Vietnam-EU Free Trade Agreement: Impact and Policy Implications for Vietnam

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On 4 August 2015, after three years and several rounds of negotiation, the European Union – Vietnam Free Trade Agreement officially established principles for the basic content of the Agreement. This study aims to analyse impact of Vietnam-EU FTA on bilateral trade of Vietnam. By using a gravity model and a panel data analysis, we show that the reduction of tariffs in the framework of the FTA will have a positive impact on bilateral trade between Vietnam and the EU. In addition, Vietnam-EU FTA will offer many new opportunities but it also challenges for Vietnam. Based on these analyses, this paper proposes some recommendations for Vietnam to benefit more the Vietnam-EU FTA.

VIETNAM-EU FREE TRADE AGREEMENT: IMPACT AND POLICY IMPLICATIONS FOR VIETNAM

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Abstract:

On 4 August 2015, after three years and several rounds of negotiation, the European Union – Vietnam Free Trade Agreement (EVFTA) officially established principles for the basic content of the Agreement. This study aims to analyse impact of EVFTA on bilateral trade of Vietnam. By using a gravity model and a panel data analysis, we show that the reduction of tariffs in the framework of the FTA will have a positive impact on bilateral trade between Vietnam and the EU. In addition, Vietnam-EU FTA will offer many new opportunities but it also challenges for Vietnam. Based on these analyses, this paper proposes some recommendations for Vietnam to benefit more the Vietnam-EU FTA.

JEL Classification: F14, F15, F21, O11, O19, O53.

Key words: FTA, impact, implications, Vietnam- EU

1. Introduction

In recent years, Vietnam negotiated several bilateral and multilateral free trade agreements (FTA) such as the Trans-Pacific Partnership (TPP), the Regional Comprehensive Economic Partnership (RCEP), FTA with the European Union (EVFTA), FTA with South Korea, customs Union with Russia, Belarus and Kazakhstan (VCUFTA) ... The scope of these FTA, beyond the trade of goods and services, mentioned also new problems such as intellectual property rights, government procurement, sustainable

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development (labour and environment, competition) ... In the context that ASEAN and each individual ASEAN member countries have not yet formed an FTA with the EU, Vietnam continued the integration process by negotiating bilateral free trade agreement with EU.

In 1995, Vietnam and the EU signed an economic and development framework agreement. In 2010 Vietnam and the EU completed negotiations of the Agreement on partnership and cooperation (PCA) ... In this context, a future Free Trade Agreement (FTA) between Vietnam and the EU is considered as an important step in the trade liberalisation of Vietnam and EU. This FTA is expected to liberalize 90% of imports from both sides in 10 to 15 years. However, the conclusion of Vietnam-EU FTA will have several impacts on Vietnam's economy. The experience of some FTA that EU has signed with other countries such as Chile, Mexico and South Africa showed that the FTAs have positive impact on the economy of the country. For example, trade between South Africa and EU also increased since the FTA become effective from 2000; with an imports increase of 160% and exports increase of 143% in 2008 compared to pre-FTA period.

In case of Vietnam, besides the positive impact on the economy, Vietnam has to face several challenges. Therefore, analysing the impact of Vietnam - EU Free Trade Agreement (EVFTA) on Vietnam's economy is very important. In this context, this paper aims to study the impact of EVFTA on trade and policy implications for Vietnam. The first part analyses Vietnam-EU trade relations and EVFTA negotiations process. The next part presents the theoretical framework of FTA impact on the country. After, a gravity model will be used to analyse impact of tariff reduction, in the framework of EVFTA, on Vietnam's bilateral trade. The last part proposes policy implications for Vietnam to more benefit from Vietnam-EU FTA.

2. Overview of Vietnam- EU trade relations and the EVFTA

2.1. Vietnam- EU trade relations

Trade relations between Vietnam and European Union strongly developed in the early 90s, after Vietnam signing a series of bilateral agreements with EU such as

economic and development framework(1990) , Textiles and Clothing Agreement (1994, 1996, 1997 , 2000, 2003) ; Footwear Agreement (2000). Two-way trade turnover increased continuously over time. With the conclusion of the Cooperation Framework Agreement in 1995, exports and imports of Vietnam reached over $1 billion.

Among the major export items of Vietnam to EU, textile can benefit a lot from the GSP, with an import duty fall of 3.5% during the period 2014 - 2016. This preferential tariff will create a competitive advantage for Vietnam's garment enterprises against Chinese businesses- the biggest competitor of Vietnam on EU market. EU in 2015 was the second largest economic partner of Vietnam's, after United States.

Table 1 shows that, from 1995 to 2000, import turnover increased almost 4 times, from US $ 1374.600 million to US $ 4162.500 million. In the period from 2001 to 2005, import turnover of Vietnam steady increased by about $ 1 billion per year. In 2006, export turnover of Vietnam to the EU reached US $ 10,223.200 million. In October 2007, European Union formally proposed negotiating Framework Agreement on Comprehensive Partnership and Cooperation; this agreement replaced the economic and development framework agreement in 1995 and created a new framework for the development and cooperation in the long term between Vietnam and EU. This makes the import turnover of Vietnam increased by 1, 4 % compared to 2006. In 2011, exports and imports reached US $ 24.292,400 million. According to the General Department of Vietnam Custom, in December 2013, exports to the EU reached 22,3 billion US dollars: Germany was the largest partner of Vietnam with a turnover of US 4,3 billion, followed by UK (US $ 3,5 billion), Netherlands (US $ 2,7 billion), Italy (US $ 2,1 billion), France (US 2,0 billion) and Spain (US $ 1,9 billion).

In terms of FDI, in 2013, the EU foreign direct investment (FDI) reached US $656 million in Vietnam. According to the General Statistics Office, at the end of 2012, EU was the 6th largest investor of Vietnam with 71 new registered projects. Other main partners of Vietnam were South Korea (US $ 24.816 million), China (USD 4697,2 million), Japan (US $ 28.699,6 million) and Singapore (24.875 US $ million).

