

ASSESSMENT OF FIVE EXISTING FREE TRADE AGREEMENTS OF VIETNAM

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Short title: Assessment of Free Trade Agreements

Summary

In this report, we do an *ex post* assessment of the impact of five Free Trade Agreements (FTAs) on Vietnam's exports and imports. We focus on Vietnam's FTAs with five dialogue partners: Australia and New Zealand, China, India, Japan and Korea. The six relevant FTAs are the ASEAN Free Trade Area (ASEAN FTA), the ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA), the ASEAN-India Comprehensive Economic Cooperation Agreement (ASEAN-India CECA), the ASEAN-Republic of Korea Comprehensive Economic Cooperation Agreement (AKFTA), the ASEAN-Japan Comprehensive Economic Partnership (AJCEP), and the ASEAN-People's Republic of China Comprehensive Economic Agreement (ACFTA). These agreements all came into effect on January 2010 except the ASEAN FTA and AJCEP which came into effect in December 1995 and December 2008, respectively.

We find that export flows to these trading partners have had a significant impact on the Vietnamese economy (this is a multiplier effect). The manufacturing and agriculture (including fishing and forestry) industries in particular have increased significantly. All of the FTAs have provided important markets for exported goods, especially the ACFTA and AKFTA.

We also find that import flows from these six FTAs have had a significant impact on the Vietnamese economy. Of the six partners, China and Korea were the major sources of Vietnam's imports. Three kinds of imports have increased rapidly: agriculture (including forestry and fishing), mining, and manufacturing.

Vietnam's balance of international trade flows has deteriorated since these FTAs came into effect, especially with trading partners such as China, Korea, Singapore and Thailand. The net result has been a persistent and generally worsening international trade deficit for Vietnam. The trade deficit was particularly large with the ACFTA and AKFTA.

Multiplier analysis shows the FTAs have had overall negative effects on Vietnam economy, particularly on employment. The effects of the ACFTA and AKFTA are particularly large and have a downward trend. The effects of the AJCEP, AANZFTA and ASEAN-India CECA are improving – if this trend continues they will soon have an overall positive effect.

Comparative advantage analysis shows that the ACFTA and AKFTA were competitive economies while the AJCEP and AANZFTA were complementary economies. Vietnamese economy has comparative advantage with rice, apparel, furniture and footwear from these FTAs.

Methods and Data

To estimate the *ex post* impact of an FTA on import and export flows for Vietnam, we have used multiplier analysis based on a modified traditional Input-Output Model. The model relies on inter-industry data to determine how changes in one industry will impact others. In addition, the model also estimates the share of each industry's purchases that are supplied by domestic and foreign firms. Based on this data, multipliers are calculated and used to estimate economic impacts. We will publish a separate paper giving the details of this methodology. The method looks at changes in total trade flows which are the difference between export and import flows for each FTA. Our new approach to estimating the economic effects of FTAs on international trade is more suitable for developing countries, in which the strategies of export promotion and import substitution are increasingly important.

We have also used trade indicators to examine whether pairs of economies are complementary or competitive. Five trade indices will be analysed for this purpose.

The trade data used consists of the Extended Input-Output Table 2007 and the Extended Input-Output Table 2011. The Extended Input-Output Table in 2007 and 2011 were compiled

by the author based on the official published data from the General Statistics Office (GSO), Central Institute for Economic Management (CIEM) in Vietnam and the United Nations Statistics Division (UNSD).

