The factors affecting trade balance in Vietnam

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Abstract

Purpose—The purpose of the study is examined about the factors impact on trade balance in Vietnam including oil price, foreign direct investment (FDI), government spending, domestic price, manufacturing growth rate and agricultural growth rate.

Design/Methodology—Data were collected by monthly during the period 2002 – 2011 including 110 observations.

Findings—The findings showed that there was only domestic price impact on trade balance in Vietnam. And domestic price had negative impact on trade balance in Vietnam. The other factors include oil price, foreign investment, government spending, manufacturing growth rate and agricultural growth rate had no impact on trade balance in Vietnam.

Research Implications—The relevant parties could understand the factors that's affect trade balance in Vietnam in order to enhance the Vietnam competiveness. The result of this study is useful for the policy maker to adjust the policy appropriately with the economy's situation in Vietnam.

Research Limitations—The study was examined six factors impact on trade balance in Vietnam. So, there might be some missing factors that this study didn't examined.

Key words :Trade balance, Oil price, Foreign direct investment

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1. Introduction

In the recent year, international trade becomes more important in every economy. And there are many problems that all the multinational enterprises must face. Especially the government, they must know how to control the economy on the right ways.

In 2011, world trade growth decreased very strongly. The global economy was face with the influence of natural disasters, financial uncertainty and civil conflict. Earthquake in Japan 2010 and flooding in Thailand 2011 are impact on global supply chain. There was an expected the slowdown of in trade after these crisis. Besides that, there was an impact of fears of sovereign default in the euro area weighed heavily in the closing months of the year. The supply of oil is the important factor that affects the world trade. At this time, there was civil war in Libya that reduced the oil supplies and contributed to sharply higher price. All of these factors combined to produce below average growth in world trade in 2011 (World Trade Organization report 2012).

In the context of global economic crisis, Southeast Asian is one of area that is not too much impact on. Global uncertainly, notably reduced confidence in the US fiscal policy and continued Euro-area debt crisis, Asia area, especially Southeast Asian become attractive market for the investors. In 2011, all of the countries in AEC (Asean Economic Community), especially Thailand, were facing with the flooding affected the region adversely. Besides that, the earthquake in Japan also impact on AEC. The Great Tohoku Earthquake has had a temporary impact on activity and exports in some countries such as Indonesia, the Philippines and Thailand, but in general the magnitude of the negative impact appears to have been short – time in 2010.

Vietnam is a country that evaluated one of the large market share in AEC. Total exports in 2011 were estimated at $96.2 billion, rising by 33% compare with last year, became the highest growth within the last 14 years. The impressive figure was resulted from the increase in most item's prices as well as firm's attempts to expand their global market share. Besides that, import value in this year reached $105.7 billion, climbing by 24.7% over the same period last year. Owing to the strong growth of exports, 2011 trade deficit hit the lowest level within the last 5 years. It was $9.5 billion, falling by 23% over the same figure last year. However, the decrease in deficit was partly because of the deceleration of domestic production. Therefore, deficit reduction was not sustainable (Southeast Asian economic outlook 2011).

So, what factors impact trade balance and what the consequences. In this study will examine the factors impact on trade balance in Vietnam. There are six factors that this study examine include oil price, foreign direct investment (FDI), government spending, domestic price, manufacturing growth rate and agricultural growth rate.

2. Literature Review

2.1 Trade balance

This study examined six factors impact on trade balance include oil price, foreign direct investment (FDI), government spending, domestic price, manufacturing growth rate, agricultural growth rate – both of them are independent variables, and the trade balance is the dependent variable.

The economic can develop if the exports of that country can growth up or development and have a positive trade balance. Exports develop not only generate the foreign exchange earnings, it generate an development of infrastructures, decrease the unemployment, develop the domestic industries, increase the domestic production, increase the quality and quantities of the products, improve the living standard in that country (Rahimi Borujerdi 1997).

According Rakauskienè (2006), his study showed that an increase in the export volumes will have a positive impact on the development of the economy.

