



**AN INTERRELATION STUDY OF MACROECONOMIC
INDICATORS IMPACT ON THE VALENCE OF U.S DOLLAR
AND THAI BAHT FROM AN INTERNATIONAL TRADE
PERSPECTIVE**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT
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A handwritten signature in blue ink, appearing to read 'Jomphong' followed by a stylized flourish.

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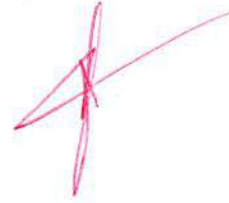
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Abstract

The exchange rate fluctuation between two currencies caused by various forces and factors and so is with the exchange rate fluctuations between Thai baht and US dollar. This study investigates the exchange rate movements between both currencies by using historical data and references. This includes the historical data from the period 2010 to 2017 to study the movements between both currencies. Moreover, this study elucidates four major macroeconomic indicators such as terms of trade, interest rates, international reserves and manufacturing production index analyses their performance in both countries throughout the mentioned period. Furthermore, these macroeconomic indicators will explain their impacts on the movement of the Thai baht and US dollar from 2010 to 2017.

The study explains the trade practices detail investigation between both countries alongside with its benefits and challenges followed by trend analysis of macroeconomic indicators and well supported by Vroom's expectancy model in order to justify the analysis had attractiveness or averseness towards the currencies.

In this study, the data collection gathered from the secondary sources mostly from the literature. The research methodology is longitudinally followed by numeric analysis and Vroom valence model analysis. This study offers recommendations for the future purposes and perspectives which are well mentioned in this study.

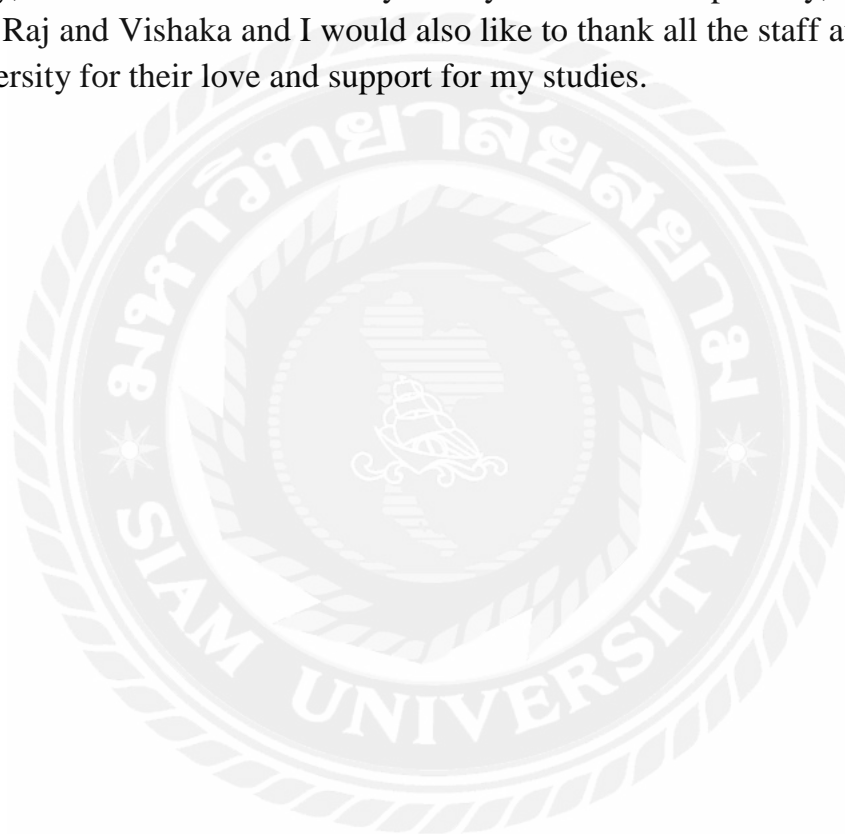


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CHAPTER 1

1. Introduction

In the age of globalization where one country economy integrates with another country's economy causes the stipulation and bestow of the foreign currencies involvement. It exhibits the transaction between both economies in terms of foreign exchange currencies with the help of major parties such as central banks, commercial banks, hedgers and speculators (Argy, 2010).

Presently, the exchange rate between Thai Baht against other currencies are a total of 48 local currencies up from 35 currencies from April 2008 onwards (Source: The Average Exchange rate of the Commercial Banks in Bangkok Year 2003 - present: The Bank of Thailand, 2015).

This study aims to study the influence of the critical factors to the exchange rate of Thai Baht currency against US dollar. The foreign exchange brings many issues along within from the international trade perspective and it can create a negative impact on the functioning of the country such as the adverse impact on the wages, fluctuation in interest rates, declining employment opportunities, sickening production levels. This explains that the understanding of the market efficiency of currency is utmost important in order to understand that the behaviour study of exchange rates is highly important especially when two countries are dealing with each other (Saeed et al., 2012).

The study of the market efficiency of currencies enables to identify the global value of country's position in the field of international trade by measuring imports and exports, international reserves, government debts, the balance of trade and terms of trade. When there is a shift in exchange rate or imbalance in any country international trade can influence the currency to appreciate or depreciate (Zwanzger, 2008). The aim of this paper is to investigate the previous

five years interrelation trade relation between Thailand and United States of America and their currency movement's trends to inference the Valence of Thai Baht and US dollar. There are various other researchers (Salikupod and Khongsawatkiat, 2013) who have worked in order to deduce the international trade relations and exchange rate movements based real and nominal interest rate, money supply, international reserves, interbank transfer, inflation rate, current bank account.

In 1997, Thailand has changed its foreign exchange mechanism from fixed exchange rate to floating or managed exchange rate and allowed other currency to fluctuate in accordance. This change had brought vastly change in foreign exchange rate between US dollar and Thai baht

This paper will elucidate the different models which can be used to assess the currency movement in order to understand the market efficiency of Thai Baht and US dollar based on the last seven years (from 2010 to 2017) and also the study of the international trade relations between both the countries. The main study of this paper will be macroeconomic indicators and the indicators that are going to be studied in this paper are terms of trade, interest rates, manufacturing production index and international reserves of both countries. Moreover, these indicators will be justified by Vroom's valence model.

1.1. Rationale of the study

The primary basis for doing this study is to analyse the movement and valence of currency trade between Thai baht and US dollar from international trade outlook. It also analyses the factors associated with the international trade over the last seven years. Moreover, this study focusses on the change in currency movement between both these countries because of the change in terms of trade, interest rates, manufacturing production index and international reserves. This study constitutes the positive and negative valence of both these currencies with the help of detail study of the above macroeconomic indicators. This study needs to be done in order to safeguard the investors to see and check

which currency pairs are correct enough to be invested in the future. Furthermore, this study is also very important for one country to understand about its economic growth so the cause for this study is to know about Thailand and US exporters & importers and economy situation previously and with that available information to forecast in the future (Baneda, 2009).

1.2. Purpose of the study

This topic will encounter the issues are associated with currency trading and exchange market. It will give the investors of Thailand who are exporting or importing trading goods and services from the USA to know the valence of Thai baht in comparison with US dollars for the future trading references and vice versa. This study will analyse the previous seven years international trade transaction between both countries and provide the detail investigation of macroeconomic indicators of Thailand economy with USA economy. This study will identify the movement of the exchange rate between US dollars and Thai baht and it will also pinpoint the causes of movement along with the current scenario (Bodnar and Gentry 2010).

1.3. Background of the topic

Thailand had adopted a fixed exchange rate system and it lasted until 2nd July 1997, when Thailand transited from fixed to floating exchange rate system. The main intention of this to Thai baht move freely and steadily with other currencies. The below table shows the historical date of US dollar exchange rate with Thai baht from the period of July 1998 to July 2002. It shows that after the inception of managed exchange rate system Thai baht was getting weaker as it had touched more than 55 against one dollar and later gradually had started to decline and scaled a level of 35 to 37 baht against on dollar and in this scenario Thai baht was getting stronger. It also explains a very important factor is that when Thailand economy was getting stronger and better the exchange ratio with US dollar was getting stronger and better as well. Furthermore, this also explains

the policy regarding the exchange rate is very vital to maintain economic firmness.

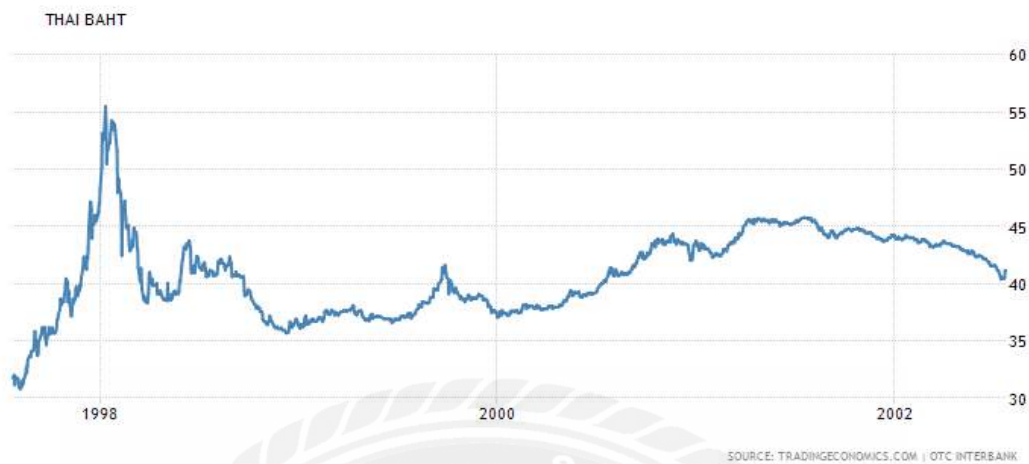


Figure: Thai baht exchange rate with US dollar from July 1998 to July 2002

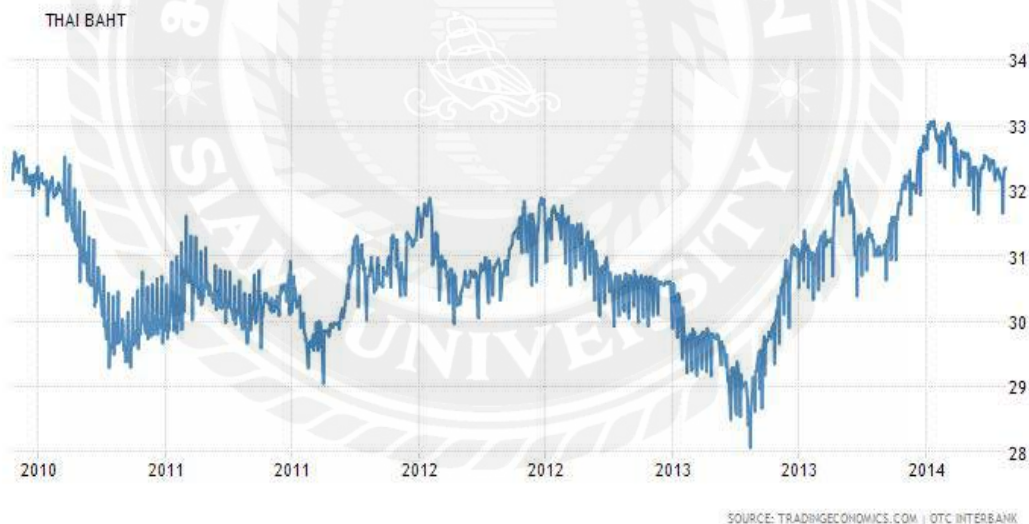


Figure: Thai baht exchange rate with US dollar from 2010 to 2014

The above chart explains the Thai baht exchange rate with US dollars from the period 2010 to second half of 2014 and it shows that in 2013 the Thai baht traded for 1 US dollar was in 28-30 which advocates that Thai baht was the strongest in 10-15 years and it reflects that economics situations were better as well. In early 2013 it had started to decline gradually and then skyrocketed up to more than 3baht against one US dollar.