Table1: Vietnam-EU trade turnover

Year	Exports	Imports	Trade balance	Total trade turnover
1995	664,200	710,400	-46200	1.374,600
1996	848,517	1.153,205	-304,688	2.001,722
1997	1.607,844	1.335,212	272,632	2.943,056
1998	2.079,041	1.246,276	832,765	3.325,317
1999	2.515,300	1.094,900	1.420,400	3.610,200
2000	2.845,100	1.317,400	1.527,700	4.162,500
2001	3.002,900	1.506,300	1.496,600	4.509,200
2002	3.162,500	1.840,600	1.321,900	5.003,100
2003	3.852,600	2.477,700	1.374,900	6.330,300
2004	4.968,400	2.681,800	2.286,600	7.650,200
2005	5.517,000	2.581,200	2.935,800	8.098,200
2006	7.094,000	3.129,200	3.964,800	10.223,200
2007	9.096,400	5.142,400	3.954,000	14.238,800
2008	10.895,800	5.581,500	5.314,300	16.477,300
2009	9.402,300	5.343,300	4.059,000	14.745,600
2010	11.385,500	6.361,700	5.023,800	17.747,200
2011	16.545,300	7.747,100	8.798,200	24.292,400
2012	20.302,820	8.791,339	11.511,481	29.094,159
2013	28.110,000	11.430,000	16.680,000	39.550,000
2014	27.907,376	8.893,011	19.014,365	36. 800, 387

2.2. *Some main FTAs of Vietnam and EU with the rest of the world*

Since the 1990s, parallel with the process of globalization, regionalism has strongly grown in terms of quality and quantity. Bilateral and multilateral FTAs become more popular, with a broader scope, not only limited in trade of goods and services but mention also new contents such as promotion and investment liberalization, technology transfer, trade facilitation, customs procedures, capacity building, labour, environment…Many economists said that the FTA was the trend of development that the country cannot stay outside. Especially after the failure of the Doha negotiations round in 2000, the number of FTAs in the world strongly increased, from 16 (at the end of 1989) to 171 (in 2009).

In Asia, most of commercial activities of the region are from FTAs. The South-East Asia region was the leader of the world with 86 FTAs implemented in 2008.

In the new generation FTA, beside traditional objective such as to remove trade barriers, many new contents ware added: trade of services, foreign investment liberalisation, as well as simplification of procedures resolving trade disputes. Japan - Singapore FTA and EU are some typical examples Japan - Singapore FTA mentions not only the liberalization and facilitation of goods and services, foreign investment, but also mentions general rules of labour mobility services, intellectual property, competition policy, science and technology, broadcasting and tourism.

In the recent years, bilateral FTAs become popular. After the failure of the Doha negotiations round in 2000, the number of bilateral and regional FTA considerably increased. According to WTO, there were 271 trade agreements (including bilateral agreements) taking effect in 3/2010.

The business community today considered bilateral FTAs as an efficient means to open the market rather than multilateral negotiations. In Asia, completed bilateral FTAs accounted for 77%, such as, ASEAN- China FTA (effective since 2004), ASEAN - Korea FTA (effective from 2007), ASEAN-Japan FTA (effective since 2004 since 2008), and ASEAN - Australia - New Zealand FTA (signed in 2009).

Since 1995, Vietnam has participated in the free trade area by joining in the Association of Southeast Asian Nations (ASEAN). As a member of ASEAN, Vietnam signed and realised 3 FTAs including ASEAN Free Trade Area (AFTA, in 1995); ASEAN - China Free Trade Agreement (ACFTA, signed in 11/2002) and ASEAN - South Korea Free Trade Agreement (AKFTA signed in February 2008).

In addition, Vietnam has negotiated and signed agreements with other countries in the world: ASEAN - Australia - New Zealand Free Trade Agreement (AANZFTA) ASEAN - India Free Trade Agreement (AIFTA), ASEAN – EU Free Trade Area (7th meeting in 3/2009); Trans-Pacific Partnership; Customs union with Russia, Belarus and Kazakhstan (VCUFTA) in May 12/1014.

In terms of bilateral agreements, Vietnam also signed FTAs with other countries in the region such as Vietnam- Myanmar FTA (signed in May 5/1994); Vietnam US bilateral trade agreement (signed in May 7/2000); Vietnam – China bilateral FTA (signed in 2002); Vietnam- Japan bilateral FTA (signed in12/2008); Vietnam- India bilateral FTA (in 2010).

These FTA helped Vietnam to promote economic activities, trade and investment with partner countries towards the economic and social development strategic of the country. The scope of these FTA, beyond traditional field such as trade of goods and services, including new areas such as intellectual property rights, government procurement, sustainable development (labour and environment, competition…). Today, especially in the Asia- Pacific region, FTAs become a trend. As an active member of ASEAN, Vietnam will not be outside this trend.

As for EU, the union has negotiated and signed FTAs with many trading partners with the similar level of development than Vietnam. In general, trading partner countries would benefit from FTAs with EU. According to WTO Centre - VCCI – in an analysis talking about the impact of FTA on trading partners of EU (for example in case of Chile EU FTA, Mexico EU FTA, and South Africa EU FTA), these FTA had positive impacts on these countries. For example, trade between South Africa and EU has strongly

increased after signing the FTA in 2000, imports from the EU to South Africa in 2008 increased by 160% compared to 2001 and exports increased by 143%. In the case of Mexico, the statistics show that two-way trade turnover has increased over 207% after 9 years of FTA implementation; the exports growth from Mexico to the EU was 228% and imports growth was 196%. In addition, these FTA give occasion to foreign direct investment from the EU. In fact, EU companies considered Mexico as an important production base to exports to US market, in order to benefit from the North American Free Trade Agreement NAFTA (including Mexico - United States and Canada).

