

Macroeconomic Shocks and Malaysian Tourism Industry: Evidence from a Structural VAR Model

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Abstract

This study employs a structural vector autoregression (SVAR) model to investigate the macroeconomic shocks on Malaysian tourism industry, especially how the economy dynamically responds to oil price shocks, exchange rates, changes in price level, exports, economic growth and tourism income during the study time period from January 2001 to December 2012. The results indicate that oil price shocks, economic growth, exchange rate, and exports have a contemporaneous inverse impact on tourism revenues except for consumer price index which has a positive impact. This study added instant information to manage tourism industry in Malaysia. The findings of the study are useful to implement a number of corrective measures for the promotion of tourism in a country.

Keywords: Oil Price Shocks, Exchange Rate, Inflation, Exports, Economic Growth, Tourism Income, SVAR Model, Malaysia.

JEL Classification: C33, Z32.

1. Introduction

Recent hikes in the field of tourism has emerged it in the world's rapidly growing industry. Role of tourism in boosting the country's economic growth remained the topic of inspiring catch ball in the eyes of researchers since few decades (Tang, 2011). Captivatingly, developing economies of Asia are promoting this sector vastly and termed it as "Port in the storm" (Szivas & Riley, 1999) because it not only gauge foreign exchange and stimulate infrastructure development

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but also create employment opportunities for a mixed nature of labour force (Liu & Liu, 2008; Tang, 2011). Favouring the same Frederick (1993), called tourism industry as heaven for the unskilled and uneducated individuals' of developing economies as it is labour-intensive industry. All these arguments have made Asian Pacific region as the fastest growing tourism region of the world (Singh, 1997; Tang, 2011). Amongst all Asian countries, according to Malaysian Tourism Promotion Board (MTPB), Malaysian tourism sector has grown tremendously over the years. According to the statistics given by MTPB, only 800,000 tourists visit Malaysia in 1980, but in 2005 it became the second largest tourist country with record 16.4 million tourists (Zain, 2005) and in 2008, 22.1 million tourists visit Malaysia (Tang, 2011). Similarly, 25.03 million tourists in 2012 are not surprising because it is one of the most prominent industries of Malaysian economy.

Number of the studies on Malaysian tourism can be classified into four categories i.e.:

- i) Demand functional analysis of Malaysian tourism (e.g. Salleh et al., 2007; Salleh et al., 2008),
- ii) Tourism industry in terms of descriptive analysis (e.g. Liu, 2006; Poh-Poh, 1990; Wells, 1982),
- iii) Undeviating or ephemeral impact of tourists on Malaysia (e.g. Lean & Smyth, 2009), and
- iv) Convergence of tourism market in Malaysia (e.g. Lean & Smyth, 2008).

Despite ample of study on the Malaysian tourism industry, there still exist some escapes because how sudden fluctuations in oil prices and exports effect on the economy have not been studied frequently. Countries that depend on tourism industry (like Malaysia) might unevenly expose to sudden fluctuation in the price of oil (Becken & Lennox, 2012). This rapid change in the oil prices can harm the potential benefits of this industry (Chatziantoniou et al., 2013). On the other hand, exports are thought to impact on the country's economic growth for long period of time. Therefore, the present study not only focus the literature on economic growth in tourism sector but also

review the past studies regarding oil prices effect on economic growth.

1.1 Malaysian Tourism Industry: An Overview

Malaysia, an endowed country with copious natural resources is located in the Southeast Asian region. This county is blessed with the production of rubber and tin since colonial days and restructured its economy after independence. Like other developed countries, now Malaysia is also moving from primary manufacturing towards service industry. Captivatingly, tourism is the most profitable service sector of Malaysia. Tourism Development Corporation (TDC) was established in 1972 to promote Malaysian tourism industry through marketing channels. Later TDC was replaced by Malaysian Tourism Promotion Board (MTPB) to stimulate further tourists.

The arrival of international tourists in Malaysia shows an upward trend of tourists even during the Asian financial crises in 1997. In 80's TDC worked for the promotion of this industry and got fruitful results in attracting international arrivals with foreign exchange. Such programs mushroom international tourists from 800,000 in 1980 to 4.8 million in 1989 with an increased receipts from US \$ 2986.6 million (1980-85) to US \$ 5743.4 million (1985-89).

