD exchange rate	2004 to 2013	Multiple regression	Significant factors in exchange rate included international reserves, manufacturing production index, and terms of trade (−). Interest rate differential, , government debt, and M1 money supply were not significant.
Chang and Su (2014)	Investigation of dynamic relationship of exchange rates and macroeconomic factors in Pacific rim countries (using USD exchange rates).	1987 to 2006 (Thailand)	VECM	Economic fundamentals included M1 money supply and real output. Prior to the Asian financial crisis (1997), exchange rates drove macroeconomic fundamentals in a unidirectional relationship. Post-financial crisis, there is no significant relationship between exchange rates and macroeconomic fundamentals.
Gongkhonkwa (2021)	Investigating the impact of the COVID-19 pandemic on Thai exchange rates with 10 major currencies.	2020 (Daily)	Multiple regression	COVID-19 deaths had a significant impact on exchange rates in 8 of 10 currency pairs, but directionality was inconsistent.
Hui (2022)	Investigating the impact of political risk on exchange rates	2000 to 2018	ARDL	Geopolitical risk was a long-term factor in depreciation of exchange rates in countries investigated, which included Thailand.
Jongwanich & Kohpaiboon (2013)	Investigating the impact of capital flows on real exchange rates in East Asia (eight countries).	2000 to 2009	Dynamic panel data analysis	Lagged real exchange rates (−), productivity differences (−), government spending (−), terms of trade (−), trade openness, and portfolio investment, foreign direct investment, and other types of investment flows had an effect on exchange rates. However, Thailand was not broken out by country in the analysis.
Kim et al. (2020)	Investigating the impact of monetary policy shocks on exchange rates in East Asian countries.	2001 to 2018 (Thailand)	VAR	Exchange rate response to monetary policy shocks was inconsistent, with exchange rates either depreciating significantly (three cases) or not responding (six cases). Industrial production (−) also had a significant effect on exchange rates.
Koukouritakis (2023)	Investigating the nominal exchange rates of ASEAN countries including Thailand	2000 to 2023 (Thaialnd)	ARCH VECM	Exchange rate was cointegrated with factors including uncovered interest rate parity and purchasing power parity (PPP). However, authors acknowledged this was the weakest form of the CHEER model for estimating exchange rates, suggesting limited effect of these factors..
Kraipornsak (2020)	Investigation of exchange rate of Thai baht and Asian currencies.	2004 to 2013	OLS VECM	Foreign reserves, real interest rate, income per capita (−), and external debt (−) had significant effects on the baht exchange rate.
Liew et al. (2009)	Investigating the long-run monetary model of the Thai baht exchange rate.	1997 to 2006	VAR	Domestic money supply, national output, and nominal interest rates were cointegrated into the long-run exchange rate pattern.
Tulasombat et al. (2015)	Investigating the effect of economic factors on Thai baht exchange rates.	2003 to 2014	Multiple regression	Forward positions (−), balance of payments (−), and international reserves (−) had a significant effect on exchange rates. There was no significant effect of interest rates.

Continued

Vithessonthi (2014)	Investigating the effect of monetary policy on Thai baht exchange rates against global currencies during the global financial crisis.	2003 to 2011	Event study	Monetary policy announcements (rate changes) (−) had a significant effect on spot rates for THB/EUR and THB/GBP exchange rates, but not for THB/USD and THB/JPY exchange rates. Interest rate differentials, term spreads, and foreign reserves had significant effects for some exchange rates.
Wongpunya (2015)	Constructing an empirical exchange rate model for post-1997 Thailand.	1999 to 2013	Multiple time series models	The random walk model was the most predictive model for the Thai exchange rate.

There have been some studies which have investigated the effects of specific economic shocks, such as monetary policy changes, on the Thai exchange rate, though not as many as investigated these effects in the Japanese exchange rate. One study found that in three events, a monetary policy shock caused significant depreciation, but in the other six events identified, there was no significant effect on the exchange rate (Kim et al., 2020). Another event study showed that monetary policy shocks caused baht depreciation for THB/EUR and THB/GBP exchange rates, but not for THB/USD and THB/JPY exchange rates (Vithessonthi, 2014). Furthermore, there were short-run crisis effects from the COVID-19 pandemic, as COVID-19 related death announcements caused fluctuations in exchange rates (positive or negative) in eight of ten currency pairs investigated (Gongkhonkwa, 2021).

There is an indication that Thailand's exchange rate behaviour has changed over time, as well. One study, which investigated long-run dynamics of macroeconomic fundamentals and exchange rates, found that prior to 1997, there was a unidirectional effect of exchange rates on macroeconomic fundamentals, but post-1997 there is no significant effect in either direction (Chang & Su, 2014). This implies that the 1997 currency crisis and resulting structural change in the Thai economy led to a fundamental change in the behavior of the exchange rate. Furthermore, there has been research which has indicated that geopolitical risk is a significant long-term factor in exchange rate depreciation for ASEAN countries including Thailand (Hui, 2022). However, there has been less effort within these studies to connect movements in the Thai baht to global economic shocks (other than global currency crises), which is a feature of the research conducted in Japan.

4. Discussion

Table 3 compares the macroeconomic factors identified as influencing exchange rates in Japan and Thailand respectively. This comparison shows that although there are similarities in factors that may influence exchange rates, there are also some differences. For example, while one study found that lagged interest rates had a depreciating effect on exchange rates in Thailand (Jongwanich & Kohpaiboon, 2013) the opposing effect was found in Japan (Kurita, 2014). Authors also found somewhat separate sets of influential exchange economic performance

indicators between Japan and Thailand, with consumer prices being influential in Japan while interest rates were found to be influential by a few studies in Thailand. However, there are also some similarities. Economic events such as macroeconomic announcements and macroeconomic shocks tended to have a significant influence in both countries, although the effect was not always consistent. However, the effects of trade (e.g., imports and exports) were predominantly a concern of studies in Japan, while investment was mainly investigated in Thailand. This comparison shows that not only is there not necessarily consistency between Japan and Thailand in terms of the factors that influence exchange rates, but authors

Table 3. Macroeconomic factors in the exchange rate: Japan versus Thailand.