As other FTA called "new generation", in addition to the cuts of import tariffs for most products, other problems are mentioned such as liberalization of investment, promotion of environmental policies realisation, procurement policies and the protection of intellectual property rights.

In some recent FTA with EU, the partners engaged to reduce import tariff immediately or within 10 years, but the tariff reduction can be not applied in some sensitive areas. On technical barriers to trade (TBT) or Sanitary and Phytosanitary measures (SPS), FTA is an important opportunity to discuss between countries about any problems of Vietnamese exporters in accessing into EU market. Other principles were completed through specific commitments such as elimination and prevent non-tariff barriers to trade in particular fields, such as automobiles, and electronics.

Lessons of both successes and failures from earlier EU's FTA, will be precious to latecomers like Vietnam to benefit more from EVFTA

2.3. *Some milestones in the Vietnam-EU diplomatic relations*

Vietnam and European Union formally established diplomatic relations in 1990, since then, relations between the two sides have rapidly developed. EU becomes one of the important partners of Vietnam in many fields, especially: trade, investment, and contributes positively to the economic development and integration process of Vietnam. Here after are some milestones in the diplomatic relations between Vietnam and EU:

1990: Vietnam and the European Union formally established diplomatic relations.

1992: Vietnam and the European Community signed the Agreement on Textiles and Clothing.

1995: Vietnam and the European Community signed Economic and Development Framework Agreement

1996: European Commission Delegation established permanent representative in Vietnam.

1997: Vietnam joins in ASEAN- EU Cooperation Agreement

2003: Official dialogue between Vietnam and EU on human rights

2004: First Vietnam - EU Summit in Hanoi.

2008: Negotiations of the Agreement on partnership and cooperation (PCA) between Vietnam and EU

2010: PCA between Vietnam - EU.

2012: Vietnam and EU launched EVFTA negotiations

Main contents of EVFTA include:

- Trade of goods: imports duties, trade facilitations, technical barriers to trade (TBT) and Sanitary and Phytosanitary measures (SPS), safeguards, anti-dumping and anti-subsidy measures.
- Rules of origins
- Trade of services
- Investment, new mechanism solving trade disputes.

Besides these above contents, the Vietnam-EU FTA has also chapters about allowing EU companies to approach Vietnamese public contracts; creating a new playing field for EU companies and innovative products; establishing an efficient mechanism to resolve

future disagreements; safeguarding social and environmental protection standards; promoting democracy and respect for human rights.

3. Impact of FTA on trade

3.1. The theoretical background

To analyse impact of FTA, economists used some popular quantitative methods such as CGE model and gravity model.

Chang-Soo Lee, Ji-Hyun Park, and Kwon Oh-Bok (2005) used the general equilibrium model (CGE) to analyse the impact of US - Korea trade liberalization on Korea's agriculture industry and suggest policy recommendations for Korea. This study also includes an analysis of agricultural trade and the competitiveness of agricultural products between the two countries Korea and United States.

Xinshen Diao, Shenggen Fan, Xiaobo Zhang (2002) used the general equilibrium model to analyse impacts of the WTO on different regions in China, especially on agricultural production, trade, and revenue integration of farmers in different regions of China.

H. Zhu, Gu H., (2008) used gravity model to study border effect of China-U.S. agricultural trade. The results showed that the border effects have an important role in agricultural trade between US and China and tend to decrease over the years.

Centre for Information and Statistics ICARD (2005) used CGE model to evaluate advantages and disadvantages, opportunities and challenges of 5 main agricultural products of Vietnam include rice, pepper, tea, pineapple and livestock on the domestic market and ASEAN market.

J.M. Philip et all (2011) used CGE model to analyse the quantitative and qualitative impact of EVFTA.

Sabine Daude (2004) used the general equilibrium model GTAP to analyse the price changes under two scenarios of trade liberalization: Vietnam was WTO's member and

Vietnam was not WTO member. The results showed that the cause of farmers in the northern mountainous provinces could be affected by world trade liberalization and trade liberalization had impacts on the net income and the poverty of mountainous northern farmers in Vietnam

Roland-Holst and Fujii (2007) used CGE model and the VLSS survey data in 1998 to estimate geographical impact of WTO accession on Vietnam poverty at the most detailed level by drawing poverty maps. CGE model assumes that all of labour and capital factors circulate freely in all economic sectors; land is a specific factor to the agricultural sector.

Many studies in the world estimated the impact of a FTA on trade. However there is little research focus on EVFTA. So that, our paper, by gravity model, aims to analyses impact of EVFTA on trade and implications for Vietnam.

3.2.   Empirical analysis

3.2.1. Model specification and data

Gravity model, applied for the first time in 1962 by Tinbergen, is an econometric model commonly used to analyse impacts of deferent factors on bilateral trade flows, Gravity model in international trade is similar to Newton's gravity law in physics. The model says that bilateral trade depends on the size of the two economies and the distance between them.

$$TR_{ij} = \alpha GDP_i^{\beta 1} \, GDP_j^{\beta 2} \, / DIS^{\beta 3}$$

Where:

+ TRij: total bilateral trade between country i and country j

+ GDPi, j: total gross domestic product of the country i and j

+ DISij: distance between countries i and j

The β coefficients represent the impact of each factors on bilateral trade. For example, if the GDP of country j increases 1%, exports will increase $\beta 2\%$.