Tilelioglu and Al – Waqfi (1994) examined about structure and determinants of imports demand in small open less developed countries in Jordan. Their empirical showed that imports are highly and the value of imports more than value of exports which will lead a trade deficits on the country.

Gulzar (2011) examined about the factors on trade balance in Pakistan. The empirical showed that in Pakistan, trade balance is in deficits position continuous for a long – time. This problem comes from the imbalance between the value of imports and exports. Namely in Pakistan case, the value of import is higher more than the value of export. Thus, it makes the trade balance negative.

2.2 Oil price

There are difference researches created the result of the impact of oil price on the trade balance. Some research showed that oil price have positive influence on trade balance. Opposite, the other researches showed that oil price have negative influence or no impact on trade balance (Akpan 2007).

Tsen (2009) showed that in increase in oil price would lead to a decrease or an increase on the trade balance, it’s depends on that economy is the net oil importing or the net oil exporting. Namely, that country is the net oil exporting, an increase in oil price would lead to an increase in trade balance. If that country is the net oil importing, an increase in oil price would lead to an decrease on trade balance. Same result of Tsen (2009), Abeysinghe (2001) showed that, all most of the economies in the research are net oil importers. And there is negative impact on economy growth in both direct and indirect way. The result also showed that, the impact of oil price on growth may not important for a large economy like U.S but it could have a critical role in small economies or poor economies.

Mohammad (2010) examined about the impact of oil price on export earning in Pakistan from 1975 to 2008. By using the vector error correction model (VECM), the results showed that the oil price had a negative relationship to export earnings.

Sanchez (2011) examined the effects of rising oil prices on 6 oil – importing countries includes Thailand, Tanzania, Bangladesh, Kenya, El Salvador, Nicaragua from 1990 to 2008 by using dynamic computable general equilibrium model (CGE). The results showed that an increase of oil price in the long – run will lead a high cost of goods that produce for export. Decrease export and increase import, worsen the trade balance.

In this study, oil price is expected to have a negative impact on the trade balance in Vietnam according to Akpan (2007), Mohammad (2010) and Sanchez (2011). After reviewing the previous study, the hypothesis was made:

Hypothesis 1: The oil price will have negative impact on the trade balance.

2.3 Foreign direct investment (FDI)

One of the factors can impact on trade balance is foreign direct investment. There are a few studies and research that examined about the impact of FDI on trade balance.

There are a lot of research about the relationship between FDI and Trade balance, bring about a result that there is an effect of FDI on exports (Blomstrom 1988, Pfaffermayr 1994, Lin 1995).

More clearly, by examine the role of FDI in promoting economic growth in the industrial countries and developing countries during the period 1970 – 1989, Borensztein et al., (1998) showed that, FDI is an important factor that could become the vehicle of technology transfer which could contribute an increase to economic growth more than domestic investment.

Examine about the impact of foreign direct investment and trade on economic growth, Makki (2004) showed that, FDI has a strong positive impact on trade. FDI is the main factor that could bring more transfer in advanced technologies to developing countries.

For the impact on import, Orr (1991) showed that FDI increase for a long time should lead to lower United State import and increase export, increase trade balance.

In this study, FDI is expected to have a positive impact on trade balance in Vietnam according to Orr (1991). After reviewing the previous study, the hypothesis was made:

Hypothesis 2: The FDI will have positive impact on the trade balance.

2.4 Government spending

In this study examined the impact of government spending on trade balance. There are a few studies to find out this impact.

Blanchard and Perotti (2002) by using the context of SVAR models, the result showed that with a positive government spending shock, the consumption and real wages will be increase. More particularly with the research in export and import, Blanchard and Perotti showed that, an increasing in government spending shock will lead an increasing on imports and exports very strongly.

With another research, Monacelli and Perotti (2006) showed the result that there is an equivocal effect on the trade balance towards an increase in government spending.

More clearly, Muller (2004) in their research showed that an increasing in government spending will lead an improving on trade balance.