Factor	Direction	Japan	Thailand
		Exchange Indicators	
Forward trading positions	(−)		Tulasombat et al. (2015)
Lagged exchange rates	(+)	Kurita (2014)	
	(−)		Jongwanich & Kohpaiboon (2013)
Real interest rate		Ca'Zorzi and Rubaszek (2023)	Kraipornsak (2020)
		Economic Performance Indicators	
Consumer prices (Prices)	(+)	Ariff and Zarei (2016) Engel and West (2005)	
Debt (Debt)	(−)	Engel and West (2005) Jamil et al. (2023)	Kraipornsak (2020) Vithessonthi (2014)
GDP/Income per capita (−) (GDP/income per capita)	(−)	Ariff and Zarei (2016) Engel and West (2005) Jamil et al. (2023)	Kraipornsak (2020)
Purchasing power parity	(+/−)	Ishii (2023)	Koukouritakis (2023)
Government spending	(−)		Jongwanich Kohpaiboon (2013)
Interest rates	(+)	Ishii (2023)	Liew et al. (2009) Vithessonthi (2014) Koukouritakis (2023)
Manufacturing/industrial Production	(+)		Bouraoui and Phisuthtiwatcharavong (2015) Liew et al. (2009)
	(−)		Kim et al. (2020)
Productivity differences	(−)		Jongwanich & Kohpaiboon (2013)
Events			
COVID-19 death rates	(+/−)		Gongkhonkwa (2021)
Macroeconomic announcements	(+/−)	Fatum et al. (2012) Hashimoto and Ito (2010)	
Monetary policy shocks	(−/n.s.)		Kim et al. (2020)
Political events	(+/−)	Lobo (2002)	
Geopolitical risk	(−)		Hui (2022)

Continued

		Investment Indicators	
Foreign Direct Investment (FDI)	(+)	Jamil et al. (2023)	Jongwanich & Kohpaiboon (2013)
Other foreign investment			Jongwanich & Kohpaiboon (2013)
		Monetary Policy Indicators	
M1 money supply (M1 money supply)	(−)	Engel and West (2005) Yuan (2011)	Liew et al. (2009)
		Trade Indicators	
Balance of payments	(−)		Tulasombat et al. (2015)
Current account balance	(−)	Williams and Prasad (2019)	
Exports (Exports)	(+)	Ariff and Zarei (2016) Engel and West (2005)	
Imports (Imports)	(+)	Ariff and Zarei (2016) Engel and West (2005) Jamil et al. (2023)	
Net trade	(+)	Williams and Prasad (2019)	
	(−)	Jamil et al. (2023)	
Personal remittances	(+)	Williams and Prasad (2019)	
Reserves	(+)		Bouraoui and Phisuthtiwatcharavong (2015) Kraipornsak (2020) Tulasombat et al. (2015) Vithessonthi (2014)
Reserves/imports ratio (−) (Reserves/imports ratio)	(−)	Ariff and Zarei (2016) Engel and West (2005)	
Terms of trade	(−)		Bouraoui and Phisuthtiwatcharavong (2015) Jongwanich & Kohpaiboon (2013)
Trade openness			Jongwanich & Kohpaiboon (2013)

have also not examined the two countries using either a consistent methodology or a consistent set of potentially influential factors. Additionally, there were no studies identified that compared the two countries directly. Thus, although there has been research that has investigated macroeconomic factors in each country, these results are difficult to compare.

5. Conclusion

This literature review began with the aim of evaluating previous research into macroeconomic factors and exchange rates in Japan and Thailand, and comparing previous findings to understand similarities and differences between these two countries. For both countries, a range of studies were identified which mainly focused on the two economies since the 1990s. Broadly speaking, it was determined that exchange rates in both Japan and Thailand are random walks, and therefore it is difficult to identify any persistent factors that influence exchange rates in the

long run. However, there were some factors that were identified in the short run, including economic growth factors, trade of factors, monetary policy factors, and events and shocks. Even within studies relating to the same country, however, the effects of these factors were not always consistent. To some extent, this is probably due to methodological variation in studies, which used a range of cross-sectional, panel, and time series analysis techniques. It is also probably due to time period variation, as some studies indicated that for example the behaviour of exchange rates in Thailand changed after the 1997 currency crisis. Therefore, it is entirely possible that exchange rates do not have the same determinants from period to period. However, this research was limited by its qualitative structure in determining whether this was the case, as it was not possible to reconcile the differences in methodology through quantitative meta-analysis or other comparisons. This remains an issue for future research, which could be structured to directly compare economic indicators between different countries.

Overall, studies are only partly comparable between Japan and Thailand, due to these differences in methodology. Therefore, there are still opportunities for further research, in order to directly compare the two countries across the same or similar time periods. There are also opportunities to investigate a diverse set of potential economic factors, in order to understand the differential effects of these factors on Japan and Thailand respectively. In addition, there is the question of study replication, as even studies using similar methodologies in the same country did not always have consistent findings. Thus, a replication study that investigated the findings from these studies could be helpful. In future research, the current author hopes to address some of these research gaps, beginning with a direct comparison of exchange rates between Thailand and Japan and their response to various macroeconomic indicators.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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