Visit Malaysian Year (VMY) campaign was introduced in 1990 to further increase the international tourists in Malaysia. This campaign enlisted tourism industry amongst top three industries to earn foreign exchange after export and manufacturing industries. From 1989 to 1990, almost 61% increase has been seen in the receipts and 54% increase in the arrival of international tourists. But, unfortunately, due to the Persian Gulf War (1990-91), 5.6% decrease is seen in receipts (US \$ 1572.3 million) and 21.5% decrease in tourists (5.8 m). Later on in 1994 second VMY campaign was introduced to attract further tourists which could only generate a growth of 10.7%.

Once again this industry was affected due to the cholera outbreak in Sabah in 1996 with the 5.3% decrease in number of tourists as compared to last year (i.e. 7.5 million to 7.1 million). Later on, in 1997, the situation becomes worst because of series of ailment dengue fever in Penang and Coxsackie B viral epidemic in Sarawak. These problems were inflated by international media which not only disturb

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Malaysian tourism industry but also Malaysia Airline (record loss due to flight cancellation). Meanwhile, Asian financial crises occur and hit Thailand in the mid of 1997 which cause further decline in international tourists in Malaysia (-13% in 1997 and -10.8% in 1998). In 1998, Malaysia hosted commonwealth games which attract tourist from all over the world. A record 43% increase in tourists was noted in 1998 as compared to the previous one.

Commonwealth games accelerate Malaysian tourism industry but terrorists attack on World Trade Centre and Pentagon on 11 September 2001, once again disturb this industry. Because of such attacks with in a period of three months of 2001 international visitors declined from 9.3 million to 5.9 million. Furthermore, avian flu and SARS diseases added fuel to the fire in 2003 with the record lowest tourist of the millennium (4.5 million).

Third campaign of VMY was launched in 2007 to celebrate Malaysian 50th spring. As a result an increase of 22.5 million tourists visited Malaysia in 2008 as it was 20.9 million in 2007. This third campaign remained quite fruitful for the Malaysian tourism industry with 25.3 million tourists and 60.6 billion receipts in 2012. This enlisted Malaysia as the best tourism destination according to global traveller magazine. Figure 1 shows the recent number of tourist arrivals and tourism receipts in Malaysia for ready reference.

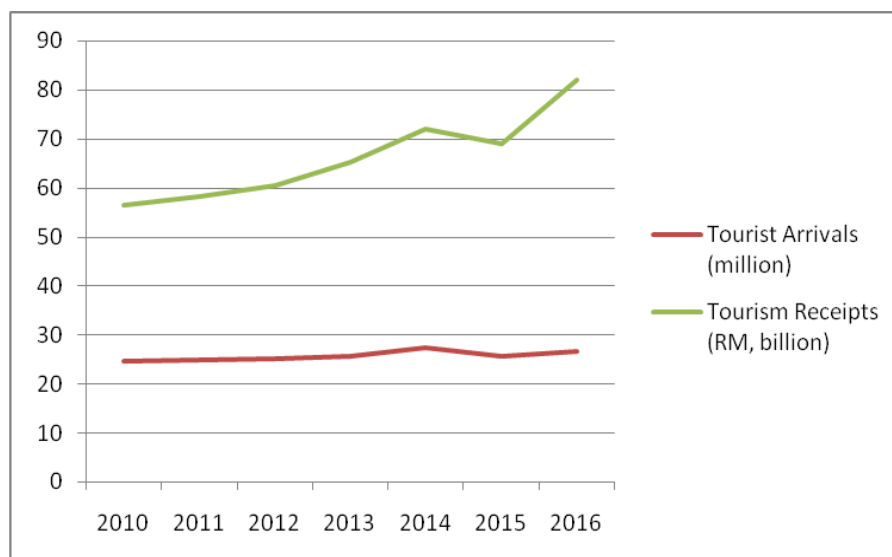


Figure 1: Number of Tourist Arrivals and Receipts to Malaysia
 Source: Ministry of Tourism and Culture of Malaysia (2016).