Thus, this basic model mentions groups of factors affecting international trade flows: group of factors represents the size of economies (GDP) and group of factors stimulates/ restricts trade (distance)

After Tinbergen, many economists developed gravity model by adding new variables, called the extension of gravity model. For example, they added Population variable (POP) in the group of variables representing the size of economies, or free trade agreement in the groups of variables stimulating trade. In the model, FTA is used as a dummy variable to estimate impact of an FTA on bilateral trade. Apart from FTA variable, they also used tariff as a variable to analyse impact of tariff reductions on bilateral trade in context of an FTA

Let us estimate effect of tariff reduction in the context of EVFTA on Vietnam's bilateral trade. The empirical study assumes a log-linear functional form for gravity equations. In our earlier study (Nguyen Binh Duong et al, 2014), this model was used to analyse the trade creation and trade diversion effect of EVFTA, but the endogeneity problem was not corrected. This time, we will solve this above problem. The model is defined and then estimated as follows:

$$\text{Ln BTI}_{c,d,t} = a_0 + a_1 \ln (GNI_{c,t-1} * GNI_{d,t-1}) + a_2 \ln (PCGNI_{c,t-1} * PCGNI_{d,t-1}) + a_3 \ln (POP_{c,t} * POP_{d,t}) + a_4 DIST_{c,d} + a_5 \ln (1 + TR_{d,c}) + a_6 \ln (1 + TR_{c,d}) + a_7 \ln EXT_{c,d,t} + e_{c,d,t}$$

where:

$BTI_{c,d,t}$: Vietnam's bilateral trade with country d at time t

$GNI_{c,t-1}$ and $GNI_{d,t-1}$ Gross national income of Vietnam at time t-1 and Gross national income of country d at time t-1

$PCGNI_{c,t}$ and $PCGNI_{d,t}$:Per capita gross national income of Vietnam at time t-1 and Per capita gross national income of country d at time t-1

POP $_{c,t}$ and POP $_{d,t:}$ Population of Vietnam at time t and Population of country d at time t

DIST $_{c, d}$: Distance (km) between Vietnam and country d, which is time-invariant

TR $_{d, c}$ and TR $_{c, d}$: Vietnam's tariff for imports from country d and EU's tariff for imports from Vietnam

EXT $_{c, d, t}$: Bilateral exchange rate between Vietnam and country j (foreign currency in terms of Vietnamese currency) at time t

c: Vietnam; d: EU countries

e $_{c, d, t}$: error (e $_{c, d, t}$ = u_c+ v_d + w_t + $\eta_{c,d,t}$)

u, v: captures all individual (country specific) effects omitted from our model specification

w: time effects; η: random effects

We built a panel data including Vietnam and 27 EU countries (Appendix 1), from 1997 to 2013. The data of Vietnam's bilateral trade (equal to the total value of Vietnam's exports and imports) are annual data, obtained at dollar values from the General Statistics Office and Trademap database. The Gross national income (GNI) of both Vietnam and its trading partners are collected from the World Bank database, Per capita Gross national income (PCGNI) data are calculated by the quotient between GNI and population data, taken from the World Bank database. The imports duties data is MFN rate of Vietnam and EU countries, taken from the website of the World Bank. The bilateral exchange rates between the VN and European countries are calculated based on data of the exchange rate between Vietnam(and its partners) and the U.S. dollar , obtained from the World Bank database. Geographical distances are obtained online from the chemical - ecology.net website (included in references).

3.2.2. Description of data

The table 2 shows that the minimum value of GNI is 4,878 (billion U.S. $), the largest value is 3120.95 (billion USD). The minimum value of GNI per capita is 460.99 (U.S. $ / person), the maximum value of GNI per capita is 69495.52 (U.S. $ / person), we can see that the gap between the richest and poorest is relatively large, 150 times approximately.

Table 2: Description of data

	Variables	Mean	Standard error	Min value	Max value
1	$GNI_{c,t-1}$ (Bn.USD)	54,29	14,3	34,26	79,55
2	$GNI_{d,t-1}$ (Bn.USD)	496,27	767	4,88	3.120,95
3	$PCGNI_{c,t-1}$ (USD/capita)	660,50	141,45	460,9966	905,58
4	$PCGNI_{d,t-1}$ (USD/ capita)	24.189,59	15.194,07	2.274,164	69.495,52
5	DIST (km)	8.256,17	1.145,75	3.961,51	10.532,99
6	POP (person)	18.200.000	22.600.000	375.236	82.500.000
7	$TR_{d,c}$ (%)	14,85	3,02	8,75	16,82
8	$TR_{c,d}$(%)	5,70	0,79	4,19	7,5
9	$EXT_{c,d,t}$ (VND)	14.460,88	9.103,89	50,21	40.918,57

Table 3 : Matrix of correlation

Variable	lnGNI	lnPCGNI	lnPOP	lnDIST	lnTEU	lnTVN	LnEXT
lnGNI	1						
lnPCGNI	0,5604	1					
lnPOP	0,8789	0,1107	1				

lnDIST	0,4518	0,4629	0,2881	1		
lnTEU	-0,1577	-0,1264	-0,0339	-0,0196	1	
lnTVN	-0,1522	-0,1150	-0,0331	-0,0204	0,7408	1
LnEXT	0,1871	0,3319	0,0295	0,0538	-0,1242	-0,1315	1

From data collected, we can see that the average tariff on imports of Vietnam is approximately 2 times higher than the EU's average tariff on imports.

In addition, we also need to consider the correlation between variables. The table 3shows that the correlation between variables is weak, except that there is correlation between lnPOP and LnY, we should pay attention in the model

3.2.3. Empirical results

In general, three types of model used to estimate with panel data are pooled ordinary least square - pooled (OLS), fixed effects model (FEM) and random effects model (REM). To decide what model to be use, we have to base on the characteristic of data and test results.

In the above equation, when we use simultaneously 3 variables: GNI, PCGNI and POP, the multicollinearity problem can occur. To overcome this phenomenon, we will estimate 3 different models, in each model we remove 1 among 3 above variables: model (1) removes PCGNI variable, model (2) removes GNI variable and model (3) remove the POP variable. Finally the model gives the best results will be used to estimate.

