Impact of 2014 Revolution: Analysis of International Trade between Thailand and Australia

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ABSTRACT

From 1 January 2005, Thailand and Australia entered into the Thailand-Australia Free Trade Agreement (TAFTA). This agreement facilitated two-way trade and investment, improved business mobility, increased transparency, encouraged international best practice, and promoted bilateral cooperation. As a result, two-way trade in goods and services increased until 2014 when there was revolution in Thailand. This political event has impacted on the future of international trade between the countries. Analysis of history, referred to as a time series, can be a key tool in relation to making current decisions and plans based on long-term forecasting. This paper aims to compare the results of time series forecasting and actual values from 2014 to 2015, by using mixed methods research that includes documentary research and Time Series Analysis on yearly data from 1987-2013. The result indicates that the Thai and Australian government policies provide a negative effect on Thailand goods and services imported from Australia and Thailand services exported to Australia, while having a positive effect on Thailand goods exported to Australia. This political event has impacted on the future of international trade between both countries. Hence, our conclusion is that this case highlights the influence that politics can have on economics.

Keywords: International Trade, Revolution, Thailand, Australia

INTRODUCTION

Thailand and Australia have longstanding and deep connections. Both countries cooperate in a broad range of areas of mutual interest, including trade and investment, law enforcement, counter-terrorism, education, security, migration and tourism (Department of Affairs and Trade, 2016a). The Economic Complexity Index (ECI) reports that Australia is the 21st largest export economy in the world and the 56th most complex economy (OEC, 2016a). In 2014, Australia exported $243B and imported $219B, resulting in a positive trade balance of $24B. This resulted in the Gross Domestic Product (GDP) of Australia being $1.45T and its GDP per capita being $45.9k (ImportDutys, 2016). In comparison, Thailand is the 22nd largest export economy in the world and the 36th most complex economy according to the ECI Index (OEC, 2016b). Thailand's economy is heavily export-dependent, with exports accounting for around 65 percent of GDP (Trading Economics, 2016). The economic backgrounds of both countries indicate that they can benefit from each other.

Thailand and Australia are members of APEC and WTO, both of which encourage the establishment of free trade agreements. Currently, there are two FTAs between Thailand and Australia, the ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA) and the Thailand-Australia Free Trade Agreement (TAFTA). From 1st January 2005, Thailand and Australia entered into the TAFTA[1]. "This agreement facilitated two-way trade and investment, improved business mobility, increased transparency, encouraged international best practice, and promoted bilateral cooperation» (Department of Affairs and Trade, 2016b). As a result, during 2015, Australia was the sixth top import partner of Thailand, importing Thai shipments to the value of $9.6 billion which was 4.6% of total Thai exports (Workman, 2016).

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1   "TAFTA has eliminated the majority of Thai tariffs on goods imported from Australia. The reduction of Thailand's previously high tariff barriers (for some goods, up to 200 per cent) is a significant win for Australian businesses, opening up a range of export opportunities in Southeast Asia's second-largest economy. TAFTA also improves the environment for bilateral services trade and investment" (Department of Affairs and Trade, 2016b).

However, after the May 2014 coup d'état, Australia downgraded ties with Thailand, imposing a travel ban on the junta leaders and cutting defence cooperation in some of the toughest punitive measures taken by a foreign government (Reuters, 2014). Moreover, the Australian Minister for Foreign Affairs (2014) announced that "all Australians travelling to Thailand, or already in Thailand, should continue to exercise a high degree of caution and pay close attention to their personal security. Australians should obey the nationwide curfew between 10 pm and 5 am. Australians should follow the instructions of local authorities and avoid all demonstrations and protest sites, political events and large-scale public gatherings." This had a huge negative impact on the Thailand tourism sector, exemplifying how political unrest could damage Thailand's economy.