With import, Giuliodori and Beetsma (2004) by using European data, their result showed that, an increasing in government spending will lead an increasing in im

However, in this study, government spending is expected to have a negative impact on trade balance according to Blanchard and Perotti (2002). After reviewing the previous study, the hypothesis was made:

Hypothesis3: The Government spending will have negative impact on the trade balance.

2.5 Domestic price

There are a few of researches to examine the effect of domestic price on the balance of trade. The domestic include the consumer price index (CPI) and the producer price index (PPI). But generally, in almost of research they're just use the consumer price index (CPI) to find down the impact of the domestic price on the trade balance. And in this study also use CPI to determine its impact on trade balance in Vietnam.

Wilson and Takacs (1979) found out the result that there is the response of trade flows towards a change in prices by using quarterly import and export to analysis in six countries include Japan, Canada, Germany, United Kingdom, France and United States from 1957 to 1971 when these countries used the fixed exchange rate regime. The evidence showed that trade flows adjust differently towards a change in prices.

Oskooee (1986) examined that trade flows are more responsive towards change in the relative prices in the long – terms.

More clearly, Kandil (2009) examined the effect of domestic price inflation on Balance of Payment (BOP). Totally, an increase in the domestic price will effect on an increase of import in a short – terms and long – terms. So, support by all the literature review above, there is appearance the impact of domestic price on the trade balance. This study examines the impact of this factor on trade balance in Vietnam – a developing country, and expects a negative impact of domestic price on trade balance according to Kandil (2009). After reviewing the previous study, the hypothesis was made:

Hypothesis 4: Domestic price will have negative impact on the trade balance.

2.6 Manufacturing growth rate

Manufacturing growth rate is one of factor of economic growth rate. Manufacturing growth rate has a role to improve the economy, especially on the trade balance.

Orr (1991) studied about the trade balance effects of foreign direct investment in United State Manufacturing. He examined that there is impact of manufacturing on the trade patterns. And there is positive effect of manufacturing on the trade balance. Namely, an increase in manufacturing will lead an increase on the trade balance.

Hussain (2005) suggested that the increase import of machinery is one of the factors responsible for the trouble balance of trade. His evidence empirical showed that the trade deficit reached 3.5 billion dollar in 9 months because of an increasing in oil price and import machinery.

Gulzar (2011) studied about the factors influencing the trade balance of Pakistan. His empirical result showed that, manufacturing growth rate has positive impact on the trade balance, reducing the trade deficits in Pakistan.

In this study, manufacturing growth rate is expected to have a positive impact on the trade balance according to Orr (1991) and Gulzar (2011). After reviewing the previous study, the hypothesis was made:

Hypothesis 5: The manufacturing growth rate will have positive impact on the trade balance.

2.7 Agricultural growth rate

There are a few of studies to find out the impact of Agricultural growth rate on the balance of trade. Some researches show that an increase on agricultural productivity will bring more benefit to the producers, as well as the domestic consumers and the foreign consumers of agricultural products. Besides that decreasing imports of agricultural products and increasing export of agricultural products (Araji 1980, Norton and Davis 1981, Araji and White 1990).

Thornton (1997) found that there is relationship between agriculture and economic growth that related to trade (include import and export). In another research, Konya and Singh (2009) examined the relationship between international trade and the domestic product (include agricultural and manufacturing products) in India during 1950 – 2003 base on vector error correction model (VECM). The result showed that agricultural can support in economic growth in India.

Gulzar (2011) examined the factors impact on trade balance in Pakistan. The consequence of the research showed that agricultural growth rate has a positive impact on the trade balance, and reduce the trade deficits in Pakistan.