Firstly, we use the Breusch and Pagan Lagrangian multiplier test to choose one model between pooled OLS and the REM. The results show that REM model is better. Next, by Hausman test, we choose one model between the FEM and REM; the result rejects the hypothesis H0 (the difference between the coefficients of the two estimations is not systematic) and selects the FEM model. Finally, we estimate the models (1), (2), (3) with the fixe, the results show that among models (1), (2), (3), model fixed effect

model (2) gives the best result. Therefore, we will choose fixed effect model (2) (GNI variable removed) to estimate the impact of EVFTA on the trade between Vietnam and EU. Table 4 represent the Coefficients of variables estimated in the models (1), (2), (3), with fixed effect.

Table 4: Coefficients of variables estimated in the models (1), (2), (3), with fixed effect

lnBTI	FE (1)	FE (2)	FE (3)
lnGNI	1.423752 ***		1.187394***
lnPCGNI		1.366953***	.2634189*
lnEXT	.6659961***	.7278193 ***	.0925223
lnPOP	-.122924	1.245682 *	
lnTEU	.0540587	.0178816	-.3496935
lnTVN	-.8496801***	-.8543372***	-1.181699***
lnDIST	.5211195	1.581139 *	-.5316351
_cons	-71.91563***	-79.15566 ***	-52.12185***
Observations	405	405	405

*Note: *, **and *** denote significance at the 10%, 5% and 1% levels respectively*

In the next step, for the fixed effect model (2), we have to test the presence of heteroscedasticity, correlation and autocorrelation on error terms, cross section dependence. The empirical results show that correlation and autocorrelation between errors and cross section dependence are absent, but there is heteroscedasticity on error terms of the model; this may arise due to misspecification of the equation or variation in the coefficients. We correct the heteroscedasticity and the result is presented in below table.

In the FEM with corrections for heteroscedasticity (Table 5), R^2 equal to 0.74 shows that independent variables explain 74% the variations of dependant variable. As

expected, the coefficient associated with the gross national income per capita and population of Vietnam and EU is statistically significant in the model at the 99 percent confidence level and of positive sign, indicating that an increase in national income per capita or population leads to an increase in Vietnam's bilateral trade.

Table 5: Models (2), heteroscedasticity corrected

lnBTI	FE (2) (hetero corrected)
lnPCGNI	1.288712 ***
lnEXT	-.1443601 ***
lnPOP	1.13561 ***
lnTEU	-.5153166 *
lnTVN	-.9501048 ***
lnDIST	-.8905999 ***
_cons	-42.71687 ***
Observations	405

Note: *, **and *** denote significance at the 10%, 5% and 1% levels respectively

In the model, the coefficient explains that an increase of 1% PCGNI leads to an increase of 1, 28% of Vietnamese trade and an increase of 1% POP leads to an increase of 1, 13% of Vietnamese trade. Vietnam's export oriented strategy is then partly explained by supply capacity: a high level of national income per capita or population indicates a high level of production, which increases the availability of goods for exports. In addition, a high level of trading partner's income per capita or population indicates a high level of consumption. Our results confirm that, like most of the Asian developing countries, Vietnam experienced a dramatic increase in export growth and this outstanding

performance was mainly driven by domestic supply capacity growth (Diaw, Rieber and Tran, 2009).

As expected, the coefficient on distance is statistically significant and has the expected sign in trade. The model suggests that geographical proximity is one of factors explaining Vietnam's bilateral trade. The coefficient on the bilateral exchange rate and tariff of EU is significant in the model at the 99 percent confidence level and of negative sign, indicating that an increase in bilateral exchange rate leads to a decrease in Vietnam's bilateral trade. This result is matching with the fact that Vietnam's economic structure tends to be more dependent on imports, despite the option for an export oriented strategy (Nguyen and Tran, 2010).

Finally, as expected, the coefficient of Vietnam's tariff and EU's tariff are significant and equal to -0,95 and -0,52 respectively suggest that tariff reduction is one factor promoting bilateral trade between Vietnam and EU countries. In the model, the coefficient explains that an decrease of 1% of EU's tariff /Vietnam's tariff leads to an increase of 0.52% / 0,95% of Vietnam-EU trade. Most of Viet Nam's duties will have been reduced: except for certain fish products, and motor cars and vehicles, which will not reach their final bound level until 2017 and 2019, respectively.

3.3. Vietnam-EU FTA: opportunities and challenges for Vietnam

3.3.1. Opportunities for Vietnam

New generation FTAs as Vietnam-EU FTA is expected to give Vietnam many opportunities as following:

- *Boosting Vietnam's exports to EU market*

The FTA Vietnam - EU would be an important occasion for Vietnam to promote economic relations with the EU. With a large size market of 500 million consumers and

over 17,000 billion of GDP, EU is a large market for all countries, including Vietnam. In fact, Vietnam's exports to EU reach only 0.8% of total EU imports. Only 42% of Vietnam's exports to EU benefit the tariff of 0% (including goods under preferential program GSP). While this rate of some ASEAN countries count for 80-85%. After the FTA, Vietnam has more potential to increase exports. Especially, Vietnam will have opportunity to increase market share in some key export items such as textiles, seafood, and footwear on the EU's market.

- *Promoting Vietnam's trade policy reforms*

Commitments in Vietnam-EU FTA such as trade defence (anti-dumping, anti-subsidy), technical barriers (TBT), sanitary and phytosanitary measures (SPS) contribute to reform the Vietnam's trade policy, peacefully resolve impasses arising in the process applying commitments. Without participation in the Vietnam-EU FTA, Vietnam will not have this opportunity, while Vietnam's exports have to answer the EU standard.

- *Accessing to advanced technology from EU*

Theoretically, the increase of EU's imports after tariff reduction could make Vietnamese firms more difficult to compete in the domestic market. However, many economists argue that the EU's market is highly complementary with Vietnam's market. So that, the Vietnam's market opening for EU's exporters and service providers is not a disadvantage for Vietnam. For example, the EU has comparative advantage in machines and equipment, technology, pharmaceutical products. These items are very necessary for the Vietnam's industrialization and modernization. FTA with EU will allow Vietnam's businesses and people can buy goods and services with cheaper prices, good quality, advanced technology, and thank of this, Vietnam has opportunity to increase the competitiveness and reduce the dependence on the imports from China.