Figure: Thai/US exchange rate

The chart indicates the exchange rate between Thai baht and US dollars from the year ending 2014 to 2017. It shows that in early 2014 to 2015 it was in the range of 32-35 baht against one dollar and then it has crossed more than 36 baht in late 2015 and early 2016. During this period Thai baht was the weakest in a long time and economic situation was on turmoil stage. The exchange rate from the period 2016 to 2017 was stable between in the range of 34-36 Thai baht against one dollar and from 2017 onwards it has started to become stronger gradually as from the table its evident that it has moved from 36 to 32 baht against one dollar.

1.4. Research aim and objectives

The main aim of this research paper is to understand the macroeconomic factors (terms of trade, interest rates, manufacturing production index, international reserves) which affected the valence of Thai baht trading with US dollar in international trade between both countries during the period of 2010 to 2017. This study will provide an overview of interrelated trade between Thailand and U.S.A and how their trade decision affecting the attractiveness of Thai baht and USD. This overview understanding will also provide an opportunity to analyse the issues faced by the Thailand Exporters and Importer using macroeconomic indicators. The aim of this study can be achieved only through

mounting with objectives and that can achieve with detail study of this topic. This brings the following objectives considering the subject and its issues from 2010 to 2017.

- ❖ To probe the international trade relation between Thailand and the USA.
- ❖ To explain the macroeconomic factors such as terms of trade, interest rates, manufacturing production index, international reserves of both countries.
- ❖ To pinpoint the macroeconomic factors that impact the valence of the Thai baht.
- ❖ To pinpoint the macroeconomic factors that impact the valence of US dollar.

1.5. Research questions

- ❖ Discuss the international trade relations and the activities between Thailand and USA from 2010 to 2017.
- ❖ Discuss the terms of trade, interest rates, manufacturing production index and international reserves of both countries from 2010 to 2017.
- ❖ Discuss and analyse the factors that impact the valence of the Thai baht.
- ❖ Discuss and analyse that factors that impact the valence of the US dollar.
- ❖ Discuss the recommendations and conclusions for the international trade relation parties.

CHAPTER 2

1. Literature Review

This chapter explains that the past and current situations of foreign exchange rate fluctuations between Thai baht and US dollars from the macroeconomic indicators point of view and the current market efficiency of both currencies accompanied with related theories considering currency exchange rate and factors affecting the exchange rate. The literature review will provide the detailed analysis of the market efficiency of Thai baht and US dollars supported by proposed theories, models, and concepts.

1.1. The concept of the foreign exchange market

The foreign exchange market is a platform where one currency is traded in exchange for other. There are various participants who facilitate currency exchange trade of buying and selling currencies for the different countries. The major participants are central banks, commercial banks, financial institutions and hedging companies (Engel and Wang, 2011). Their function is to trade the one currency in exchange for other by speculating about the fluctuations of currency values and to make a profitable return for the clients including their brokerage commission (Giddy, 2009). The foreign exchange market is distinctively categorized in two states as one where commercial banks and central banks initiate for payment of buying and selling of commodities and services while on the contrary side, the financial institutions such fund management companies perform on daily basis. Apte (2009) indicated that the foreign exchange market consists of following functions which are mentioned below;

- ❖ **Transfer function:** In this function, normally conversion of currency takes place, the purchasing power of parity comes into the picture.

- ❖ Credit function: This function explains when one party needs to pay the funds in order to secure the goods and services against their invoice and banks come in between to facilitate the transaction with the help of a letter of credit. Bodnar (2012) explained that if one country seeks more credit borrowings more likely to face depreciation.
- ❖ Hedging function: The foreign exchange market explains that investors can also hedge the chances of risk associated with currency trading. This risk of losing or gaining against the currency rates can be reduced with the help of the hedging function of the foreign exchange market. Baum and Caglayan (2009) indicated that when the price of one currency changed against other lay the gain or the loss in the investment made.
- ❖ Theories related to the foreign exchange rate

In this section, the researcher tries to explain that in order to understand the market efficiency of Thai baht and US dollar, various theories need to be explained in the first place in order to understand why currency exchange takes place? The study of certain theories will clarify the currency exchange determination and later will clarify the market efficiency together with macroeconomic indicators.

1.2. Purchasing power parity (PPP)

This theory was originated before any other and it explained that in order to establish the currency exchange the price of goods X in one country would be equivalent in another country to determine the exchange rate between both countries. For example, the price of 1 kg of mango in Thailand is 33 baht/ kg and the same one kg of mango in the USA would cost \$1 so in this case, the exchange rate would be:

$$\$1 = 33 \text{ baht}$$

However, this method was not well supported as in one country there are many goods are available and ready for sale so which product can be an ideal case scenario to determine the exchange rate between both countries.

According to Allen (2010), explained that it deals with maintaining the same price level in the local as well as in the national economy. Allen further explained that price fixation for the local commodity would be treated as the same way for currency exchange rate but to assess the actual exchange rate this theory is not really productive because it doesn't account the involvement of tariff, speculation and capital flows which can affect the exchange rate. This method will only be useful for the commodities that are coming from foreign land to the domestic land and it will be sold in the domestic market only so it will not have the international exposure attached to it and this brings that PPP theory doesn't qualify to show the true market efficiency of currency and the economic position as well.

Bortov and Bodnar (2012), explained that purchasing power parity comprises two parts absolute purchasing power parity (absolute PPP) and the relative purchasing power parity (relative PPP). The absolute PPP is the purchasing power of one unit of the domestic currency is equal to the purchasing power of one unit in another country. In this case, one currency is going to be overvalued and the other currency is undervalued. The relative PPP is a theory when inflation in both countries takes place to determine the exchange rate.

Anderton and Kenny (2010) explained that purchasing power parity offers various advantages as it is very useful to assess the standard of living and provides a better picture of country GDP in order to understand the economic situation of one country.

Beneda (2009), also opinionated that PPP theory is difficult to calculate the exchange rate as it on the basis of change in the price indices but it doesn't reflect which price index it reflects whether it's the cost of living price index or wholesale price index for the calculation of price index.

1.3. International Fisher effect (IFF)

This theory is also known as Fisher's open hypothesis explains that the currency of a country with a higher interest rate will depreciate in the value of

currency compared to the country of lower as because it will start attracting the foreign investors to put money in the bank in order to get higher interest and this creates the demand of currency and then the value of currency appreciates and at the same time it will depreciate the value of the currency of the other country (Branson, 2009). This theory further suggested that real interest rate is linked to the inflation rate and it explains that there is an indirect relationship inflation rate and value of the currency.

Allen (2010) explained that international fisher effect is not ideal for short-term analysis because of the effects of different factors on the exchange rate predictions but it is highly applicable for the long-term determination of the currency value.

Irvin Fisher, the IFE can be calculated as follows:

$$(1+r) = (1+R) (1 + E (i))$$

Where

r = nominal interest rate of a country

R = real interest rate

E (i) = Expected inflation rate over the interest rate

Anderton and Kenny mentioned that the theory of international fisher is based on the situation where the capital is perfect in every scenario and capital movement is free and the real interest rates are constant in all countries which is not the real market scenario.

Chan et al. (2010) explained that there is no direct relation between interest rates and inflation rates. However, Bartov and Bodnar (2012) stated that can be found in certain countries and will be applied to only those countries. This method can be fully trusted to analyse valence of Thai baht and US dollar

1.4. Interest rate parity (IRP)

This theory explains the relationship between the spot rate of a country and the future rate of currencies of the same country. Chan et al. (2010) explained that there is an assumption that the risk-free rate will determine the rate at which currency can be converted to each other in a forward transaction. To understand the market efficiency of Thai baht and US dollar this method would be ideal as when the bank interest rates in Thailand are less than the USA bank interest rates then the US dollar currency must trade at below face value in forward contracts. This helps the investors to borrow the money from any country no matter what is the present exchange rate because the cost of borrowing is the same for all countries.

Farmer and Joshi (2009) opined that the IRP theory is based upon the assumptions the capital amount is transferable and the investors can borrow it by exchanging domestic assets for foreign assets apart from that the investors will get the opportunity of an option to choose from the assets which will generate a higher proportion of profit.

However, Apte (2009) stated that based on the assumptions it is certain that the change in the exchange rate will not affect the return on the assets. Hence the domestic, as well as the foreign investors, will both get the same amount of return for the asset.

1.5. Asset market model

The main concept of asset market model is that the currency rate of any particular country will increase only when that particular country will experience high capital inflow which will lead also the increase in demand of the currency and as a result it will appreciate the value of the currency indicated by Giddy (2009). Engel and Wang (2011) explained further that if a country with a high proportion of financial assets will have a lower burden in terms of debts and higher demand in terms of currency because financial assets are rapidly

converted into cash so this theory would be an ideal for the understanding of valence of Thai baht and US dollar.

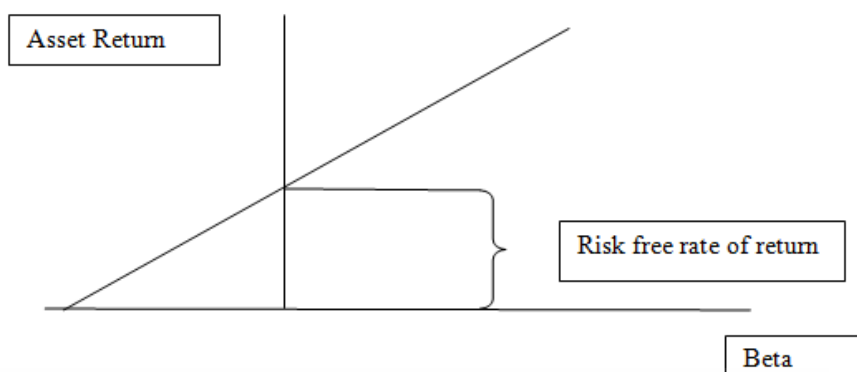


Figure: Asset Market Model

(source: Engel and wang, 2011, pp 43)

1.6. The balance of payments theory

The foreign currency price depends upon the change in demand and supply of domestic as well as the foreign countries (Duangploy et al. 2010) as value of any foreign currency depend on the demand of that currency in the home country as well as the foreign country so if there is a deficit in the balance of payment will decrease the value of the currency. On the other hand, if the there's surplus in the balance of payment will increase the value of the currency. The balance of payment concludes from the difference between export and import and when there's deficit it will decrease the value of the currency and the market efficiency of that particular currency and on the flip side if country secures a surplus from balance of payment will increase the value of currency and the market efficiency of that currency as well (DeFusco et al. 2010).

Moreover, Engel and Wang opinionated that balance of payment theory provides more concrete details about the value of foreign currency than purchasing power parity theory. Hence, this theory will guide the study of macroeconomic indicators of Thailand and USA to understand more specific about the Thai baht and US dollar market efficiency.

Baum and Caglayan (2009) further added that this is because the exchange rates are a combination of the demand and supply of the currency. Hence the determinants should be demand and supply rates of the currencies of the country

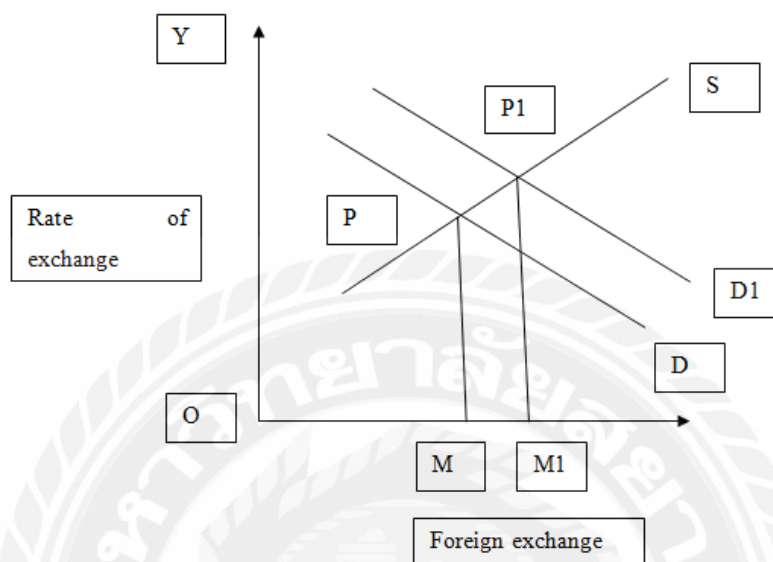


Figure: Balance of payment theory

However, Sheng and Liao (2004) contradicted that balance of payment theory has defect in it as because this theory conditioned only when the countries will have perfect competition and flow of money from one end to another would be smooth and steady but in export import business this condition is not satisfying because export import business in on credit also not only cash. The overall point of this theory is that it gives a proper picture of supplying of goods apart from export and import related as a result this theory is suitable to analyse the valence of both currencies (Thai baht and USD).