2. Literature Review

2.1 Factors Affecting On Tourism Demand

The relationship between inbound tourism and economic growth is widely discussed in tourism literature, while there are number of diverse factors that affecting tourism demand in different countries context, including energy demand (Qureshi et al., 2017), social expenditures (Nassani et al., 2017a), travel and transportation system (Khan et al., 2017), growth factors, including trade, FDI inflows, and economic growth (Zaman et al., 2017), air quality indicators (Zaman et al., 2016), military expenditures (Nassani et al., 2017b), biodiversity (Malik et al., 2016), climatic variability (Sajjad et al., 2014), exchange rate (Shah and Zaman, 2014), etc. These factors largely affected inbound tourism that provoked the need of effective policy to support economic and environmental activities for sustainable development across the globe. Qureshi et al. (2017) examined different macroeconomic factors that influenced by inbound and outbound tourism activities in a diversified panel of 37 tourists' induced countries and confirmed different economic and environmental objectives through which the country may determined its tourism infrastructure for broad-based growth. Nassani et al. (2017a) surveyed the panel of 16 tourists' induced countries and

examined the impact of different social factors including education, health, crime rate, vulnerability, and poverty on inbound tourism and supported both the positive and negative outcomes on country's economic growth. Khan et al. (2017) considered the panel of 17 tourists' induced countries and examined the impact of travel and tourism competitiveness index that largely supported the different transportation modes, which affect the tourism demand across countries. Zaman et al. (2016; 2017) considered the panel of different countries and confirmed the differential impacts of growth factors and air quality indicators on tourism demand, which confined the role of tourism growth towards environmental sustainability. Nassani et al. (2017b) examined the nexus between military expenditures and tourism demand in a panel of 18 heterogeneous countries and confirmed the tourism led military expenditures hypothesis across countries. Malik et al. (2016) examined the impact of tourism demand on environmental sustainability and biodiversity loss in the context of Austria by using the annual time series data from 1975-2015 and confirmed the potential habitat loss due to massive growth of inbound tourism in a country.

The large number of the studies disclosed that tourism is impacted by the fluctuations in oil prices. For instance, Becken and Lennox (2012) and Yeoman et al. (2007) are in favour of the hypothesis that high oil prices negatively impact on tourism. Due to the political conditions and uncertainty in commodity markets, oil prices are expected to touch to its peak in upcoming years. Favouring the same hypothesis, United Nation World Tourism Organization (UNWTO) has also noted an inverse relation between oil price and tourism. Furthermore UNWTO has also noted that some of the other industries are badly affected by the rapid increase in oil prices such as, cruise and airline etc. Distinguishing the macroeconomic and microeconomic effects of oil prices in oil importing countries (such as under observation country Malaysia), Becken (2011) concluded that high oil prices leads to inflation and negatively impact on country's income, on the other hand, disposable income is declined by positive oil price shocks. Therefore, oil price shocks might have immediate and negative impact on tourism industry (Dritsakis, 2004; Nicolau, 2008).

Despite of vast pool of different thoughts, there is still need to study the effect of oil price and inflation shocks on the countries relying on its tourism industry. Chang et al. (2013) conclude that tourism industry is influenced by country's exchange rate, particularly on tourism competition, tourism costs, arrival of international travellers, bargaining power flanked by foreign and domestic countries, organization's earning and commemoration of such shocks by the travellers over long period of time. To support the given arguments, Beckmann (2013) has conducted some analysis regarding prices and nominal exchange rates. Exchange rate is amongst one of those aspects which help a country's tourism industry to thrive (Blake et al., 2008). In addition to this, fluctuations in exchange rate effect on the overall impact on the tourism price of this industry over time. According to Hanafiah et al. (2010) there exists inverse relation between exchange rate and tourism demand because, most of the tourists having more purchasing power prefer to travel places with low purchasing power. For instance, tourists from New Zealand and Malaysia to Australia identifies that the memory of tourists of exchange rate shocks could diminish in the long run (Yap, 2011). On the other hand, it is also observed that lithe exchange rate, under normal economic conditions, leads high economic growth (Furceri & Zdzienicka, 2011). Table 1 shows the number of additional factors that affecting tourism demand across countries.