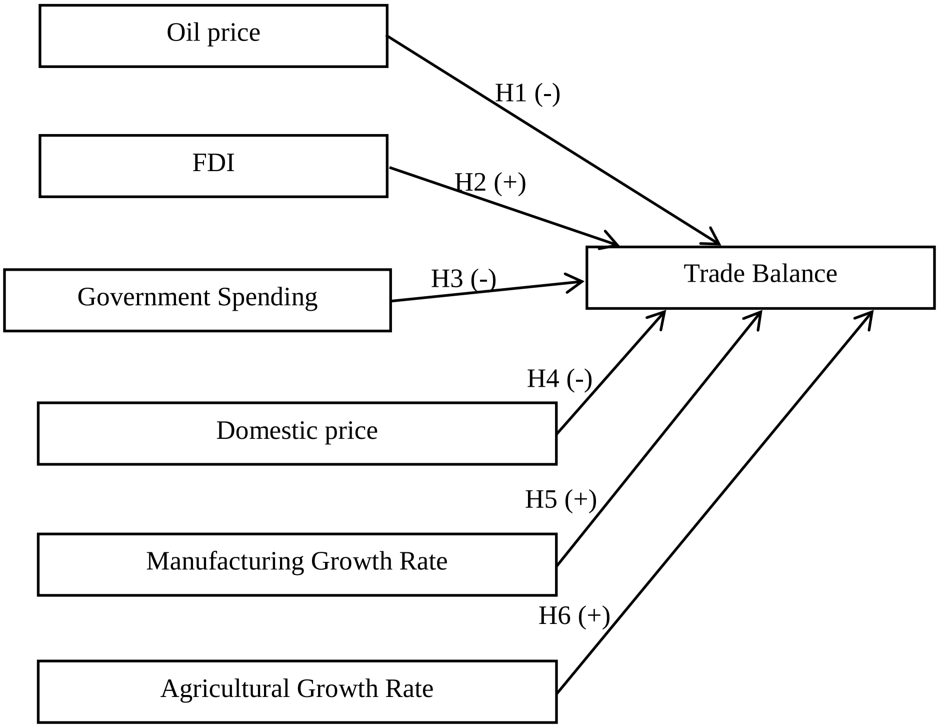
Thungsuwan and Thompson (2003) and Vohra (2006) studied about the export – led economic growth. Their result showed that there is a positive impact between economic growth and export agricultural products in the short – terms and long – terms.

In this study, agricultural growth rate is expected to have a positive impact on the trade balance according to Thungsuwan and Thompson (2003), Gulzar (2011). After reviewing the previous study, the hypothesis was made:

Hypothesis 6: The agricultural growth rate will have positive impact on the trade balance.

Based on the literature review, the conceptual framework of this study is presented as figure 2.1:

Figure 2.1 Conceptual Framework



3. Methodology

This study used regression with logarithmic form *(ln)* to determine the impact of six factors on trade balance.

Model application:

Independent variables are including oil price, FDI, government spending, domestic price, manufacturing growth rate, agricultural growth rate.

Dependent variable: The model of this study employs the ratio of export to import instead of trade balance as the dependent variable. Because there are 2 types of trade balance include nominal trade balance and real trade balance. The real trade balance depends on the real exchange rate, the real domestic income, and the real foreign income and opposite (Yusoff 2010). The ratio of export to import could be view as both nominal and real cases. Besides that, trade balance has positive or negative or equal to zero also. According to mathematical, negative or zero value can't calculate to logarithmic. In the other hand, by using the ratio in logarithmic form will make the Marshall Lerner – condition more exactly than approximately (Onafowora 2003, Christensen 2012). The trade balance equation is as the following:

$$ln\left(\frac{X}{M}\right) = \alpha_0 + \alpha_1 ln(OP) + \alpha_2 ln(FDI) + \alpha_3 ln(GS) + \alpha_4 ln(DP) + \alpha_5 ln(MGR) + \alpha_6 ln(AGR) + \varepsilon$$

Where:

X: Export;

M: Import;

OP: Oil price;

FDI: Foreign direct investment;

GS: Government spending;

DP: Domestic price;

MGR: Manufacturing growth rate;

AGR: Agricultural growth rate.