Macroeconomic indicators: In this section, the researcher tries to ponder the different factors associated trade relation between USA and Thailand and try to find valence of both currencies and also detail analysis to disclose the past scenarios of trade relation along with their trends. The main reason for studying this chapter is to investigate how the Thai baht and US dollars have performed against each other.

**Export-Import (Balance of trade) between USA and Thailand from
the period of 2010 to 2017**

Table: U.S. trade in goods with Thailand (2010)

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified. Details may not equal totals due to rounding. The table reflects only those months for which there was a trade.

Month	Exports	Imports	Balance
January 2010	682.6	1,644.8	-962.2
February 2010	700.6	1,552.2	-851.6
March 2010	745.9	1,869.7	-1,123.8
April 2010	748.1	1,786.5	-1,038.4
May 2010	679.4	1,666.2	-986.8
June 2010	676.5	1,916.4	-1,239.9
July 2010	758.4	1,899.6	-1,141.2
August 2010	746.0	2,094.3	-1,348.3
September 2010	708.9	2,100.0	-1,391.0
October 2010	806.2	2,084.0	-1,277.8
November 2010	834.6	2,091.0	-1,256.5
December 2010	889.0	1,988.8	-1,099.7
TOTAL 2010	8,976.4	22,693.6	-13,717.2

Table: U.S. trade in goods with Thailand (2011)

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified. Details may not equal totals due to rounding. The table reflects only those months for which there was a trade.

Month	Exports	Imports	Balance
January 2011	888.3	1,944.6	-1,056.3
February 2011	986.5	1,734.6	-748.0
March 2011	990.7	2,231.2	-1,240.4
April 2011	801.6	2,083.5	-1,282.0

Month	Exports	Imports	Balance
May 2011	922.5	2,084.7	-1,162.2
June 2011	905.1	2,122.4	-1,217.4
July 2011	907.9	2,247.2	-1,339.3
August 2011	983.3	2,380.7	-1,397.4
September 2011	1,079.5	2,238.0	-1,158.4
October 2011	1,038.8	2,248.0	-1,209.2
November 2011	663.7	1,796.7	-1,133.0
December 2011	762.0	1,720.1	-958.1
TOTAL 2011	10,929.9	24,831.6	-13,901.7

Table: U.S. trade in goods with Thailand (2012)

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified. Details may not equal totals due to rounding. The table reflects only those months for which there was a trade.

Month	Exports	Imports	Balance
January 2012	841.0	1,976.0	-1,135.0
February 2012	791.7	1,873.4	-1,081.7
March 2012	790.5	2,219.7	-1,429.2
April 2012	863.8	2,222.8	-1,359.0
May 2012	966.4	2,252.6	-1,286.2
June 2012	944.0	2,305.5	-1,361.5
July 2012	817.5	2,162.6	-1,345.1
August 2012	1,135.3	2,290.7	-1,155.5
September 2012	932.9	2,189.8	-1,256.9
October 2012	1,030.7	2,252.1	-1,221.4
November 2012	829.3	2,164.9	-1,335.6
December 2012	944.7	2,156.7	-1,212.0
TOTAL 2012	10,887.8	26,066.8	-15,179.0

Table: U.S. trade in goods with Thailand (2013)

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified. Details may not equal totals due to rounding. The table reflects only those months for which there was a trade.

Month	Exports	Imports	Balance
January 2013	1,057.7	2,110.3	-1,052.6
February 2013	757.4	1,884.2	-1,126.8
March 2013	1,177.8	2,234.1	-1,056.2
April 2013	1,065.8	2,103.9	-1,038.1
May 2013	1,023.4	2,184.8	-1,161.4
June 2013	1,067.4	2,062.6	-995.2
July 2013	875.2	2,208.1	-1,333.0
August 2013	919.5	2,213.6	-1,294.2
September 2013	935.0	2,316.7	-1,381.7
October 2013	1,063.6	2,399.6	-1,335.9
November 2013	959.7	2,279.0	-1,319.3
December 2013	894.6	2,172.7	-1,278.1
TOTAL 2013	11,797.0	26,169.6	-14,372.6

Table: U.S. trade in goods with Thailand (2014)

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified. Details may not equal totals due to rounding. The table reflects only those months for which there was a trade.

Month	Exports	Imports	Balance
January 2014	1,141.7	2,142.4	-1,000.7
February 2014	802.5	1,803.2	-1,000.7
March 2014	994.0	2,297.2	-1,303.2
April 2014	830.3	2,166.8	-1,336.4
May 2014	795.3	2,279.8	-1,484.5
June 2014	838.4	2,313.7	-1,475.3
July 2014	1,139.3	2,361.1	-1,221.8

Month	Exports	Imports	Balance
August 2014	941.6	2,327.7	-1,386.2
September 2014	1,151.1	2,367.5	-1,216.3
October 2014	1,044.9	2,490.1	-1,445.2
November 2014	940.0	2,187.9	-1,247.9
December 2014	1,195.8	2,491.9	-1,296.1
TOTAL 2014	11,815.0	27,229.3	-15,414.3

Table: U.S. trade in goods with Thailand (2015)

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified. Details may not equal totals due to rounding. The table reflects only those months for which there was a trade.

Month	Exports	Imports	Balance
January 2015	1,046.9	2,209.6	-1,162.8
February 2015	778.9	1,937.8	-1,158.9
March 2015	1,115.1	2,638.0	-1,522.8
April 2015	980.6	2,562.1	-1,581.5
May 2015	928.9	2,355.5	-1,426.6
June 2015	1,036.9	2,481.2	-1,444.3
July 2015	816.0	2,321.3	-1,505.4
August 2015	955.5	2,357.1	-1,401.6
September 2015	1,033.1	2,383.9	-1,350.8
October 2015	829.1	2,569.7	-1,740.5
November 2015	776.6	2,458.9	-1,682.3
December 2015	931.2	2,347.0	-1,415.8
TOTAL 2015	11,228.8	28,622.2	-17,393.4

Table: U.S. trade in goods with Thailand (2016)

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified. Details may not equal totals due to rounding. The table reflects only those months for which there was a trade.

Month	Exports	Imports	Balance
January 2016	741.1	2,192.0	-1,450.9
February 2016	802.2	2,217.8	-1,415.6
March 2016	889.5	2,374.7	-1,485.2
April 2016	789.9	2,250.5	-1,460.6
May 2016	856.9	2,452.2	-1,595.3
June 2016	802.7	2,469.2	-1,666.5
July 2016	820.5	2,572.3	-1,751.8
August 2016	853.0	2,771.5	-1,918.4
September 2016	964.2	2,505.6	-1,541.4
October 2016	936.5	2,595.2	-1,658.7
November 2016	975.0	2,683.6	-1,708.6
December 2016	1,035.9	2,404.7	-1,368.8
TOTAL 2016	10,467.4	29,489.2	-19,021.7

Table: U.S. trade in goods with Thailand (2017)

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified. Details may not equal totals due to rounding. The table reflects only those months for which there was a trade.

Month	Exports	Imports	Balance
January 2017	846.4	2,376.7	-1,530.4
February 2017	914.9	2,203.3	-1,288.5
March 2017	823.4	2,600.1	-1,776.8
April 2017	854.0	2,326.3	-1,472.3
May 2017	860.2	2,566.2	-1,706.0
June 2017	1,075.4	2,719.1	-1,643.6
July 2017	813.4	2,729.0	-1,915.6
August 2017	859.2	2,779.2	-1,920.0
September 2017	1,046.8	2,539.5	-1,492.7
October 2017	1,080.6	2,867.0	-1,786.4

November 2017	962.1	2,731.2	-1,769.2
December 2017	855.2	2,714.3	-1,859.1
TOTAL 2017	10,991.6	31,151.9	-20,160.3

In the year 2010, the USA imported more from Thailand than exported to Thailand and it had the negative balance of trade of around \$-13,717.2 million dollars. While Thailand exported more to the USA of US\$22,693.6 million dollars. In 2011, the USA imported \$24,831 million dollars from Thailand while exported 10,929.9 million dollars. The balance of payment shows import is more than export to Thailand. In 2012, USA exported of worth about \$10,887.8 million dollars and imported from Thailand \$26,066.8 which reflects that the USA had deficit balance of payment towards Thailand of -15,179.0 million dollars in 2013, Thailand exported to \$26,169.6 million dollars to the USA and imported around \$11,797.0 from the USA. There was a deficit of -\$14,372.6 million dollars to the USA from Thailand only. In 2014, Thailand exported \$27,229.3 million dollars to the USA and imported \$11,815 million dollars from the USA as the above chart of 2014 US trade in goods with Thailand shows that there was a deficit of -\$15,414.3 million dollars to the USA. In 2015, Thailand again exported \$28,622.2 million dollars goods to the USA and in exchange has imported \$11,228.8 million dollars leaving the USA with a deficit of -\$17,393.4 million dollars. Moreover, in 2016, USA imported goods from Thailand \$29,489.2 million dollars and exported \$10,467.4 million dollars back to Thailand and deficit amount of -\$19,021.7 faced by the USA. Lastly, in 2017, USA imported goods from Thailand by far the highest value of \$31,151.9 million dollars over the past seven years and exported \$10,476.4 million dollars to Thailand.

1.7. Interest rates

In this section, the interbank overnight lending rate has taken into consideration and in the case of the USA, the federal rate. The reason for taking

interest rates in order to deduce the market efficiency of the Thai baht and the US dollar, this macroeconomic indicator holds a very important presence. The study of interest rates over the past seven years from 2010 to 2017 is done in this chapter.

1.8. Interbank overnight lending rates

The interbank overnight lending rates from the period starting 2010 and period ending 2017 are taken into consideration in this part of the study as in the first three quarters of 2010 interest rates maintained as steady in between 1.25%-1.50% while in the last quarter of 2010 in rose to the range between 1.50%- 2.3%. In 2011, Thailand interbank lending rates rocketed up from 2.3%- even more than 3.5%. In the year 2012, it remained steady compared to the past year but in the last quarter, it dropped to 2.8%. In 2013, it witnessed a further decline in interest rates as it had reached another level of 2.4%.

The interbank overnight lending rates from the year 2014 to later 2015 dropped to the new level of 1.5% and finally from 2016 to 2017 it was steady between 1.5% to 1.6%. The highest interest rate over these periods was 3.6% in 2011 and the lowest was 1.35% in 2010. The mean interbank rates were 2.3% and variance was between 3%-3.25percent. The main reason for choosing interbank overnight lending rate because this topic deals in international trade where one currency transacts with another currency so based on this characteristic this rate states all the benchmark for assessing the market efficiency of Thai baht over the period. The trend of interbank interest is overall gradually declining.