2.2 Export-Led Growth and Tourism-Led Growth Model

Export-led growth (ELG) and tourism-led growth (TLG) models are measure the causality between exports, tourism, and economic growth. Some of the developed and developing economies have used such economic strategies in the past for specific export activities. Usually companies producing such specific export activities are subsidized by the governments with the expectation to resources to finance. Therefore, this model not only generates profits but also permit countries to equalize their balances though creating more exports and increasing productivity. Analyzing the same model, McCombie et al. (1994) avowed that growth rate can be increased by exports without deterioration in balance of payment. In similar way, tourism industry could play a vital role in ELG model, because it would not only maintain the balance of payment but also obtain auxiliary resource from abroad. So, tourism industry could give funds to disequilibrium to improve the country's welfare, to enhance firm's competitiveness and smooth the progress of the economies of scale among local firms (Helpman & Krugman, 1985).

Extending the work of Copeland (1991), Lanza and Pigliaru (2000) and Hazari and Sgro (2004), number of scholars have focused on the relationship between tourism industry and economy. However, the relationship between tourism and economic growth is still questionable.

Literature about the relationship support the following four views i.e.,

- i) Firstly, there is an evidence from the previous literature is that country's economic growth is been led by tourism industry (e.g., Tang and Tan, 2015, Hatemi-J, 2016, Brida et al., 2015, Zaman et al., 2017, Brida et al., 2016 etc.)
- ii) Secondly, there is argued that economic growth itself is the vital factor of enhancing tourism income (e.g., Zaman et al., 2016, Cárdenas-García et al., 2015 etc.)
- iii) This view in the literature confirmed a bidirectional casual association between tourism and economic growth (e.g., Khoshnevis-Yazdi et al., 2017, Bilen et al., 2017 etc.).

iv) In addition, some of the studies have concluded non-significant (and no causal) association between the variables (e.g., Eugenio-Martín et al., 2004; Katircioglu, 2009).

Amongst all, tourism led growth is the most rising hypothesis which emphasized multi advantages of economic growth because of raising tourism income including employment opportunities, development of tourism industry as well as other industries related to tourism and positive impact on country's balance of payment.

This study evaluated the inter-temporal forecasting relationship between the variables and analyzes the export-led growth model and tourism-led growth models in the context of Malaysia and confirmed that both the models strongly interconnected with each other in the next 10 years period of time.

3. Data and Methodology Description

3.1 Data Description

Monthly data is collected from Data Stream Database covering period from January 2001 to December, 2012. Twelve years data with 144 observations are used for estimation. There are six variables, namely oil prices in current US \$ million (OP), consumer price index in percentage (CPI), exchange rate in terms of US \$ (ER), exports in current US \$ million (EX), gross domestic product in current US \$ million (GDP) and tourism revenues in current US \$ million (TR) are used for analysis. All variables are used in natural logarithm.

3.2 Methodology

Dynamic interaction of variables is examined through oil prices shocks, inflation, exchange rates, exports, economic growth with Malaysian tourism revenues. The general form of Structural VAR (P) is presented in the following:

$$A_0 y_t = C_0 + \sum_{i=1}^P A_i Y_{t-i} + \varepsilon_t \quad (1)$$

where y_t is a 6×1 vector for endogenous variables and $y_t = (OP_t, CPI_t, ER_t, EX_t, GDP_t, TR_t)$.

A_0 shows a 6×6 contemporaneous matrix; A_i are 6×6 autoregressive coefficient matrices. ε_t represents 6×1 structural disturbance vector with zero covariance. The reduced form of equation (1) is shown as:

$$y_t = a_0 + \sum_{i=1}^P B_i y_{t-i} + e_t \quad (2)$$

where $a_0 = A_0^{-1}c_0$, $B_i = A_0^{-1}A_i$, and $e_t = A_0^{-1}\varepsilon_t$, i.e. $\varepsilon_t = A_0 e_t$. e_t , the reduced form errors represent the linear function of structural errors ε_t with a covariance matrix i.e. $E[e_t e_t'] = A_0^{-1} D A_0^{-1}$.