To deal with this situation, in October 2014, the Thai government announced an economic reform agenda to make Thailand more attractive as a regional trading hub and to develop its digital economy. "Reforms will focus on promoting Thai investment overseas, reducing the cost of doing business, tackling corruption, improving logistics and infrastructure, building a better tax structure, and developing a new body to govern the digital economy." As a result, the Thai government demonstrated an intention to support the Thai private sector, facilitate trade and promote overseas investment (Department of Affairs and Trade, 2016a).

However, the changes in trade patterns are not necessarily due to TAFTA nor the revolution but, rather, part of a long term trend. With regard to the trade performance of each nation, the strongest trade link between the two countries has been the export of automotive vehicles from Thailand to Australia (Siddique, 2016). The aim of this paper is to forecast two-year ahead trade variables between both countries (goods import, services import, goods export and services export), relying on yearly data from 1987 to 2013, before Thailand's revolution. The forecasting results from 2014 to 2015, which represent trade variables without revolution, in comparison with the actual trade variables, show the effect of political issues on international trade.

Literature Review/Research Gap

Australia and Thailand began formal diplomatic relations in 1952. The long-term culmination of these efforts was the establishment of the AANZFTA and the TAFTA in 2005. As a result, during 2011, Australia ranked as Thailand's 6th largest trading partner, while Thailand ranked as Australia's 9th largest trading partner. According to TAFTA, in 2012, Australia and Thailand marked 60 years of bilateral relations in recognition of the importance of their transnational ties and the need for the sustained growth of Australian-Thai relations into the future (Siddique, 2016).

Athukorala and Kohpaiboon (2011) examined the impact of TAFTA on bilateral trade between the two countries. The results show that trade has expanded faster following TAFTA coming into effect, but the impact is heavily concentrated in a few product lines in Australian imports from Thailand, reflecting the influence of commodity specific, supply-side factors which have a bearing on the rate of preference utilization.

Following the TAFTA plan saw the elimination of 94 per cent of Thailand's tariff and quota barriers on imports from Australia as of 2010, with the remaining tariffs phasing to zero in 2015 or 2020. The tariff rate quotas will be eliminated in 2025 for skim milk powder and liquid milk and cream. Therefore, there will be more open access for Australian companies to Thailand's services market and a commitment to liberalize two-way services trade in future (Department of Affairs and Trade, 2016a). Bilateral trade between Australia and Thailand was continuing to grow before the coup d'état in 2014. Table 1 shows Thailand's Top-10 products imported from Australia from 2013 to 2015, and Table 2 shows Thailand's Top-10 products exported to Australia.

From both tables, we can see that the revolution had little impact on the goods sector. Thailand remains an important market for Australian aluminum and copper, and Australia is a significant supplier of coal to Thailand. However, the services sector has been affected. Before the revolution, Thailand was a significant tourist market for Australians, with 400,000 Australians visiting Thailand each year, but after the revolution this number has decreased. This situation can have a negative effect on the Thai economy since tourism provides the major income for the country.

Research Method

This paper uses mixed methods research that includes documentary research and Time Series Analysis on yearly data from 1987-2013. For Time Series Analysis, there are four components: trend, cyclical variation, seasonal variation, and irregular variation (Pillai, R. S. N. and Bagavathi, V., 2008). Secular trend (t) is the long-term trend of trade factors. Cyclical variation (C_t) is a typical business or economic cycle consisting of a period of prosperity followed by periods of recession, depression, and then recovery with no fixed duration of the cycle. There are fluctuations unfolding over more than one year in time above and below the secular trend. Seasonal variation (S_t) is series fluctuating with the seasons. Because it is unpredictable and cannot

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No.	Import Description	Value : million baht		
		2013	**2014**	**2015**