Figure: Thailand three-month interbank rate

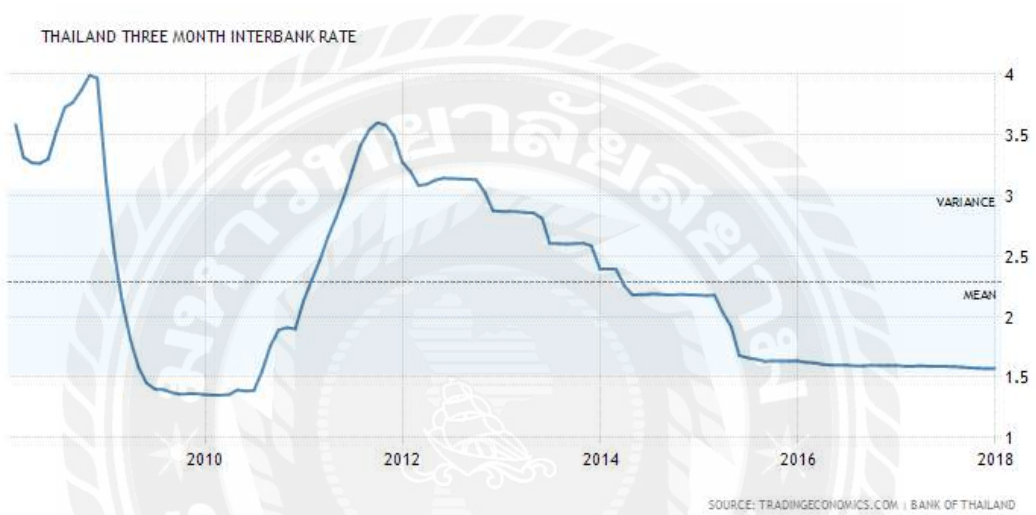
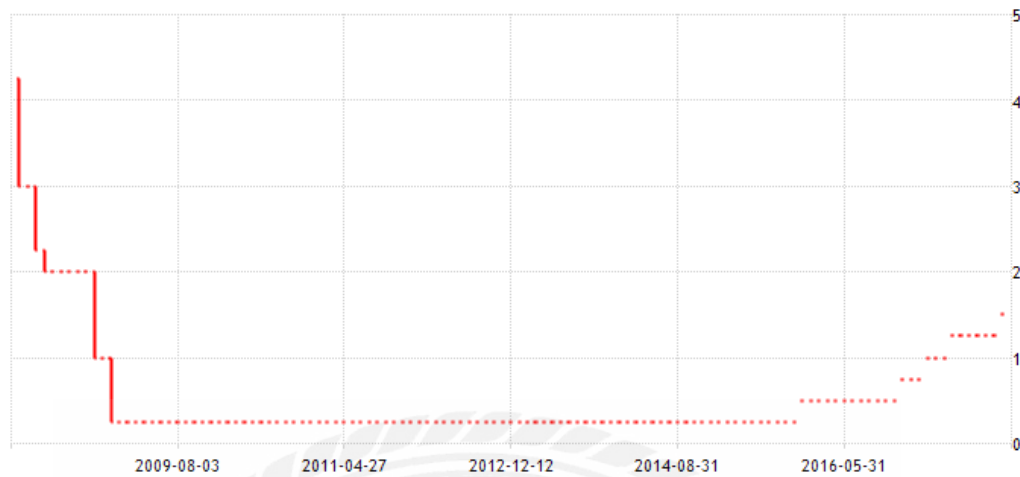


Figure: Mean and variance of three-month Thai interbank rate

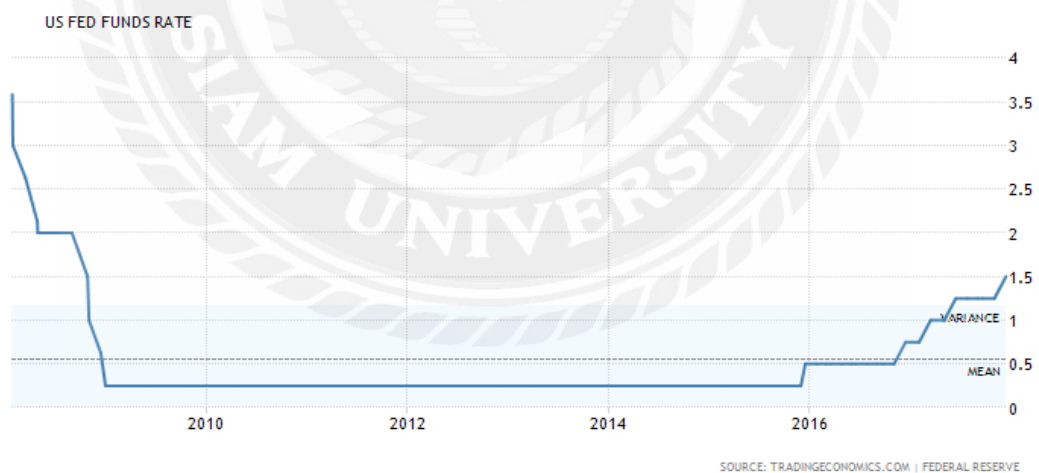


Figure: An interest rate of Thailand

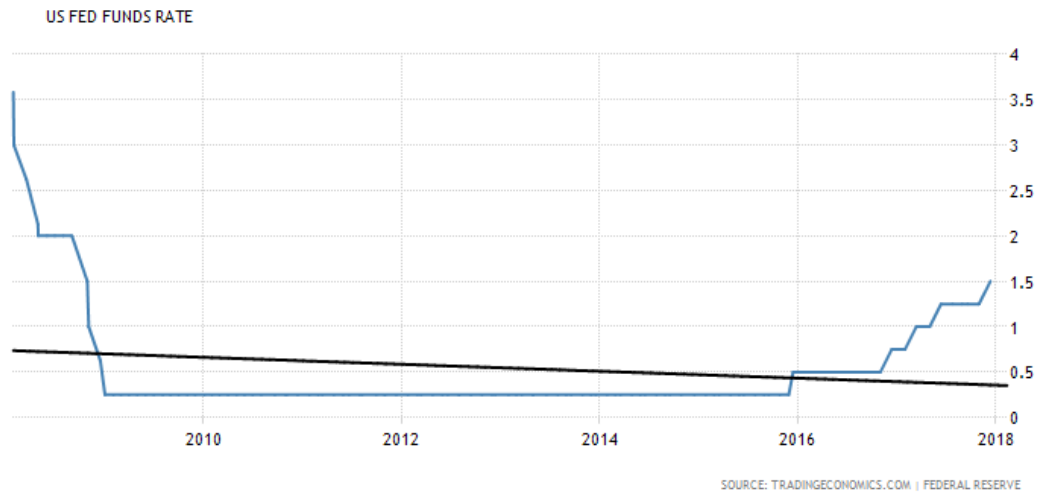
1.9. The US funds federal rates



The US fed funds rate from the year 2010 to 2016 has maintained a steady rate of 0.25% and finally, in the year 2017 beginning started to grow up and reached to 0.5% and later to another height of 1.5%



The mean of US fed funds rate had maintained to be 0.5% and variance is 1%. Furthermore, the picture below shows that the US fed funds rate has been declining over the years according to the trend analysis.



The US fed funds rate is considered to be the significant benchmark in financial markets. Goodfriend and Whelpley (1986) explained that this particular rate is the main rate in the US market and it anchors all other rates in the US. Nguyen (2013) indicated that studying of US fed funds rate could be the appropriate factor affecting the foreign exchange rate. On the other side, Chow and Kim (2004) explained that in order to assess the market efficiency of a certain currency, the study of interest rates would be an ideal and they studied the relationship between interest rates and exchange rates during the Asian crisis.

1.10.2.4.3 Manufacturing production index

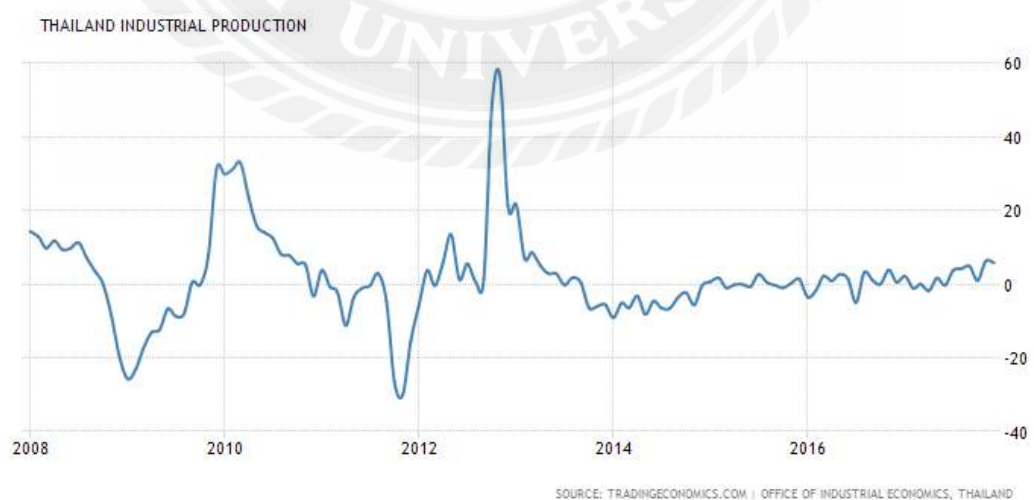


Figure: Thailand Industrial Production

The manufacturing production index or in other words industrial production index is known to be as a criterion for measuring the production of industrial and manufacturing output. This macroeconomic indicator includes output from mining, manufacturing and utilities as certain part of GDP calculation includes manufacturing production and this is very significant from the understanding of market efficiencies. Lotfalipour et al. (2013) indicated that fluctuations in the exchange rate can actually impact the manufacturing sectors for their productions and investments. Dogruel, et al. (2010) examined the impact of fluctuations in the foreign exchange rates based on the performance of manufacturing index. Manufacturing production index affects directly the price and production costs and indirectly affects the foreign exchange rates.

The above chart explains about the Thailand industrial production index from the year beginning 2010 to 2017. It shows that in 2010 the manufacturing production index was more than 30% and declined gradually to 2011, reached negative of 30 to 35 percent of the manufacturing production index. In 2012, it had started to rise and reached to all time high 60% in mid-2013. The manufacturing production started to decline again and crossed below 0%. In early 2014 to 2017, it had started to rise gradually and maintained steady and reached slightly above and in between the range of 0-10 percent.

The US manufacturing index shows that production in the US had always been stable from 2011 to 2017 between -2.5% to 2.5%.

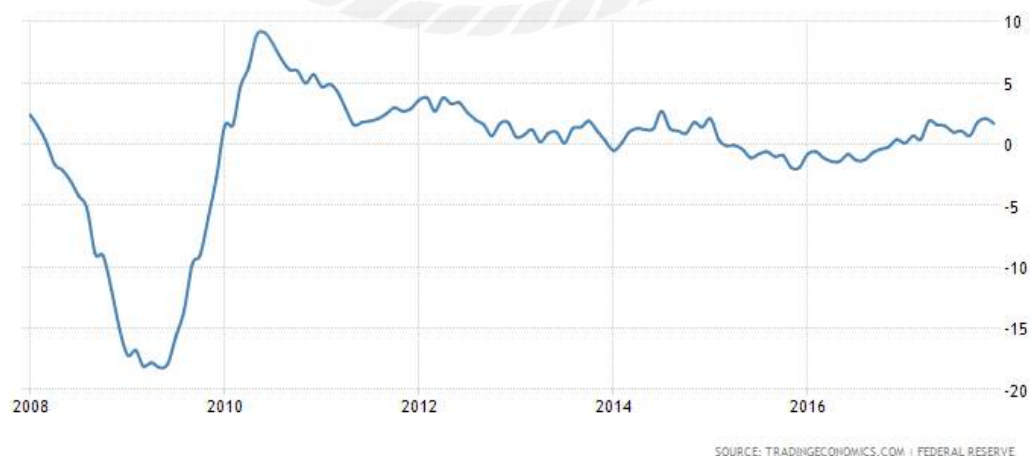


Figure: US manufacturing Production

1.11. International reserves



Figure: Thailand foreign or international reserves

The above data gathered from the world bank of Thailand foreign or international reserves from the period 2010 to 2017 annually. The foreign reserves include currency and gold deposits. In 2010 the Thailand foreign reserves amounted \$172.028 billion and it was stable and consistent in 2011. It has increased to \$181.841 billion dollars in 2012 and then decreased to \$167.23 billion dollars in 2013. The foreign internal reserves had decreased in the year 2014 and 2015 and reached to a new level of \$157.163 and \$156.46 billion dollars respectively. Lastly, in 2016 had increased again to \$171.772 billion dollars and \$202.538 billion dollars in 2017.