4. Results

The regression result is in Table 4.1 as the following:

Table 4.1 Regression Results of trade balance

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	11.39671	5.745155	1.983707	0.0500
ln(OP)	0.063840	0.053198	1.200038	0.2329
ln(FDI)	-0.000584	0.007687	-0.076011	0.9396
ln(GS)	-0.016834	0.025516	-0.659727	0.5109
ln(DP)	-2.466108	1.231936	-2.001815	0.0480*
ln(MGR)	-0.018006	0.037464	-0.480629	0.6318
ln(AGR)	6.45E-05	0.032660	0.001975	0.9984
	R-squared		0.410830	
	F-statistic		10.06109	
	Prob(F-statistic)		0.000000	

* = significant at level of 5%

According the result, the Probability is equal to 0.000000 and less than 5%. Mean that, all the independent variables in this model can be using to determine their impact on the dependent variable $ln\left(\frac{X}{M}\right)$ at significant 5%. R-squared is equal to 0.410830. Mean that, from the equation 1, the estimate equation can explain the change of independent variable $ln\left(\frac{X}{M}\right)$ by 41.0830%.

There are one significant variable include domestic price – *ln(DP)*. The relationship direction can be explained as the following:

The probability of *ln(DP)* is equal to 0.0480 and lower than 5% or significant at level 5%. The coefficient of *ln(DP)* is equal to -2.466108 mean that *ln(DP)* has negative impact on $ln\left(\frac{X}{M}\right)$ or domestic price has negative impact on trade balance in Vietnam. If the domestic price is increasing 1 unit, the trade balance will be decreasing -2.466108 units.

In the overall, there is negative impact of domestic price on trade balance in Vietnam. The other factors include OP, FDI, GS, MGR and AGR had no impact on trade balance in Vietnam.

5. Implications

From the result of this study, there was a negative impact of domestic price on trade balance in Vietnam, meaning that, an increasing domestic price will lead to and decrease of trade balance.

Domestic price is one of factors that are very important. The domestic price is increasing in Vietnam. Mean that, Vietnam must facing with the trade deficits for a long time. To solve this problem, domestic price is one of factors needs to pay special attention, and find the ways to decrease this factor.

6. Conclusion and discussion

In the result for the factors impact on trade balance, the study found out that there is domestic price which impacted trade balance in Vietnam. Its probability was significant at level 5%. Hypothesis is accepted. And domestic price had negative impact on trade balance in Vietnam. With the other five factors including oil price, FDI, government spending, domestic price, manufacturing growth rate and agricultural growth rate had no impact on trade balance. The hypotheses are rejected. Summarize for testing hypothesis is in Table 6.1 as the following:

Table 6.1 Summarize for testing hypothesis

Variable	Statistical Significant	Directional Relationship	Direction is the same as expected
Oil price	X		
FDI	X		
Government spending	X		
Domestic price	✓	–	✓
Manufacturing growth rate	X		
Agricultural growth rate	X		

Vietnam is one of countries that had more dependent on the energy come from oil. Vietnam economy report estimated 70% oil and gasoline import from the outside. The government was still control the price of oil and gasoline in the domestic. That's the reason the changing of oil price didn't impact trade balance in Vietnam.

Besides that, the political instability is the reason that created a large barrier for the foreign investors to invest in Vietnam. The volumes of foreign investment to Vietnam were quite insignificant. This is the reason that FDI had no impact on trade balance in Vietnam.

With government spending, almost the spending of government used to remedy the disasters such as flooding, storms, droughts. There was no impact of it on trade balance in Vietnam.

With domestic price factor, when it is increasing, the price level of all the products will be increased. The cost of import raw – material, goods will be increased, improve the value of imports. The cost of the products that produce in the domestic will be increase also, create more problems for the enterprises to export and sell the products.

In this study, the manufacturing growth rate didn't impact trade balance. Because even though the volume of manufacturing products is increasing but the inventories are always very large and this number is increasing also.

With agricultural growth rate, the volume of its products is depending on season. And the volume of products selling is depending on the price. So, there was no impact of this factor on trade balance in Vietnam.

7. Future research directions

In further research should be adding more factors when examined the factors impact on trade balance to find out more results.

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