Table 1: Thailand: Top-10 ten products imported from Australia

No.	Import Description	2013	2014	2015
1	Jewellery including silver bars and gold	1,952.2648	2,565.0519	2,331.1819
2	Machinery and parts	3,053.8749	2,573.2185	2,630.7969
3	Glass and products thereof	971.3899	1,516.9631	1,493.6279
4	Electrical machinery and parts	833.5904	1,331.3698	822.0296
5	Jewellery	104.6865	62.1826	96.979
6	Medicinal and pharmaceutical products	555.4172	597.8967	683.6187
7	Scientific, medical, testing appliances and instruments	368.5659	382.2811	473.0288
8	Paper and paper products	634.0219	465.5875	163.5706
9	Chemicals	522.3995	453.5818	432.3703
10	Railway, equipment and parts	35.9315	32.9572	37.3224
Total 10	Records	9,032.1425	9,981.0902	9,164.5261
Other		2,939.1781	3,801.3023	3,069.2706
Total		11,971.3206	13,782.3925	12,233.7967

Source: Information and communication technology center with cooperation of the custom department, Thailand

Table 2: Thailand: Top-10 ten products exported to Australia

No.	Export Description	Value : million baht		
		2013	**2014**	**2015**
1	Precious stones and jewellery	1,616.1418	1,423.6438	1,677.5364
2	Air conditioning machine and parts thereof	352.3792	593.8137	576.0043
3	Beauty or make up preparations, soap and preparations	656.4163	690.9605	739.2084
4	Motor cars, parts and accessories	585.3528	764.7772	775.6265
5	Articles of apparel and clothing accessories	311.6026	513.1697	469.1488
6	Automatic data processing machines and parts thereof	257.5771	340.095	215.1369
7	Electrical transformers and parts thereof	158.1892	242.4084	288.878
8	Other electrical equipment and parts thereof	16.4285	111.2261	201.0257
9	Motorcycles, parts and accessories	114.5882	138.6274	102.1111
10	Rubber products	328.4549	437.2082	615.1689

Source: Information and communication technology center with cooperation of the custom Department, Thailand

be projected into the future, we do not calculate Irregular variation (I_t). In addition, because we employ yearly data, the analysis does not take Seasonal variation into account.

The equation of Thailand goods imported from Australia can be written as:

$$TGMA = T_t * C_t * S_t * I_t$$

The equation of Thailand services imported from Australia can be written as:

$$TSMA = T_t * C_t * S_t * I_t$$

The equation of Thailand goods exported to Australia can be written as:

$$TGXA = T_t * C_t * S_t * I_t$$

The equation of Thailand services exported to Australia can be written as:

$$TSXA = T_t * C_t * S_t * I_t$$

The long-term trend of many series often approximates a straight line. The equation to describe growth in Thailand goods imported from Australia is:

TGMA' = a + bt

The equation to describe growth in Thailand services imported from Australia is:

TSMA' = a + bt

The equation to describe growth in Thailand goods exported to Australia is:

TGXA' = a + bt

The equation to describe growth in Thailand services exported to Australia is:

TSXA' = a + bt

Where:
TGMA', TSMA', TGXA' and TSXA' are the projected values for a selected value of t.
a is the Y-intercept. It is the estimated value of net FDI' when t = 0.
b is the slope of the line, or the average change in FDI' for each change of one unit in t.
t is any value of time that is selected. The unit of time reported in this paper is monthly.

For Time Series Analysis, past patterns are usually assumed to continue into the future. However, in many real-world applications, including Thailand's revolution, we are confronted with Irregular Time Series. Therefore, observations are not sampled at equally-spaced time stamps, and this can cause errors in forecasting.

Our trade factors data from 1987 to 2015 is provided by Department of Affairs and Trade, Australia. Many researchers suggest that we should not project an economic series more than *n*/2 time periods into the future where *n* is the number of data points. Others suggest the forecast may be for no longer than 2 years, especially in rapidly changing economic times. In this time series analysis, there are 29 years of all trade variables. Therefore, we estimate the data from 2014 to 2015.

Empirical Results

Before the revolution in 2014, all four values of international trade (goods import, services import, goods export and services export) of Thailand to Australia were increasing, and it seemed like the situation would continue into the future from the results of forecasting. However, after the revolution, for Thailand, goods import has been decreasing, while services import has been decreasing, then increasing slightly. Goods export has been increasing, while services export has been decreasing with high significance (see Figure 1, Figure 2, Figure 3 and Figure 4).