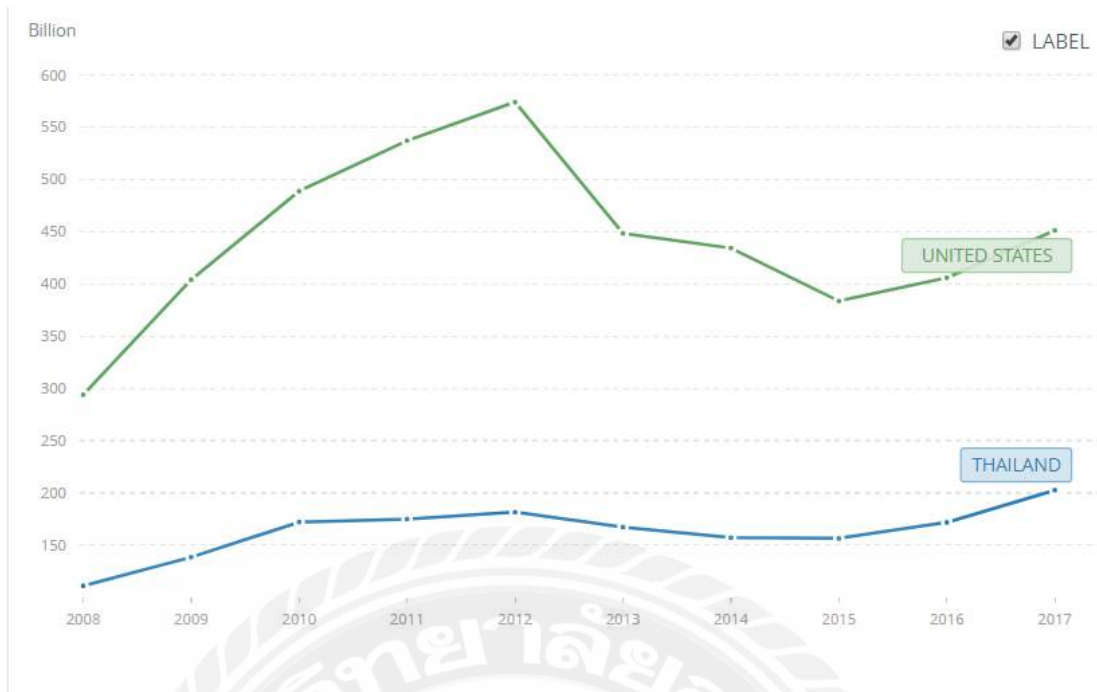


Figure: Thailand and US foreign reserves

The above chart depicts the foreign exchange reserves of the USA from the period of 2010 to 2017. This includes gold and currency and in 2010 USA had \$488.928 billion dollars followed by \$537.267 billion dollars in 2011. In 2012, USA secured \$574.268 billion dollars of foreign reserves. In 2013 and 2014, the USA had \$448.509 and \$434.416 billion dollars respectively. In 2015, the US foreign reserves accounted \$383.728 billion dollars followed by \$405.942 and \$451.285 billion dollars in 2016 and 2017 respectively.

In 1818, there was a first contract signed between Thailand and USA when an American ship captain visited the country having a letter from that time US president James Monroe. Thailand was previously known as Siam. In 1832, President Andrew Jackson sent his diplomat Edmund Roberts and was assigned in Sloop-of-war peacock, to the courts of cochin-china, Siam and Muscat in order to sign a treat of amity and commerce. This step was taken to promote trade and commerce within the treaty communities in early 1833 in the presence of Chao-phraya phra klang king Phran Nang Klao. In 1966, there was “Treaty of Amity and economic relation between the kingdom of Thailand and the United States of America signed in Bangkok. This treaty provides American citizens and

business parties to own a company or a majority of shareholding and there will equity and fair-trade practices. The companies in this treaty are exempted from many trade restrictions which are imposed by the Thai foreign business act 1999. In this case, the American directors or shareholder can have the minimum 51% but for other countries mostly can have 49%. This treaty restricts American companies to involve in certain business activities such as are as follows:

1. Communication
2. Transportation
3. Fiduciary function
4. Banking involving depository functions
5. Exploitation of land and natural resources
6. Land ownership
7. Domestic trade in agricultural products.

This treaty also benefits Thai citizens to apply for visas to open their business with minimum formalities and profits derived from their business are entitled to be remitted to Thailand freely and their assets will also not be compromised. Thailand also has free trade agreement between the USA and it was signed in the presence former US president George W. Bush and Thaksin Shinawatra to negotiate trade agreements.

1.12. The Valence model (Vroom's expectancy theory)

Vroom's expectancy theory was developed by Victor. H. Vroom, a Canadian psychologist in 1964. He offered this theory to understand motivation level. He further stated that any motivational level achieved towards certain action can be derived from the results or outcomes. Vroom's expectancy theory consists of two models-the valence model and the force model.

In this paper, the researcher tries to incorporate the valence model particularly. In other words, the valence model explains that discussing any events or outcomes that describe attractiveness or averseness. The "attractiveness" means the positive valence or outcomes and "averseness" mean

negative valence or outcomes from the events, performance or situations. Although this model is related to motivation and emotion. It can be used to analyse the positive valence (attractiveness) and negative valence (averseness) of trade relation and activities happened with Thailand and USA from the period 2010 to 2017. This model will explain further in chapter 4 the macroeconomic indicators which are being discussed earlier in this chapter whether they were positive or negative valence towards the country trade practices and the investor. The researcher will use this model to explain the macroeconomic indicators used in this chapter and the attractiveness or averseness in corresponding to Thai baht currency and US dollars.

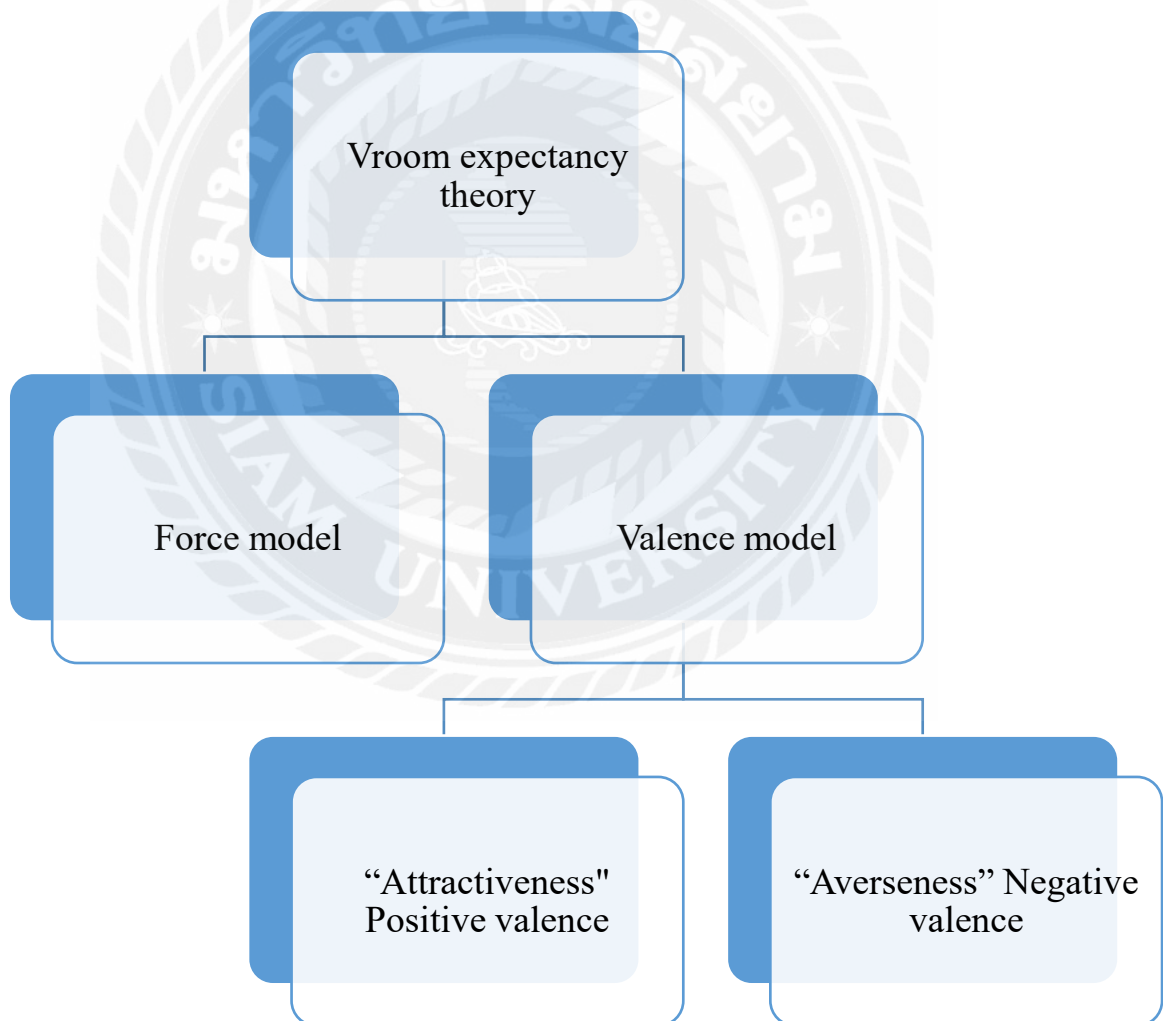


Figure: The Valence model (Vroom’s expectancy theory)

1.13. Conclusion:

In this chapter, it concluded the intricacies of the foreign exchange market and their functions followed by the various theories which support the fluctuations of the foreign exchange market. These different theories methods are well explained with the instances of past researcher to analyse the pros and cons of those methods. Furthermore, this chapter explains the macroeconomic indicators as there are many indicators to compare the two different economies but in case only four of them were taken such as Balance of trade, interest rates, manufacturing production index and international reserves. The data were taken from secondary sources such as the World Bank and trading economics from the period 2010 to 2017. This chapter partially answered the research questions about the positive valence or negative valence of Thai baht and USD over the period and the impact of discussed microeconomic indicators on Thai baht and USD but will be well justified in chapter 4. This chapter also answered the question of trade relation between these two countries.

This chapter presented the trade relation between Thailand and USA which come from the long-time back as these two countries are free to trade with a different source of benefits except for US companies to do business in certain areas. In addition to this, it brings many benefits for both the nationalities to cherish for as for Americans citizens can have 51% as a shareholder while Thai citizens can have their operation started in the USA with minimum formalities and can transfer their funds from America to Thailand freely without any assets damage.

The model selected for this study is the Vroom expectant theory which has two forces and out of those two forces, the valence model supports this topic. The components of this model will explain the positive or negative valence of both currencies during the mentioned period after doing an analysis of macroeconomic indicators in a further chapter.

CHAPTER 3

1. Methodology

This chapter explains about the method being used in this study so that the results carried out would be efficiently and effectively. Cameron (2009) explained that justification and show case of proper techniques in order to make research work proper and achievable similarly this chapter explains also the method being used in this research paper and explains the reason for choosing that method along with the source of collecting data and information which support the selective method. Furthermore, this chapter analyses the data in order to provide the results achieved through this research work.

1.1. Type of Research Methodology

In research methodology, it has got various methods and ways to collect or gather data along with analysing and interpreting and so in this case the research data collected or gathered followed by analysing and interpreting on the basis of qualitative research (Mack; Woodsong, 2005). This paper includes previous articles, survey reports, and annual publications in the form of secondary sources of collecting data. The main purpose of this research study is to probe trade relation between Thailand and USA from the period of 2010 to 2017.

The primary purpose of this research work as stated above is to find out trade relation between Thailand and USA from the period starting from 2010 to the period ending 2017 through analysing certain macroeconomic indicators which are mention as below:

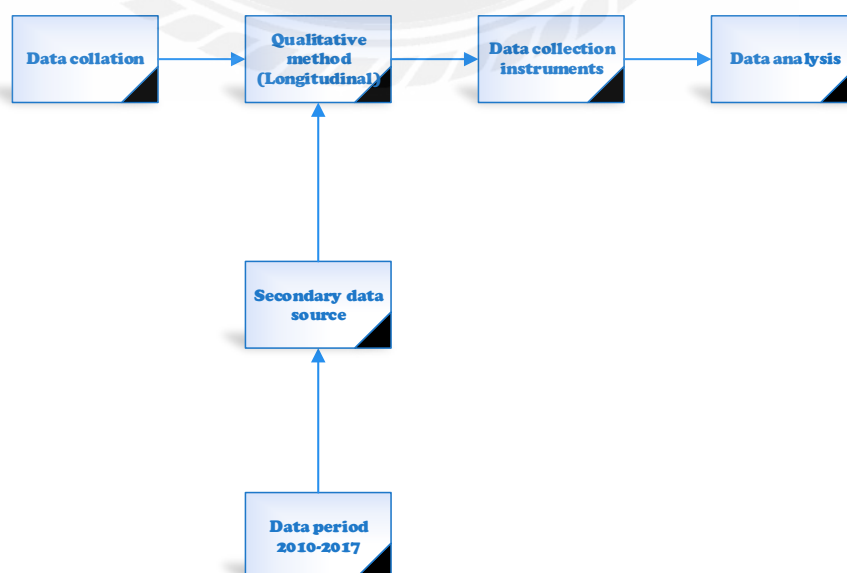
- Export –import

- Interest rates
- Manufacturing production index
- International reserves

The above macroeconomic will analysed and examined in order to provide the trade relationship between USA and Thailand accompanied with valence theory of Vroom's expectancy theory in order to find the valence of Thai baht and US dollar during the period of 2010 to 2017. The reason to find out the valence is to check the attractiveness and averseness of Thai baht and US dollar during the period of 2010 to 2017.