First equation of the model represent for oil price shocks and it does not hold any restriction, being treating it in the global prospective. Therefore, impact of oil prices is assumed on all other variables of the model but no inverse impact of other variables is expected for this variable similar to Chatziantoniou et al. (2013). In second equation, consumer price index is assumed to be influenced by oil prices. On the one hand, hike on oil price generate inflation in the economy and consumable goods and transport facility of tourism become expensive. In this way, a_{21} restriction is imposed means consumer prices index simultaneously influenced by high oil price. However, impact of all other variables is excluded. Third equation represents exchange rate which is contemporaneously influenced by oil prices, inflation, exports and tourism revenues shocks through restrictions a_{31} , a_{32} , a_{34} and a_{36} . Considering the high sensitivity of exchange market, all variable will simultaneously affect this market except GDP. In fourth equation, contemporaneous impact of oil price and exchange rate shocks are examined through restrictions a_{41} and a_{45} on exports. It is sensible that oil price push all the cost channels of economy which immediately impact exports, whereas GDP is directly linked with export agreements. Hence, the impact of both channels are assumed to be most relevant and other channels will affect with pass

through effect with lag. Simultaneously impact of oil price and exchange rate on GDP is hypothesized in fifth equation. Last and sixth equation represents the impact of model variables on tourism revenues. It is assumed that all variables have contemporaneous impact on tourism revenues through a_{61} , a_{62} , a_{63} , a_{64} and a_{65} .

Turning towards estimation of model, it is necessary to ascertain lag-length order and stationarity of variables series. In analysis, all variables are seasonally adjusted and used in natural logarithm form in level. Information criteria, among other techniques, are commonly used by researchers to attain optimal lag length. Largely information criteria applied by the researchers are: Akaike information criterion (AIC) and Schwarz information criterion (SIC). To select the best lag-length order, it is suggested by Hall (1989) and Johansen (1992) that it is that situation when VAR residuals are not serial correlated. Among others, Hall (1991) further explained that low lag length order induce to serial correlation problem whereas high lag length order leads to create finite sample bias. Taking into account the suggestions of previous researchers and finite sample bias, the present study applied thirteen lags length order where VAR residuals are serially uncorrelated in accordance with Ibrahim (2006). To estimate the model after analysing the residuals at different lags, 13 lag is selected. On this lag level, the residual are completed free from autocorrelation.

4. Empirical Findings

Table 2 applied Augmented Dickey Fuller (ADF) and Phillips-Perron Tests for unit root test. All variable series are not found stationary at level i.e., I(0), however, after taking first difference, it would become stationary i.e., I(1). While estimating the stationarity of the variables, a problem of unit root is found.

Table 2: Stationary Test for Variables

Variables	ADF		PP	
	Level	1 st diff	Level	1 st diff
OP	-1.518	-8.794*	-1.455	-8.829*
CPI	-0.165	-8.285*	-0.071	-8.285*

ER	-0.639	-12.148*	-0.592	-12.165*
EX	-2.049	-3.780*	-1.839	-19.975*
GDP	-1.097	-2.896	-0.893	-5.242*
TR	-1.687	-12.888*	-1.233	-15.919*

* Significant at 1 % level.

The study simultaneous used seasonal unit root tests with breakpoint and presented the results in Table 3 for ready reference.

Table 3: Seasonal Unit Root Tests with Breakpoint

Minimize Dickey-Fuller t-statistics				
Variables	Level	Break Date	First Difference	Break Date
OP	p>0.050	2005	p<0.050	2005
CPI	p>0.050	2004	p<0.050	2007
ER	p>0.050	2005	p<0.050	2006
EX	p>0.050	2006	p<0.050	2006
GDP	p<0.050	2009	p<0.050	2010
TR	p>0.050	2011	p<0.050	2011

Note: p<0.050 indicates probability value at significance level of 5% confidence interval.