The least squares equation can be used to find points on the line through yearly data from 1987 to 2013. The equation TGMA determined earlier is
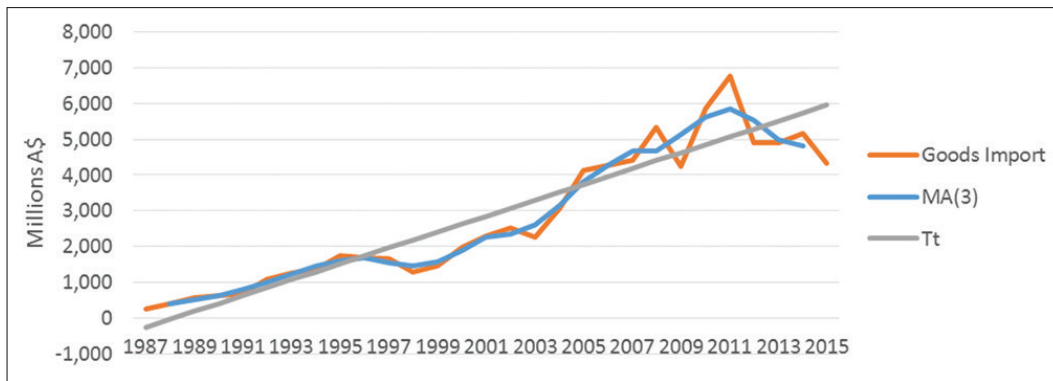
TGMA' = a + bt

To get the coordinates of the point on the line for 2014 to 2015, for example, insert the *t* value in the equation. Then

TGMA' = 481.11 +221.90(t)

The results of our forecasting are shown in Figure 1. From 2014 to 2015, we can see that the average of actual TGMA is lower than the expectation by time series forecasting (TGMA').

The least squares equation can be used to find points on the line through yearly data from 1987 to 2013. The equation TSMA determined earlier is

TSMA' = a + bt

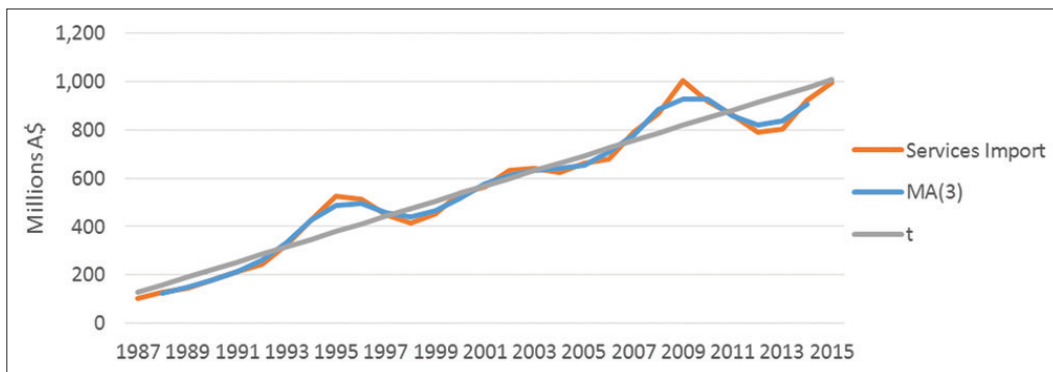**Figure 1:** Thailand goods imported from Australia from 1987 to 2015