1.2. Research Design

Yin (2009) explained that in order to reach one point, it needs a logical plan and that plan connects it in order to reach that point. The bridge between the points fulfilled through set of questions that need to be answered, can be explained as the conclusion achieved from the set of questions. Harwell, (2011) explained that research design is very important for any research work to be in proper framework and on the basis of standard which is ideal for research work to be justified and credible.



The researcher used the longitudinal study as it aimed to find out the cause and effect of trade relation between USA and Thailand using four macro-economic indicators as stated above as with the help of longitudinal research researcher used the previous trade related activities between USA and Thailand from the period 2010 to 2017 and used them to analyse the effects of the trade happened between both countries. Finally, this method provides the suggestions on the basis of cause and effect relationship.

1.3. Data collection

As stated earlier, this research study is entirely longitudinal study so the data collection in this research paper is from secondary source which was gathered different sources such as:

- Internet,
- Past reports of US trade of goods with Thailand,
- Journals,
- Bank of Thailand,
- World Bank,
- Trading economics website
- Case studies.

In this study, the data were gathered from secondary sources as mentioned above to present the trade relation between Thailand and USA from 2010 to 2017 and it includes the data from internal sources such as World Bank and Bank of Thailand websites and from the external sources as well such as journals, past reports case studies on the basis of the topic.

1.4. Data collection instruments

This research paper explains and provides large amount of information and concept of foreign exchange and trade relation scenarios

from Internet sources. The data collected in order to analyse the export and import practices from “US trade goods with Thailand yearly report” from 2010-2017 and interest rates trends, manufacturing production index information gathered from trading economics followed by international reserves data collected from world bank. The numeric figures provide more concrete and solid information about the subject of this topic. Secondly, the valence model from expectant theory is also supporting this research work by explain the impact of macro-economic indicators towards the currencies sensitivity. Lastly, the analysis of case studies and related research will add more realistic examples to elaborate this research work.

1.5. Research approach

This study includes inductive approach strategy which facilitates the conclusion can be achieved from the observation of data, results or theories (Ghauri & Grønhaug, 2005). The observation in this paper achieved through detail study of literature review which included export and import trade practices between Thailand and USA, and change in the interest rates such as (interbank overnight interest rates and US fed interest rates) followed by manufacturing production index of Thailand and USA and international reserve analysis. This study also presents the numeric figure analysis apart from the valence model analysis of Vroom’s expectancy model (Trochim, 2006).

CHAPTER 4

1. Data analysis and interpretation of findings

In this chapter, the researcher will try to analyse the macroeconomic indicators mentioned in chapter 2 impact on currency exchange rates between Thai baht and US dollars over the period from 2010 to 2017.

1.1. The balance of trade impact on Thai baht and US dollar

As discussed in chapter 2 in order to analyse the currency valence between the Thai baht and the US dollar. The numeric figure of export and import between USA and Thailand took from secondary sources (census.gov), figures are in US dollars in billion

Table: Numeric analysis

(US trade in goods with Thailand -summative figure)

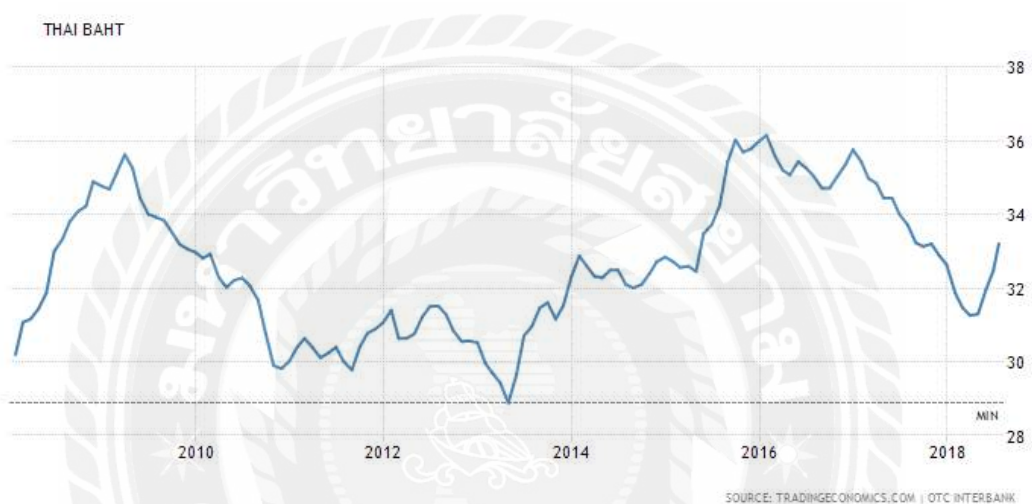
Year	Goods import from The USA to Thailand	Goods export to The USA from Thailand	Balance of trade
2010	8,976.0	22,693.6	-13,717.2
2011	10,929.9	24,831.6	-13,901.7
2012	10,887.8	26,066.8	-15,179.0
2013	11,797.0	26,169.6	-14372.6
2014	11,815.0	27,229.3	-15,414.3
2015	11,228.8	28,622.2	-17,393.4
2016	10,467.4	29,489.2	-19,021.7

2017	10,991.6	31,151.9	-20,160.3
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From the above table, it explains that Thailand export had increased every year by respective percent shown in the above table and USA import with every year had increased by respective percent as shown above. The balance of trade between Thailand and the USA had increased as well from the findings. On the contrary, the exchange rate fluctuation between US dollar and Thai baht showed an upward trend which was not good for Thai baht as it was in the range of 29-33 baht for one US dollar which had increased to 34-35 range for one US dollar. The maximum exchange rate between the US dollar and the Thai baht over the respective period was 36 baht for one dollar and the minimum exchange rate between both currencies was 29 baht for one dollar in 2013. The mean exchange rate between both currencies was 29 baht for one dollar in 2013. The mean exchange rate between both currencies was 32 above.

Figure: Trend analysis of Thai baht versus US dollar

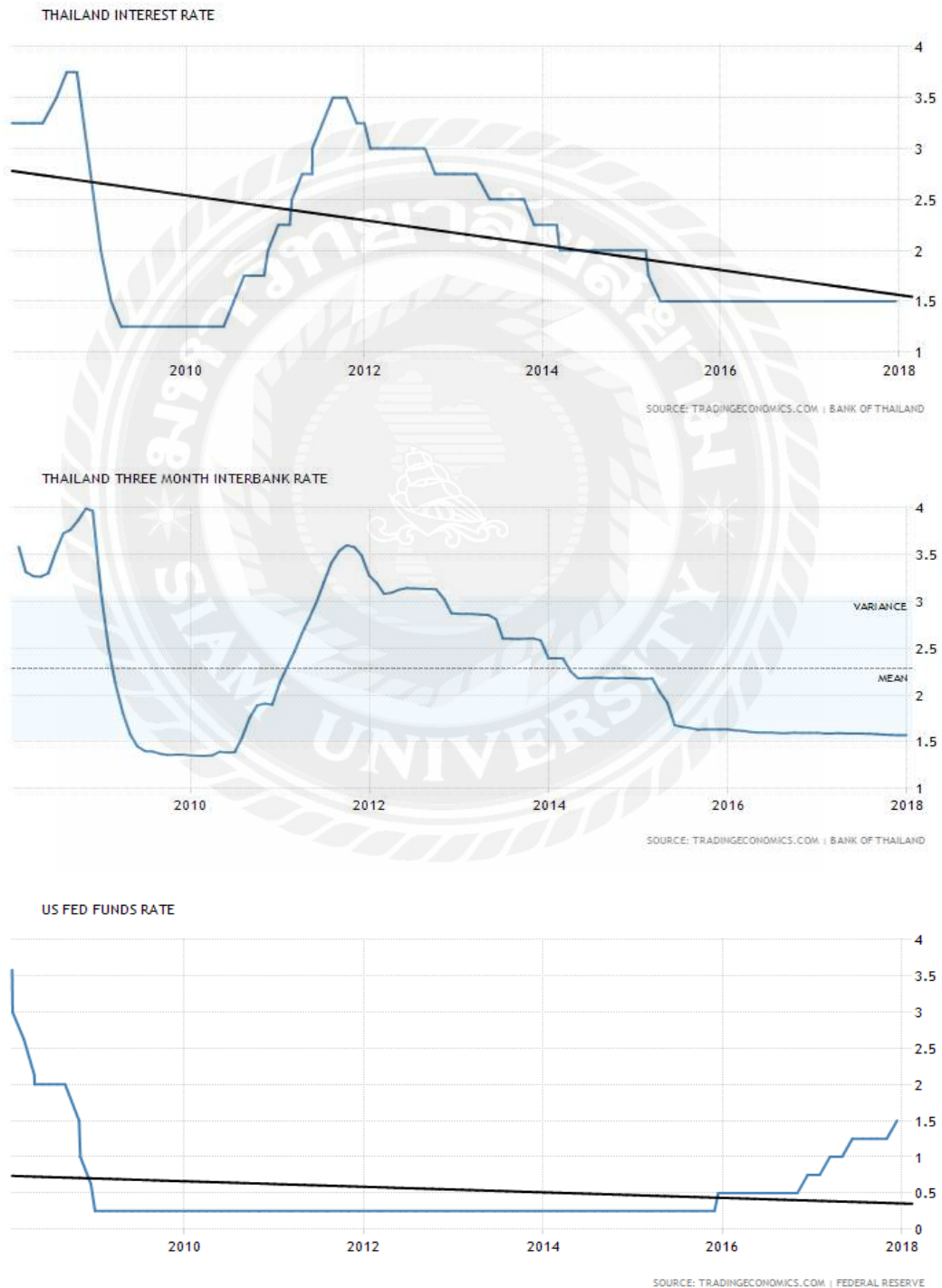


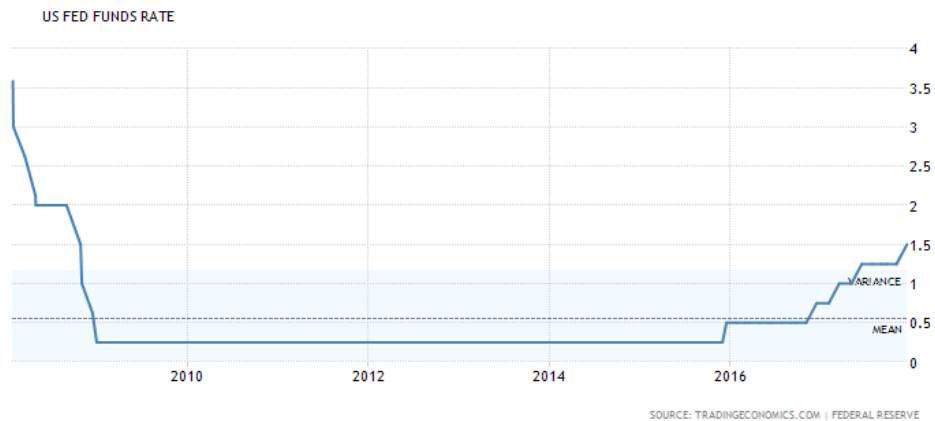


The above export figures suggest that every year USA imported more and compared to the last year from Thailand which means that US dollar should depreciate as because the demand of Thai baht in order to goods from Thailand and Thailand exported more compared from the last year, resulting Thai baht should appreciate but from the above exchange rates trend figures it shows that from 2010 to 2017, US dollar appreciated and Thai baht depreciated. The results explain that even Thailand exported more over the years from 2010 to 2017. The above trend of Thai baht and US dollar disapproved the balance of payment theory as technically, it should have appreciated but it had gone depreciated. On the flip side, the USA imports are more than exported. Hence it should have depreciated but it had gone appreciated from a trade perspective. The above analysis concluded the valence of Thai baht had averseness and valence of the US dollar had attractiveness. In other words, the balance of trade had created

negative valence on Thai baht even Thailand exported more to the USA and positive valence on US dollar even USA imported more. This would not have created a profitable venture for Thai exporter and would have created profitable for US importer.