The results of seasonal unit root test by breakpoint confirmed that except GDP, the remaining variables, i.e., OP, CPI, ER, EX, and TR is differenced stationary variables, while GDP is non-stationary series. The different break dates of the respective variables, both at level and at their first difference shows wider fluctuations in the real data set, which would yield the largest variance among the variable series during the period of study.

The likelihood test of over-identification restriction test shows chi-square value ($\chi^2(1) = 1.04$) with significance level of 0.31 means that the over-identification restrictions cannot be rejected at any conventional significance level. Summary of contemporaneous coefficients is reported in Table 4.

Table 4: Summary of Contemporaneous Coefficients

a_{21}	a_{31}	a_{32}	a_{34}	a_{36}	a_{41}	a_{45}
-3.1525 (1.5112)	2.7511 (1.8250)	96.2293 (68.2819)	-15.7300 (17.0362)	-8.6173 (6.2777)	4.5896 (1.7839)	- 213.1565 (15.6931)

a_{51}	a_{53}	a_{61}	a_{62}	a_{63}	a_{64}	a_{65}
1.3606 (1.5803)	89.7237 (5.5458)	2.3394 (2.9350)	88.5156 (72.7888)	10.2934 (8.7149)	-23.0618 (10.7429)	-49.7873 (34.4777)

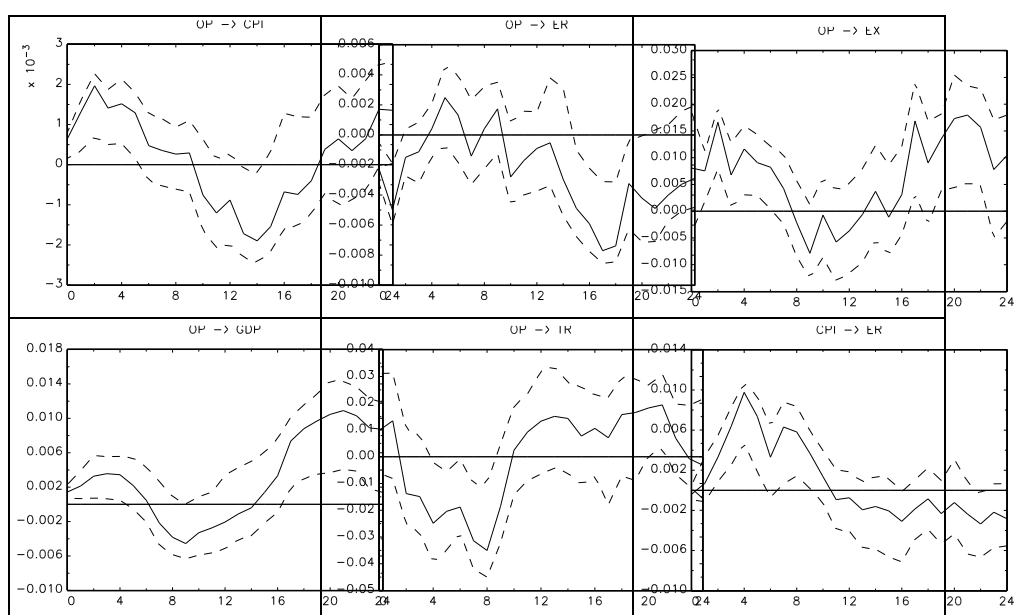
Coefficient a_{21} discloses positive impact of oil price on CPI with coefficient of -3.1525. It means that one cause of inflation in Malaysia is hike in oil prices. Contemporaneous impact of all variables is examined on exchange rates except GDP through a_{31}, a_{32}, a_{34} and a_{63} because Malaysia is net exporter of goods and services and leading countries in tourism. When inflationary trend happens in Malaysia due to high oil prices that become the cause of inflation and exchange rate is appreciated and negative affected by oil prices and inflation. Contrarily, appreciation of currency can influence the competitiveness of exports in international market and discourage the tourism. Therefore, positive relationship of tourism and export with exchange rate is acceptable and reasonable. Contemporaneous impact of oil price and GDP is examined through a_{41} and a_{45} on exports. Increase in oil price negatively impacts the exports and similar relation found in results. Negative impact of oil price on exports is found which indicates that higher oil prices discourage the exports due to high cost of production, whereas positive impact of GDP is estimated on exports which signifies that when GDP increases that promotes the exports positively. Restrictions a_{51} and a_{53} showed negative impact on GDP which is not surprising. Recent higher oil prices are negatively impact the cost of production and ultimately to GDP. Therefore, government has to depreciate their currency to make their goods competitive in the international market.