- *Creating a freer environment for business and investment*

A several number of EU companies chose Vietnam as a potential investment destination. In fact, Vietnamese companies often lack know-how, technology and capital but European companies have comparative advantage of these factors. However, labour costs are relatively higher in Europe, while the labour cost in Vietnam is quite attractive. Thank to Vietnam-EU FTA, quality of labour as well as the protection of intellectual property rights become better. Therefore, cooperation between Europe and Vietnam is a two way relationship that brings many benefits, helping Vietnamese companies access to knowledge of the West and, at the same time, giving European companies a reliable and effective basis producing in terms of cost in Asia.

Therefore, the Vietnam-EU FTA will promote not only EU's FDI inflows to Vietnam but also high-quality services such as financial and banking- service; insurance, energy, telecommunications, ports and maritime transport. By economic size and potential growth of the EU, Vietnam has the opportunity to become the intermediate province, connecting commercial activities and investment of EU with ASEAN region. This wills encourage the economic restructuring process and policy reforms in Vietnam.

3.2.2. Challenges for Vietnam from Vietnam-EU FTA

The Vietnam-EU free trade agreement gives Vietnam many opportunities, but it poses also many challenges.

- *Competition pressures on the domestic market*

Besides opportunities, Vietnam will also face great challenges. Although the distance is one of the factors limiting imports from Europe, but the point of view that "foreign product is better" is very popular in Vietnam. On the other hand, the quality as well as price of domestic products is less competitive. Thus, even on the domestic market, Vietnam has to face a competition pressure, especially in electronic goods, automobiles, motorcycles, machinery and equipment ... This is a challenge for domestic industries

Not only trade of goods, the service will be the sensitive area and Vietnam has to face strong competition pressure from EU. According to WTO commitments, in Vietnam many areas were open quite wide, accepting foreign firms to set up branches and companies 100% proprietary capital in Vietnam and to access in the fields where Vietnam currently is in the initial stages of development, such as the logistic industry, seaports, financial services, distribution…With management experience and superior quality, EU's firms will become a great challenge for Vietnamese enterprises.

- *Commitment concerning rules of origin, dumping, subsidies and trade defence instruments*

In some FTAs (such as in TPP), the partners have strict requirements on rules of origin (local content of goods), this fact can make the benefits of the tariff cuts become effective only be on the paper. In case of Vietnam-EU FTA, it poses also challenge for Vietnam in context that Vietnam has to import raw materials from foreign countries (mainly China), and therefore cannot answer the strict rules of origin in the FTA, therefore, these above promising benefits for Vietnam might never become reality.

- *Lack of full knowledge about the FTA of many Vietnamese companies*

Many Vietnamese companies in fact have not full knowledge about the FTA such as tariff cut process, the procedure for certificates of origin. According to the Ministry of Industry and Trade, in recent years, only preferential Korea FTA is fully exploited while the other FTA is not. in context that the majority of Vietnamese companies have not answer origin conditions, this becomes also a great challenge for Vietnam

- *Reduction of tariff revenues*

One challenge for Vietnam is the reduction of tariff revenues when Vietnam-EU FTA is implemented. Vietnam is still a relatively closed market for many commodity groups, with a high MFN tariffs. Therefore, the tariff cut on the majority of EU's

commodity is expected to lead to reduction of tariff. This is a direct consequence of Vietnam-EU FTA

3.3. Some recommendations for Vietnam

The Vietnam-EU free trade agreement gives Vietnam many opportunities, but it poses also many challenges. Some recommendations are suggested for Vietnam to take opportunities and overcome the challenge of Vietnam-EU FTA

3.3.1. More efficient mechanisms to support business

This current mechanism with too much intervention of the state can limit the growth of private enterprise. State enterprises need to be reformed to overcome weak competitiveness and budget deficit. One of the measures proposed is equitization of state - enterprises to diversify and to create competition for this sector. At the same time, it contributes to ensure equality between state enterprises and private sector. Besides, firms will lose the motivation doing business because of corruption; this is a major limit to development.

In addition, to overcome the situation where many enterprises lack information and the modest ability to absorb the benefits of the, the State should have a mechanism to support businesses through many more meetings between the policy makers and the business community; organization of seminars or training workshops to introduce the Vietnam-EU FTA to large business community. Enterprises should get full participation from the preparation to the process of negotiation and implementation of the FTA. Firstly, firms should have the investigation, exploration of partner market to study the tastes of consumers. Thereby, companies will determine for themselves the logical step in the process of negotiations and implementation of FTA. An effective, complete, timely information system is essential for businesses today. At the same time, the Government should also support Vietnamese enterprises in building distribution channels or national brand in the EU... Through such activities, firms can improve their knowledge, actively take opportunities and overcome challenges from Vietnam-EU FTA

3.3.2. Better preparation for FTA implementation

To benefit advantages of the FTA, we should reform the current Vietnamese law towards commitments in the FTA to have suitable measures. In some case, Vietnam could require EU supports in form of technical supports or investment advice to help Vietnamese businesses to understand and answer the EU's technical requirements. In addition, Vietnam have to build more efficient technical barriers to limit imports of backward technology influencing negatively environment...;reform the legal system; remove preferential subsidies for state-owned enterprises; encourage the development of supporting industries. In addition, the Vietnam government should pay more attention to the trade deficit and the contraband problem. Currently particularly in the sugar industry, smuggled goods have accounted for 30% of total domestic production, so that, local companies cannot compete with foreign products. The policy implementations have to be well realised to support the growth of businesses.

3.3.3.. Amelioration of enterprises competitiveness

European standards in terms of technique, environment or food safety will be applied equally to all countries exporting to the EU, therefore, a trade bilateral agreement certainly cannot require EU to reduce their requirement. Vietnam can benefit technical support of EU's enterprise, or EU's institutions to upgrade Vietnamese standards and increase exports.