1.2. The interest rate impact on Thai baht and US dollar





1.2.1. Numeric analysis:

As from the above chart indicates that overall the US fed funds rate from the period 2010 to late 2016 was stagnated as 0.25 percent and then gradually increased and reached to range of between 0.5 percent to 1 percent in 2017 and on the other side, Thailand interbank rate as mentioned above from 1.25 percent to 3.5 in late 2011. By the start of 2012, it started to decline gradually from 3.25 percent to 1.5 percent in 2015. Lastly, it remained the same at 1.5 percent until 2017.

The above charts comparison of interest rates differential of USA fed funds rate and Thailand interbank rates suggested that every year the differential interest rates of Thailand is more than the USA fed funds rate. In order to calculate an interest rates differential is the difference in interest rate between the Thai Baht and the US dollar, the method is mentioned below

$$\text{Interest rate differential} = i^* - i$$

Where,

i^* = Thai interbank overnight lending rate

i = US federal funds rate

The theory of interest rates suggests that if any country interest rates are more or higher than other country interest rates comparison. The higher rate

interest country would likely to attract investment from overseas and from the domestic and regarding that case it will increase the demand of that higher interest country and this will ultimately appreciate the currency and vice versa. Conversely, the interest rates of Thailand interbank overnight lending rate outweigh the theory as because from the period of 2010 to 2017 Thai baht depreciated even though the interest rates were higher than US fed funds rate and on the other side the US fed funds rate were lower but US dollar appreciated over the period.

1.2.2. Valence model analysis

Hence, the valence of Thai baht was negative as the outcomes turned out to be negative for those who had invested during that period in Thai baht and even for exporter of Thailand as because in order to export the funds required for them levied higher interest rates to repay the debt. Contrary, US funds fed rate was lower and currency appreciated (chapter 2) over that period so it was a win-win situation for importer as they had to pay less for buying goods from Thailand and even at the same the deposits in a bank account for US investor would have provided higher returns. As a result, the valence of the US dollar in that particular period was positive as the performances or the outcomes suggest attractiveness.

1.3. The impact of manufacturing production index on Thai baht and US dollar

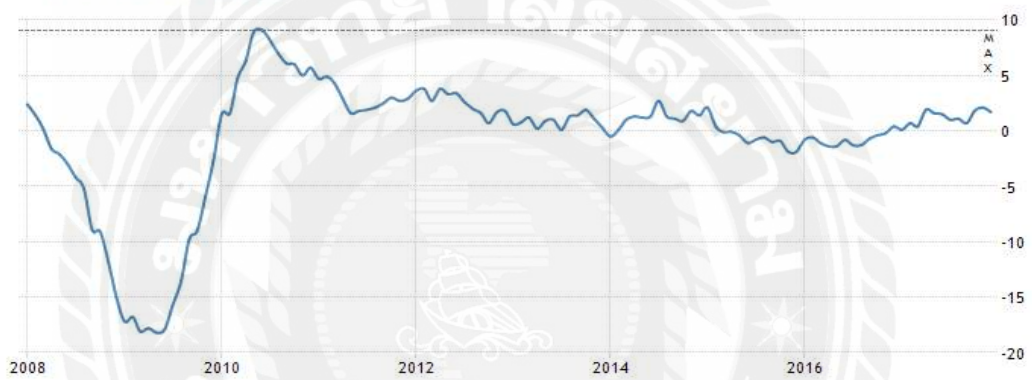


US MANUFACTURING PRODUCTION



SOURCE: TRADINGECONOMICS.COM | FEDERAL RESERVE

US MANUFACTURING PRODUCTION



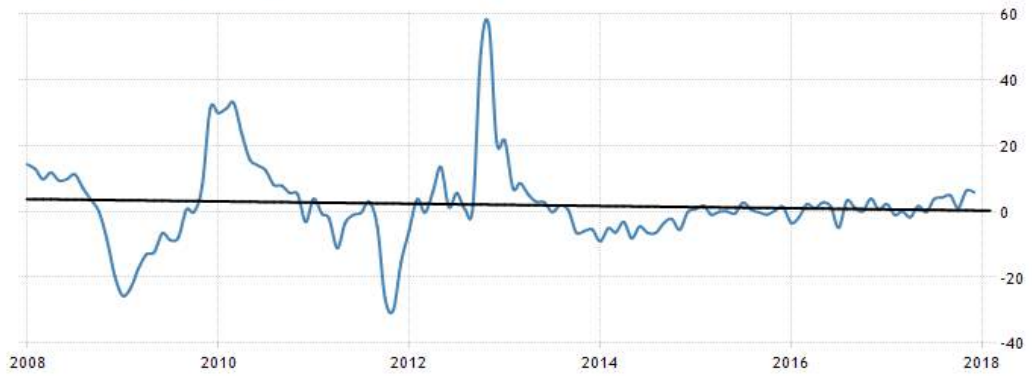
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US MANUFACTURING PRODUCTION



SOURCE: TRADINGECONOMICS.COM | FEDERAL RESERVE

THAILAND INDUSTRIAL PRODUCTION



SOURCE: TRADINGECONOMICS.COM | OFFICE OF INDUSTRIAL ECONOMICS, THAILAND

THAILAND INDUSTRIAL PRODUCTION



SOURCE: TRADINGECONOMICS.COM | OFFICE OF INDUSTRIAL ECONOMICS, THAILAND

THAILAND INDUSTRIAL PRODUCTION



SOURCE: TRADINGECONOMICS.COM | OFFICE OF INDUSTRIAL ECONOMICS, THAILAND



The USA manufacturing production index trend suggested an increasing trend with a mean value of -1 percent and maximum value range in between 5 percent to 10 percent. Contrary, Thailand industrial production trend suggested slightly declining industrial production over the years from the period 2010 to 2017 as maximum was 60 percent and the minimum were -30 percent. Hence it proved from the findings that export from Thailand to the USA was more during that period and interest rates were higher than the USA but still Thai baht depreciated over the period so it can be concluded from above facts that Thailand was having severe currency crisis as because its currency value was declining in exchange to one US dollar.

The main reasons for declining industrial production could be as follows:

- Thai baht depreciated against dollar value.
- Cost of manufacturing units turned out to be expensive.
- Interest rates were higher so borrowing funds could be expensive in order to produce goods.

1.3.1. Valence model analysis:

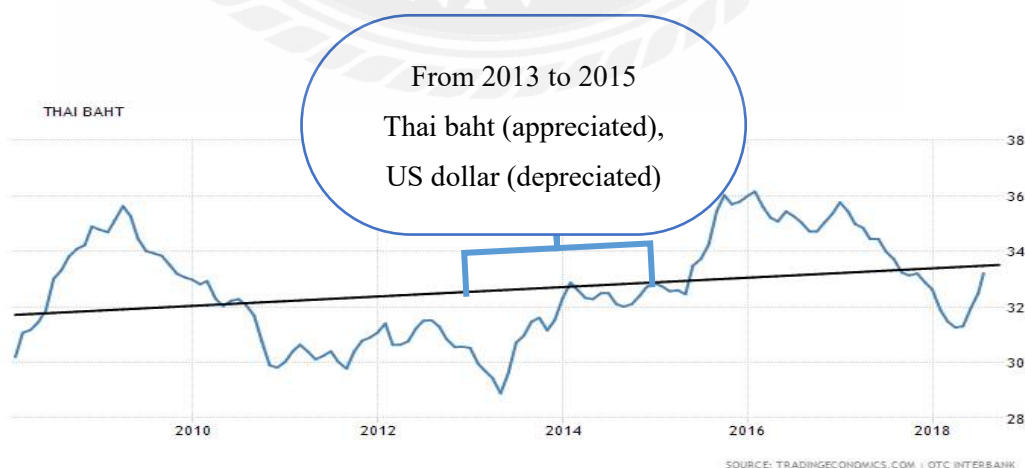
According to this model, as noticed Thailand manufacturing production had faced discouragement because of depreciated Thai baht value, expensive business operation, and higher interest rates so these factors are more likely to responsible for reduced manufacturing production index as Thailand didn't have

enough cash flow to produce or increase manufacturing goods and whatever they were producing were expensive and on the flip side USA had slightly increased manufacturing production index as because of appreciated dollar value and lower interest rates even though the USA imported more than Thailand , US dollar overall didn't depreciate. This again proves that Thai baht outcomes and performance during the period of 2010 to 2017 had averseness (negative valence) and the US dollar had attractiveness (positive valence).

1.4. The international reserves impact on Thai baht and US dollar

Table: International reserves (In billion)

Year	Thailand international reserves	Percent change	USA international reserves	Percent change
2010	172.028	–	488.928	–
2011	174.891	+1.66%	537.267	+9.88% ↑
2012	181.481	+3.76%	574.268	+6.88% ↑
2013	167.230	-7.79%	448.509	-21.89% ↓
2014	157.163	-6.07%	434.416	-3.14% ↓
2015	156.460	-0.44%	383.728	-11.66% ↓
2016	171.772	+9.78%	405.942	+5.78% ↑
2017	202.538	+17.91%	451.285	+11.16% ↑



The overall trend of Thai baht in an exchange with US dollar is depreciating but if we closely look from the period of 2013 to 2015 as Thai was

strongest so far in last seven years or so as it had reached 29 baht to one dollar and most of the time it was under 32 baht to one dollar. This could be the reason of Thai baht got appreciated because of the decline in the international reserves of Thailand and US dollar got depreciated.

Another interesting point in the above charts comparison during 2013 to 2015, the US international reserves got declined likewise in Thailand as well and when international reserves declined it explained that Thailand sold dollars to buy more Thai baht and USA bought Thai baht in exchange for dollar which means demand of the Thai baht got increased and demand of the US dollar got decreased. That's why Thailand had declined their international reserves in order to appreciate the Thai baht value corresponding USD. The US international reserves also declined during the period of 2013 to 2015 but the exchange rate with Thai baht didn't reflect the correspondingly as it should be appreciated due to the realization of the US international reserves.

Lately, Thailand again got increased in international reserves and then also Thai baht value also depreciated while USD depreciated first then appreciated.

To conclude this, it would be advisable to say that during the era of 2013 to 2015 had the golden run for Thai currency in exchange rate comparison with USD. Hence it proves that only in these periods the Thai baht had positive valence over US dollar. It had attractiveness over USD.

1.5. Conclusions

This research aims are to study the economic factors effecting change of the Thai's Bath and US dollar exchange rate. Various factors included in the study were inflation rate, inter-bank interest rate, current account, and Export value of Thai goods.

In this chapter, the research questions are clearly examined and answered accordingly and the trade relation between USA and Thailand along with the explanations of a free trade agreement between both the countries mentioned.

The macroeconomic factors selected for this study in order to analyse the impact on both the Thai baht and the US dollar is well explained. Moreover, Vroom's Valence model also justified by comparing the macroeconomic indicators with trend analysis of exchange rate between Thai baht and USD.



CHAPTER 5

5. Conclusion, Limitation and Recommendation

As stated earlier, this study was attended to analyse the exchange rate fluctuations between Thai baht and US dollar from the period of 2010 to 2017 with the help of selected macroeconomic indicators such as terms of trade, interest rates, manufacturing production index and international reserves. The first chapter formulated the research objectives and with the help of the objectives, the research questions were developed.

The second chapter explained the study of free-trade scenarios and history between both countries about their agreements and related matters followed by the study of terms of trade, interest rates, manufacturing production index and international reserves.

The terms of trade data gathered from the website (census.gov) and explained the US trade of goods with Thailand from the period of 2010 to 2017 with the figure import, export and net balance (chapter2). Furthermore, interest rates and manufacturing production index figures were gathered website (tradingeconomics.com). Lastly, international reserves figures were gathered from the World Bank website. This chapter also explained different models that can cause the exchange rates fluctuations accompanied with past research done by previous researchers with their pros and cons but in this study, the Vroom's expectancy theory of valence model was accepted to justify the findings.