Impact of oil price, consumer price index, exchange rate, exports and gross domestic product is on tourism revenues through restrictions $a_{61}, a_{62}, a_{63}, a_{64}$ and a_{65} . First three restrictions exposed negative relationship with tourism revenues. This situation indicates that higher oil prices generate inflation in the economy and tourism revenues are negatively affected. Contrarily, exports and GDP have demonstrate positive impact that means that increase in GDP promotes exports and

result in higher tourism revenues. Overall, findings of the study revealed that oil price shocks are very critical for Malaysian economy and similar findings are suggested by Chatziantoniou et al. (2013). On the other hand, GDP and exports are found helpful for tourism in Malaysia.

4.1 Impulse Response

Impulse response function is presented in Figure 2 having similar time horizon (24 months). Impulse response and responding variable is titled at the top of each graph. The dashed lines in graphs show the upper and lower bound of one-standard deviation. Considering the symmetry in presentation, similar altitude is used in minimum and maximum heights. Confidence interval is applied through 95% Hall bootstrap in estimation. First, impact of oil shocks is graphed on CPI, ER, EX and TR. Oil prices shocks are showing significant positive effect on inflation in early 8 monthly and after that this response negative later on but its impact on exchange rate is negative only in first 4 month and again this impact become negative significantly from 10 month to onward. Response of exports to oil prices is positive and significant in early 8 months after than it become negative but strength of shock is weak.