To solve this problem, Vietnam's government could call EU's powerful investors to build joint ventures or 100% foreign investment enterprises. After, a part of goods produced in Vietnam will be exported abroad. On the other hand, Vietnam's government should also attract strong groups of countries having advanced technology, management experience to invest in Vietnam to improve the quality of Vietnamese goods.

This is an experience of many countries in the region to attract investment of countries having advanced technologies and techniques in the 80's, 90's of last century. ASEAN countries, especially the old ASEAN has applied this experience in trade with

China. These countries, during the period of 80, 90s of the twentieth century, have attracted a lot of investment of multinational companies in the world. Through the process of development of multinationals, many businesses in domestic country have grown, and they have exported many components, products abroad, including the Chinese market. This is an experience that Vietnam can refer..

3.3.4. Better cooperation between Vietnamese enterprises

Vietnam could learn from Mexico when this country participates in the FTA with US, one lesson is to improve the effectiveness of enterprises cooperation. Mexico has agreements with 40 countries, but the FTA with the US is the most important because the US accounts for 80% of Mexican exports. The first experience from US-Mexico FTA is to equitize SOEs. Before FTA,Mexico's state enterprises are lack of competitiveness as Vietnamese state enterprises at present. However, after US-Mexico FTA, the state-owned enterprises have gradually reduced

The role of private enterprises is very important for the country to benefit opportunities of agreements. In Mexico, the business community has participated from beginning to end of negotiations and had in time proposal to the government in signing of the trade agreement process. As regard to the government, a very important role is to provide information about the FTA in a simple, easy to understand to businesses and people from which, to make recommendations regarding their intimate problems.

4. Conclusion

Since 1990, bilateral or multilateral FTAs have become popular, with a larger scope, not only liberalization of trade of goods and services but also promotion and liberalization of investment, technology transfer, cooperation and facilitation of customs procedures, capacity building and other new content such as labour, environment.

Since 2012, Vietnam has started FTA negotiation with EU, so far, the two sides have realized a lot of negotiations rounds and finally Vietnam-EU FTA was signed in

August 2015. As forecast, Vietnam-EU FTA will bring many benefits for both sides. For Vietnam, the tariff reductions will increase Vietnam's exports to EU. Some sectors have the strongest tariff reduction from EU are textiles, footwear, processed food (including seafood). The service sector is also expected to significantly expand after FTA, and this can contribute to increase efficiency for the entire economy. In addition, the agreement is expected to increase social welfare. Base on this assessment, we recommend that Vietnam need more efficient mechanisms to support business, a better preparation for FTA implementation, an amelioration of enterprises competitiveness and a better cooperation between Vietnamese enterprises to profit benefit opportunity of Vietnam-EU FTA

The FTA will also better protect investors from both sides. After this agreement was signed, FDI from EU countries and other partner to Vietnam is expected to increase; thanks to the EU - Vietnam FTA and other FTAs that Vietnam has signed, investors will actually considered Vietnam as a production point to re-export to EU or other trading partners of Vietnam. Vietnam - EU FTA can also be a strong motivation for Vietnam to do institutional reforms and create a more transparent business environment.

For Vietnam and other developing countries, joining the FTA is one way to promote exports, but it will create pressure for the country to ameliorate production efficiency, competitiveness, innovation, perfection legal system conform with international standards. In addition, the FTA will help developing countries strengthen political relationship with partners, especially large countries. On the other hand, participation in many FTAs will create too many overlap commitments, making it difficult for policy-makers in the implementation of commitments. However, if the country is out of this trend, the country could face the "trade diversion" effect, so that, the international integration is an irreversible trend for developing countries, including Vietnam.

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APPENDIX

1. Sample countries

2. Austria	15. Latvia
3. Belgium	16. Lithuania
4. Bulgaria	17. Luxembourg
5. Cyprus	18. Malta
6. Czech Republic	19. Netherlands
7. Denmark	20. Poland
8. Estonia	21. Portugal
9. Finland	22. Slovak Republic
10. France	23. Spain
11. Germany	24. Slovenia
12. Greece	25. Sweden
13. Hungary	26. Romania
14. Ireland	27. United Kingdom
15. Italy	28. Vietnam

2. Breusch and Pagan Lagrangian and Hausman test for model (1)

2.1.   Breusch and Pagan Lagrangian test

Breusch and Pagan Lagrangian multiplier test for random effects

lntrade[country,t] = Xb + u[country] + e[country,t]

Estimated results:

```
        |      Var      sd = sqrt(Var)
---------+----------------------------
 lntrade |   4.809369       2.193027
       e |   .2538188       .5038043
       u |   .3817808       .6178841
```

Test: Var(u) = 0

```
              chibar2(01) =   761.20
                 Prob > chibar2 =   0.0000
```

2.2.   Hausman test for model (1)

. hausman fe1 re1

```
        ---- Coefficients ----
      |    (b)        (B)          (b-B)    sqrt(diag(V_b-V_B))
      |    fe1        re1       Difference         S.E.
------+------------------------------------------------------------
lngni |  1.423752   1.494584    -.0708319       .1034963
lnpop |  -.122924  -.3352162     .2122922       .7085716
lndis |  .5211195   -.660201    1.181321        .598072
 lnex |  .6659961    .078886     .5871101       .1589423
lntaxvn | -.8496801  -1.168667    .3189873       .037879
lntaxeu |  .0540587   -.313335    .3673937       .0483184
------------------------------------------------------------------
```

                 b = consistent under Ho and Ha; obtained from xtreg
         B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

```
        chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
            =      32.89
       Prob>chi2 =     0.0000
          (V_b-V_B is not positive definite
```

3. Breusch and Pagan Lagrangian and Hausman test for model (2)

3.1. Breusch and Pagan Lagrangian test

Breusch and Pagan Lagrangian multiplier test for random effects

lntrade[country,t] = Xb + u[country] + e[country,t]