The third chapter explained the methodology as this study is entirely based on the longitudinal study so the data collection was from the secondary sources and past articles related to the subject matter. Furthermore, data collection was analysed and explained in order to prove the findings in chapter 4.

The chapter fourth concluded that terms of trade had negative valence on Thai baht and positive valence on USD, interest rates had negative valence on Thai baht and positive valence on USD, manufacturing production index had negative valence on Thai baht and positive valence on USD and lastly the international reserves overall created negative valence on Thai baht but during the period of 2013 to 2015 created positive valence on Thai baht and negative on USD.

5.1. Findings

The findings below explain the result of this study in order to analyse the valence of Thai baht and US dollar based on numeric analysis and valence model analysis.

5.1.1. Export-import impact on Thai baht and US dollar

Thailand export to the USA had increased every year and USA import with every year had increased by respective percent as presented in (chapter 4). The net balance of trade between Thailand and USA had increased as well from the findings since Thailand export had increased with the USA, as a result, the Thai baht should have been “stronger” but it went on becoming “weaker”. On the contrary, the USA had done import more than the export technically with too much import country currency price decreases but the US dollar “surged up”

The valence model of vroom’s theory after analysing numeric analysis of export and import practices between Thailand and USA. It explains that the numeric figure disapproves the balance of payment theory in which Thai baht should have been appreciated but got depreciated and on the other side US dollar should have been depreciated but got appreciated. This explains according to the valence model of Vroom’s that during these period Thai baht had “averseness” and USD had “attractiveness” (chapter 4) from the trade investor and exporter point of view.

5.1.2. Interest rates impact on Thai baht and US dollar

The theory of interest rates suggests that if any country interest rates are more or higher than other country interest rates comparison. The higher rate interest country would likely to attract investment from overseas and from the domestic and regarding that case it will increase the demand of that higher interest country and this will ultimately appreciate the currency and vice versa. Conversely, the interest rates of Thailand interbank overnight lending rate outweigh the theory as because from the period of 2010 to 2017 Thai baht depreciated even though the interest rates were higher than US fed funds rate and on the other side the US fed funds rate were lower but US dollar appreciated over the period. Hence, the valence model of Vroom's explained Thai baht was negative as the outcomes turned out to be negative "Averseness" for those who had invested during that period in Thai baht and even for exporter of Thailand as because in order to export the funds required for them levied higher interest rates to repay the debt. Contrary, US funds fed rate was lower and currency appreciated (chapter 2) over that period so it was a win-win situation for importer as they had to pay less for buying goods from Thailand and even at the same the deposits in a bank account for US investor would have provided higher returns. As a result, the valence of the US dollar in that particular period was positive "Attractiveness" as the performances or the outcomes suggest attractiveness.

5.1.3. Manufacturing production index impact on Thai baht and US dollar

According to the Vroom's valence model after analysing numeric analysis of Manufacturing production index and industrial production index (chapter4) Thailand manufacturing production had faced discouragement because of depreciated Thai baht value, expensive business operation, and higher interest rates so these factors are more likely to responsible for reduced manufacturing production index as Thailand didn't have enough cash flow to produce or

increase manufacturing goods and whatever they were producing were expensive.

USA had slightly increased manufacturing production index as because of appreciated dollar value and lower interest rates even though the USA imported more than Thailand, US dollar overall didn't depreciate. This again proves that Thai baht outcomes and performance during the period of 2010 to 2017 had averseness (negative valence) and the US dollar had attractiveness (positive valence).

5.1.4. International reserves impact on Thai baht and US dollar

The US international reserves got declined likewise Thailand as well and when international reserves declined it explained that Thailand sold dollars to buy more Thai baht and USA bought Thai baht in exchange of dollar which means demand of Thai baht got increased and demand of USD got decreased. That's why Thailand had declined their international reserves in order to appreciate the Thai baht value corresponding USD. The US international reserves also declined during the period of 2013 to 2015 but the exchange rate with Thai baht didn't reflect the correspondingly as it should be appreciated due to the realization of US international reserves. Lately, Thailand again got increased in international reserves and then also Thai baht value also depreciated while USD depreciated first then appreciated.

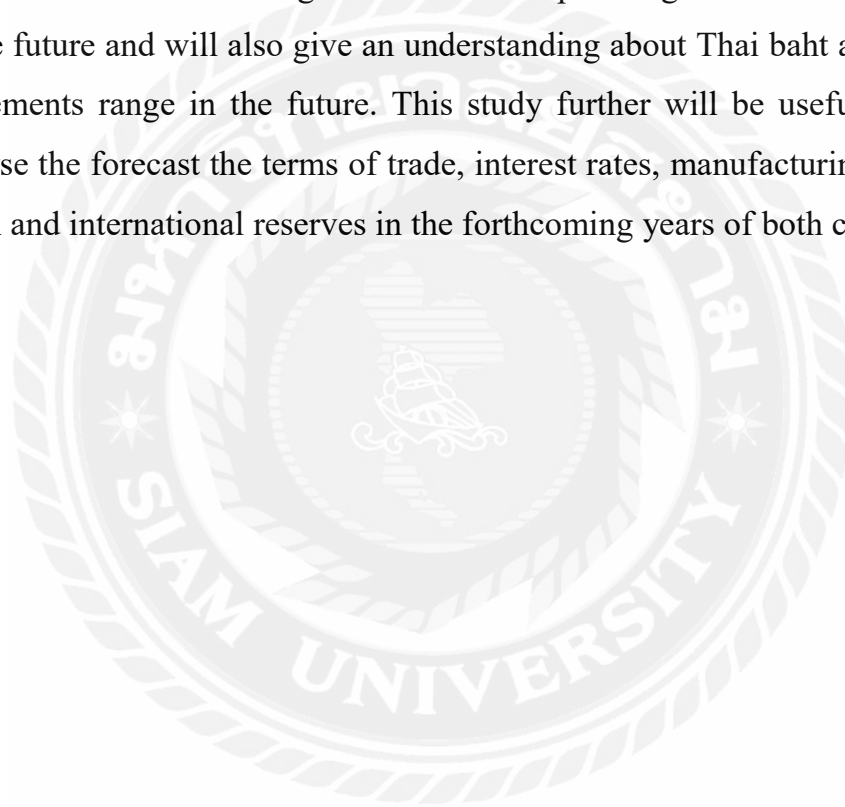
5.2. Limitation

There are certain limitations associated with this research study as the first limitation would be the study of macroeconomic indicators as there are many indicators which affect exchange rate between both countries and in this study only four indicators have been studied. The second limitation was the time frame for this research paper as it was very limited. The data available regarding interest rates and exchange rates are not very concise and with limited access, if

it would have been available concisely and with abundant sources would have been more solid and concrete research work. In the nutshell, the study had various limitations but still this paper is still very useful for the future references.

5.3. Recommendation

The first and foremost recommendation of this research paper is educating the potential investors about the exchange rate relationship between two currencies and then try understanding about the mechanics. This study will be useful for the students and graduates who are planning to take the charter exams in the future and will also give an understanding about Thai baht and US dollar movements range in the future. This study further will be useful in order to analyse the forecast the terms of trade, interest rates, manufacturing production index and international reserves in the forthcoming years of both countries.





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Appendix

Firm KAINÉ internal questionnaire survey:

Dear colleagues,

Hello! First of all, thank you for cooperating with this survey. This questionnaire aims to understand the current situation of human resource management in the company and your Suggestions for improvement. In order to ensure the objectivity of the data, this survey is an anonymous survey. All information will be kept strictly confidential. The research results only reflect the comprehensive data, and no personal information is present.

The authenticity of the results of the survey depends on your serious and objective answer for the question, may also affect your future work environment, please fill out this questionnaire, you carefully read all the questions, the true expression of your opinion.

The office
May 1, 2018.

Note: except for multiple choice, all other options are single.

1. You are well aware of the company's development goals and objectives.
 - A Totally disagree
 - B. disagree
 - C. It's not clear.
 - D. agree
 - E. Totally agree
2. You think the company has formulated a clear mid - and long-term development strategy.
 - A Totally disagree
 - B. disagree
 - C. It's not clear.
 - D. agree
 - E. Totally agree
3. When did you start serving the company?
 - A. Before 2007 (transfer to problem 4)

B. After 2007 (transfer to issue 9)

4. In 2007, the company transferred from the construction party to the developer. In the process of transformation, did you accept the real estate organized by the company?

Training in development management.

A. is

B. no

5. You believe that human resource management has completed the transformation in the process of transformation.

Don't agree at all.

A Totally disagree

B. disagree

C. It's not clear.

D. agree

E. Totally agree

6. The company has also made clear guidance on your post responsibilities and work arrangements after the company's transformation.

Don't agree at all.

A Totally disagree

B. disagree

C. It's not clear.

D. agree

E. Totally agree

7. You believe that the company has introduced professional talents in real estate development management during the transformation process.

A Totally disagree

B. disagree

C. It's not clear.

D. agree

E. Totally agree

8. After the transformation of the company, the original employees were clearly divided into the ownership development company or the construction unit.

A. Totally disagree

B. disagree

C. It's not clear.

D. agree

E. Totally agree

9. You have a clear understanding of the importance of HRM to the development of the company.

- A Totally disagree
- B. disagree
- C. It's not clear.
- D. agree
- E. Totally agree

10. In your opinion, the key factor to change the human resource management of the company is (3)

- A. The concept of modern human resource management is established.
- B. Improve the organization of modern human resource management.
- C. High quality management team.
- D. Ask outside experts for guidance.
 - establish the appropriate incentive mechanism.
 - form a standardized performance evaluation system.
- Increase the investment of enterprises in human resources.
- E. Other, a. H.

11. What do you think are the main risks of human resource management that affect the company's long-term development? lack of incentive system and distribution system.

- A. No talent is needed.
- B. The employee is suffering from a weak consciousness.
- C. The phenomenon of talent waste exists.
- D. lack of assessment.
- The overall quality of employees is not high.
- E. Other, a. H.

12. You believe that all departments of the company cooperate well and that people of different levels can communicate equally and openly.

- A Totally disagree
- B. disagree
- C. It's not clear.
- D. agree
- E. Totally agree

13. You think your team has a good team spirit.

- A Totally disagree
- B. disagree
- C. It's not clear.
- D. agree

- E. Totally agree
14. You feel proud to work in a company and think you can make a difference here.
- A. Totally disagree
- B. disagree
- C. It's not clear.
- D. agree
- E. Totally agree
15. You think our management has a strong executive force.
- A. Totally disagree
- B. disagree
- C. It's not clear.
- D. agree
- E. Totally agree
16. You think the company can coordinate with each other and cooperate with each other.
- A. Totally disagree
- B. disagree
- C. It's not clear.
- D. agree
- E. Totally agree
17. You believe that company decision information can be delivered quickly and accurately between departments.
- A. Totally disagree
- B. disagree
- C. It's not clear.
- D. agree
- E. Totally agree
18. You believe that each sector can actively provide useful information to each other.
- A. Totally disagree
- B. disagree
- C. It's not clear.
- D. agree
- E. Totally agree
19. You believe that employees have sufficient experience and ability to meet the requirements of each position.
- A. Totally disagree
- B. disagree

- C. It's not clear.
D. agree
E. Totally agree
20. You think the organizational structure of the company has clearly defined the responsibilities of each department.
- A. Totally disagree
B. disagree
C. It's not clear.
D. agree
E. Totally agree
21. You believe that each department can effectively implement the company's goals and plans.
- A. Totally disagree
B. disagree
C. It's not clear.
D. agree
E. Totally agree
22. You think employees can communicate with each other smoothly and work together.
- A. Totally disagree
B. disagree
C. It's not clear.
D. agree
E. Totally agree
23. You believe that the superior can master the employee's work situation in time and provide help.
- A. Totally disagree
B. disagree
C. It's not clear.
D. agree
E. Totally agree
24. You think the workload of all positions in the company is relatively saturated.
- A. Totally disagree
B. disagree
C. It's not clear.
D. agree
E. Totally agree