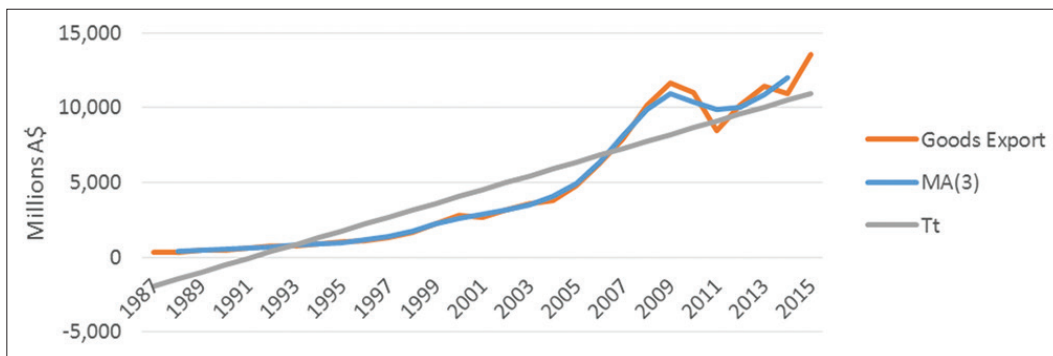**Figure 2:** Thailand services imported from Australia from 1987 to 2015

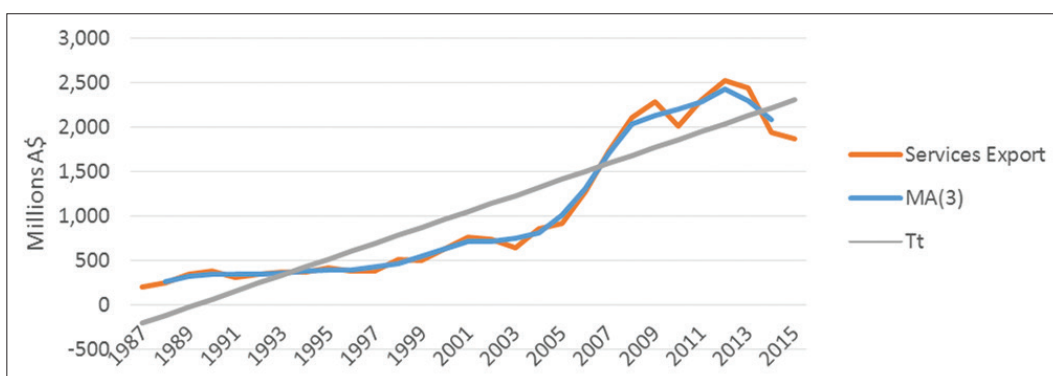**Figure 3:** Thailand goods exported to Australia from 1987 to 2015

Figure 4: Thailand services exported to Australia from 1987 to 2015

To get the coordinates of the point on the line for 2014 to 2015, for example, insert the *t* value in the equation. Then

TSMA' = 89.76 +31.40(t)

The results of our forecasting are shown in Figure 2. From 2014 to 2015, we can see that the average of actual TSMA is lower than the expectation by time series forecasting (TSMA').

The least squares equation can be used to find points on the line through yearly data from 1987 to 2013. The equation TGXA determined earlier is

TGXA' = a + bt

To get the coordinates of the point on the line for 2014 to 2015, for example, insert the *t* value in the equation. Then

TGXA' = -2,367.01 +459.10(t)

The results of our forecasting are shown in Figure 3. From 2014 to 2015, we can see that the average of actual TGXA is higher than the expectation by time series forecasting (TGXA').

The least squares equation can be used to find points on the line through yearly data from 1987 to 2013. The equation TSXA determined earlier is

TSXA' = a + bt

To get the coordinates of the point on the line for 2014 to 2015, for example, insert the *t* valu in the equation. Then

TSXA' = -299.96 +89.78(t)

The results of our forecasting are shown in Figure 1. From 2014 to 2015, we can see that the average of actual TSXA is lower than the expectation by time series forecasting (TSXA').

CONCLUSION

Two-way trade in goods and services increased until 2014 when there was revolution in Thailand. This political event has impacted on the future of international trade between both countries. This result indicates that the Thai and Australia government policies provide a negative effect on Thailand goods and service imported from Australia and Thailand services exported to Australia, while having a positive effect on Thailand goods exported to Australia. Hence, our conclusion is that this case highlights the influence of politics on economics.

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