Estimated results:

```
            |      Var      sd = sqrt(Var)
    --------+----------------------------
    lntrade |   4.809369       2.193027
          e |   .2587283       .5086534
          u |   .3606041       .6005032
```

Test: Var(u) = 0
                chibar2(01) =   698.92
                Prob > chibar2 =   0.0000

3.2. Hausman test for model (2)

. hausman fe2 re2

```
            ---- Coefficients ----
         |    (b)        (B)         (b-B)    sqrt(diag(V_b-V_B))
         |    fe2        re2       Difference        S.E.
---------+----------------------------------------------------------
   lngpc |  1.366953   1.427097    -.0601445       .1068752
   lnpop |  1.245682   1.155513     .0901696       .6632931
   lndis |  1.581139  -.1032406    1.684379        .5962439
    lnex |   .7278193   .0848318     .6429875       .1598018
  lntaxvn |  -.8543372  -1.209621     .355284        .0341286
  lntaxeu |   .0178816   -.395138     .4130195       .0367126
---------------------------------------------------------------------
```

                 b = consistent under Ho and Ha; obtained from xtreg
        B = inconsistent under Ha, efficient under Ho; obtained from xtreg

  Test: Ho: difference in coefficients not systematic

            chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                 =   38.89
         Prob>chi2 =   0.0000
         (V_b-V_B is not positive definite)

4. Breusch and Pagan Lagrangian and Hausman test for model (3)

4.1. *Breusch and Pagan Lagrangian test*

Breusch and Pagan Lagrangian multiplier test for random effects

lntrade[country,t] = Xb + u[country] + e[country,t]

Estimated results:

```
        |     Var     sd = sqrt(Var)
---------+----------------------------
 lntrade |  4.809369      2.193027
       e |  .2518695      .501866
       u |  .3827896      .6186999
```

Test: Var(u) = 0
              chibar2(01) =   763.57
                Prob > chibar2 =   0.0000

4.2. *Hausman test for model (3)*

. hausman fe3 re3

```
        ---- Coefficients ----
      |    (b)        (B)          (b-B)     sqrt(diag(V_b-V_B))
      |    fe3        re3       Difference        S.E.
------+----------------------------------------------------------
lngni |  2.578826   1.187394    1.391432        .6911183
lngpc | -1.298867    .2634189  -1.562286        .7477416
lndis | -.0557544  -.5316351    .4758807        .6630146
 lnex |  .561501    .0925223    .4689787        .1627665
lntaxvn| -.826717  -1.181699    .3549822        .0328446
lntaxeu|  .1297276  -.3496935   .4794211        .0375005
------------------------------------------------------------------
```

                  b = consistent under Ho and Ha; obtained from xtreg
          B = inconsistent under Ha, efficient under Ho; obtained from xtreg

  Test: Ho: difference in coefficients not systematic

        chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
            =   38.08
     Prob>chi2 =   0.0000
              (V_b-V_B is not positive definite)

5. Test and corrections for model FE(2)
5.1. Multicorrelation test

```
. corr lngpc lnpop lndis lnex lntaxvn lntaxeu
(obs=405)

        |   lngpc   lnpop   lndis    lnex  lntaxvn  lntaxeu
-------------+-------------------------------------------------------
    lngpc |   1.0000
    lnpop |   0.1133   1.0000
    lndis |   0.4405   0.2881   1.0000
     lnex |   0.3458   0.0295   0.0538   1.0000
   lntaxvn |  -0.2559  -0.0331  -0.0204  -0.1315   1.0000
   lntaxeu |  -0.2664  -0.0339  -0.0196  -0.1242   0.7408   1.0000

. vif (of POOLED)

   Variable |     VIF      1/VIF
-------------+----------------------
   lntaxeu |     2.25    0.443573
   lntaxvn |     2.24    0.446546
    lngpc |     1.54    0.648575
    lndis |     1.37    0.727342
     lnex |     1.15    0.866882
    lnpop |     1.09    0.915097
-------------+----------------------
   Mean VIF |     1.61
```

5.2. Heteroskedasticity test

```
. xttest3

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (27)  =    1828.20
Prob>chi2 =     0.0000
```

5.3. *Autocorrelation test*

```
. xtserial lntrade lngpc lnpop lndis lnex lntaxvn lntaxeu

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
   F(  1,    26) =     0.725
        Prob > F =      0.4021
```

5.4. *Test of cross sectional independence*

```
. xtcsd, friedman

Friedman's test of cross sectional independence =    31.904, Pr = 0.1963
```

6. *Correction of heteroskedasticity for model FE(2)*

```
. xtgls lntrade lngpc lnpop lndis lnex lntaxvn lntaxeu,panel(hetero)

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:       heteroskedastic
Correlation:   no autocorrelation

Estimated covariances    =      27       Number of obs      =      405
Estimated autocorrelations =      0       Number of groups   =      27
Estimated coefficients    =       7       Time periods       =      15
                                   Wald chi2(6)     =   6370.94
                                   Prob > chi2      =    0.0000


------------------------------------------------------------------------------
   lntrade |    Coef.  Std. Err.    z   P>|z|    [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lngpc |  1.288712  .0390591   32.99  0.000    1.212158   1.365266
     lnpop |  1.13561   .0189532   59.92  0.000    1.098463   1.172758
     lndis | -.8905999  .1953506   -4.56  0.000    -1.27348  -.5077198
      lnex | -.1443601  .0159661   -9.04  0.000   -.1756531  -.1130671
   lntaxvn | -.9501048  .1517543   -6.26  0.000   -1.247538  -.6526718
   lntaxeu | -.5153166  .2744313   -1.88  0.060   -1.053192   .0225588
     _cons | -42.71687  1.557208  -27.43  0.000   -45.76894   -39.6648
------------------------------------------------------------------------------
```