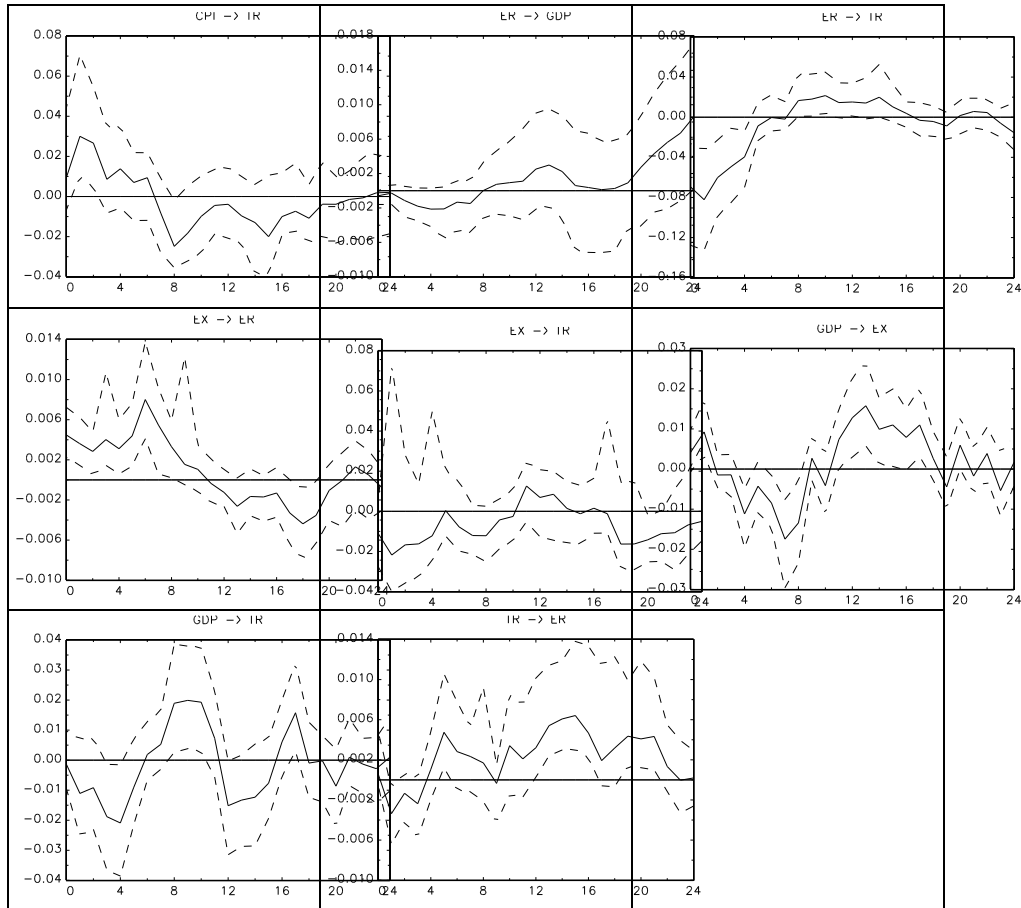


Figure 2: Impulse Response Function

Similarly, oil price shock on GDP is positive in early 6 month and onward shock is negative but the strength of shock is not significant. Oil price shocks on tourism revenues are strongly negative in early 8 months. Overall, strength of oil price shocks is in early 8 months. Impact of inflation (CPI) shocks is observed on exchange rates and tourism revenues. Immediate impact of inflation on exchange rate is positive and in the 10 month of horizon, it become negative but strength is not strong. Similar impact on tourism revenues is observed (positive in early 6 months) and in next horizon, it is negative and ultimately dies away. Therefore, it can be concluded that inflation has no significant influence on tourism revenues.

Summarising the results of impulse responses, tourism revenues is presenting downfall with some lag period but remain significantly negative during early 8 months. It can be concluded that oil price impact negatively and significantly to tourism revenues. CPI shock influences tourism revenues positively in early 8 months but exchange rate shock is significant in early 4 months. Exports are depressing the tourism revenues in the same fashion with exchange rates but influence of this shock remains up to 10 months. GDP impact is negative in the same token. Now study is turning towards policy implications.

5. Conclusions

SVAR model is used to investigate the impact of oil prices, consumer price index, exchange rate, exports and gross domestic product on tourism revenues in Malaysia. Monthly data is used for analysis for the period January, 2001 to December, 2012. The results revealed that tourism revenues are negatively influenced by oil prices, exchange rates, exports, and gross domestic product except consumer prices index that influence positively the tourism revenues. However, it can be concluded that hike in oil prices accelerate inflation that impact positively on the nominal value of the tourism revenues. All the variables are showing negative impact including oil prices on tourism revenues which conjecture that oil prices put a critical burden over tourism market. On the basis of significant discussion and robust results, the study proposed the following short-term, medium-term, and long-term policy implications in the context of Malaysia, i.e.,

- i) **Short-term policy:** It is evident that the quality and cheaper oil has a significant important in the country's profile that resulted in the form of higher tourism income. The Malaysian economy is an oil dependent country, where the oil prices may affect the tourists' additional income in the form of increase prices of tourism goods and transportation costs. The study results confirm the negative relationship between oil prices and tourism income that indicates the need of cheaper oil to reduce tourist's transportation and travel expenses for sustained country's economic growth.

- ii) **Medium-term policy:** The foreign exchange rates between the country's currencies is considered one of the viable instrument to analyze the tourist's spending on the current destinations, which is influenced by higher differences in the exchange rates between the domestic and host country. The study results show the negative association between exchange rate and tourism income, which provoked the need of stable exchange rates that would helpful to the tourists to decide the country's destination points with stable currency exchange.
- iii) **Long-term policy:** The impact of inflation on the country's travel and transportation decision is very costly in the sense that it's influenced largely the tourists' choice to spend their leisure work in a country where the prices are stable and consistent over a period of time. Although, the current study results depict another side of the story, where the higher tourism revenues lead to higher price level in a country, which support the 'welfare impact of inflation' hypothesis in a country.

Logging and board cost as well as transportation cost significantly impact the affordability of tourism and resultantly tourism activities are negative influenced. Future research is suggested for ASEAN-5 countries which are attracting tourists from other Asia countries including Australia vis-à-vis European countries.

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