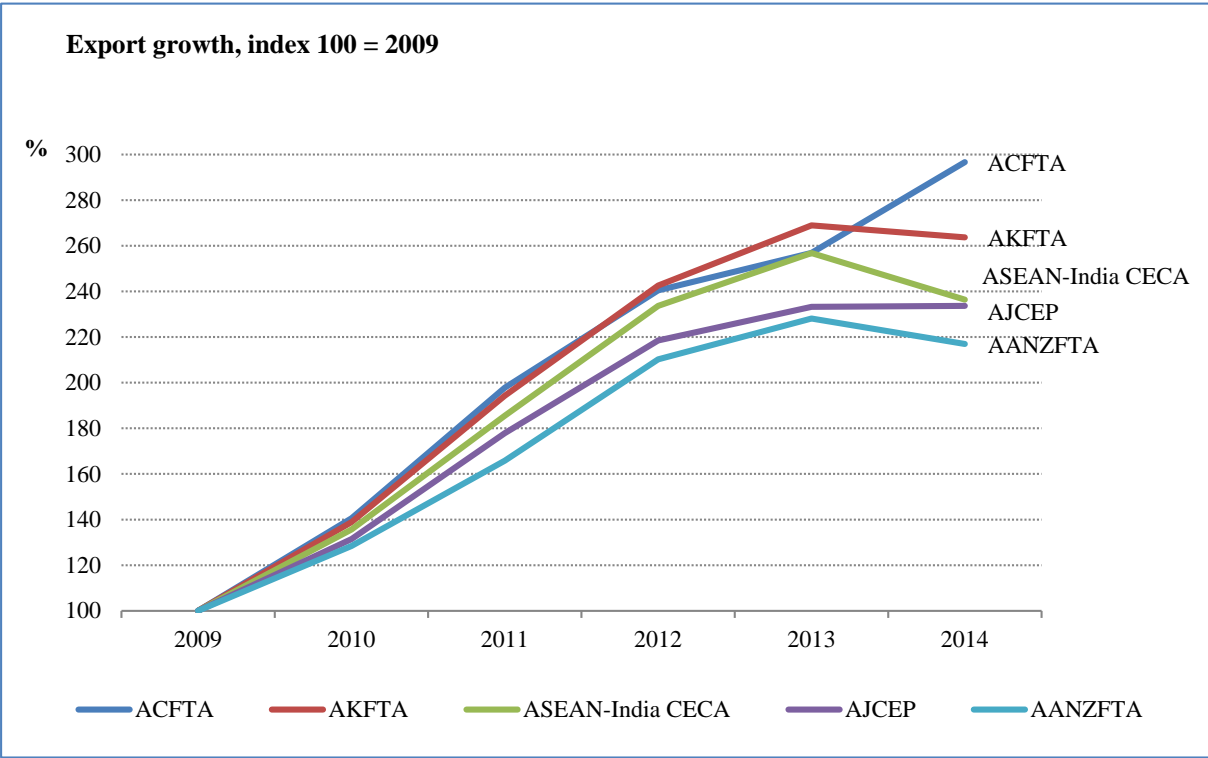
Result

A. Exports and imports

1. Vietnam’s exports to the five trading groups

In this section, we analyse export flows to the five trading partners. We display the data as radar charts on a log scale to prevent outliers from complicating the diagrams.

Figure 1: Vietnam’s export growth to the five partners after the FTA

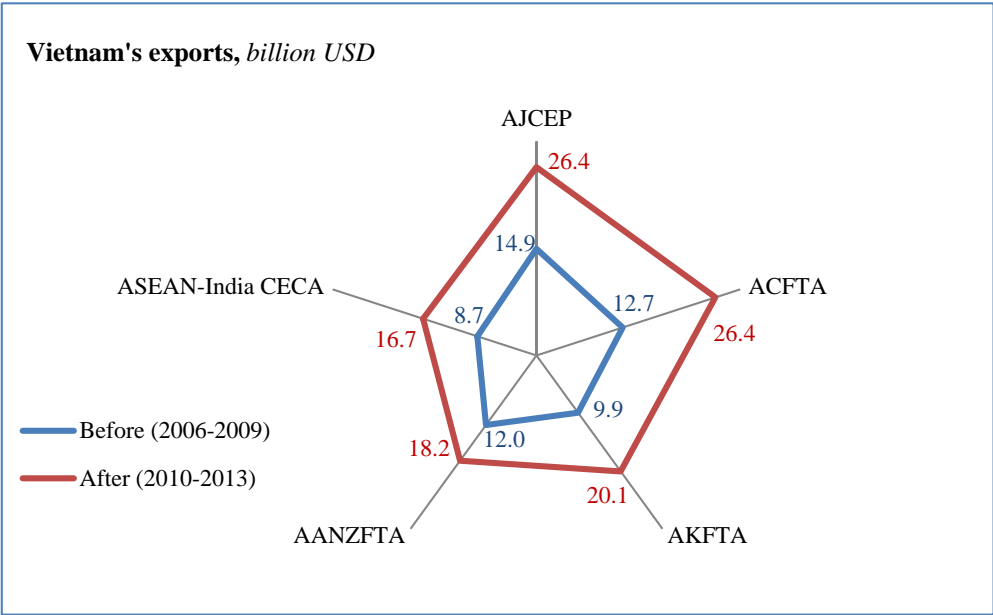


Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

Note: The year 2009 is used as the base year (equal to 100). Vietnam’s export growth in the four years following the enforcement of the FTAs is given.

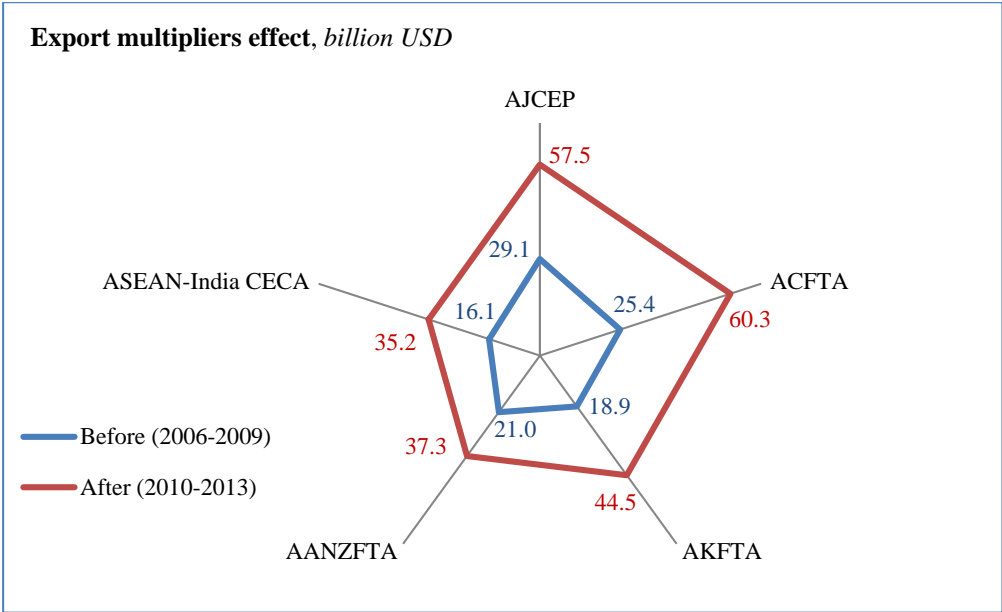
Figure 1 illustrates that exports from Vietnam to the five partners more than doubled during the first four years of the FTAs. The strongest growth was due to the ACFTA, AKFTA and ASEAN-India CECA which almost tripled.

Figure 2a: Vietnam’s exports to the five trading group before and after the FTAs



Source data: Trade Map

Figure 2b: Multiplier effects of Vietnam’s exports to the five trading partners before and after the FTAs

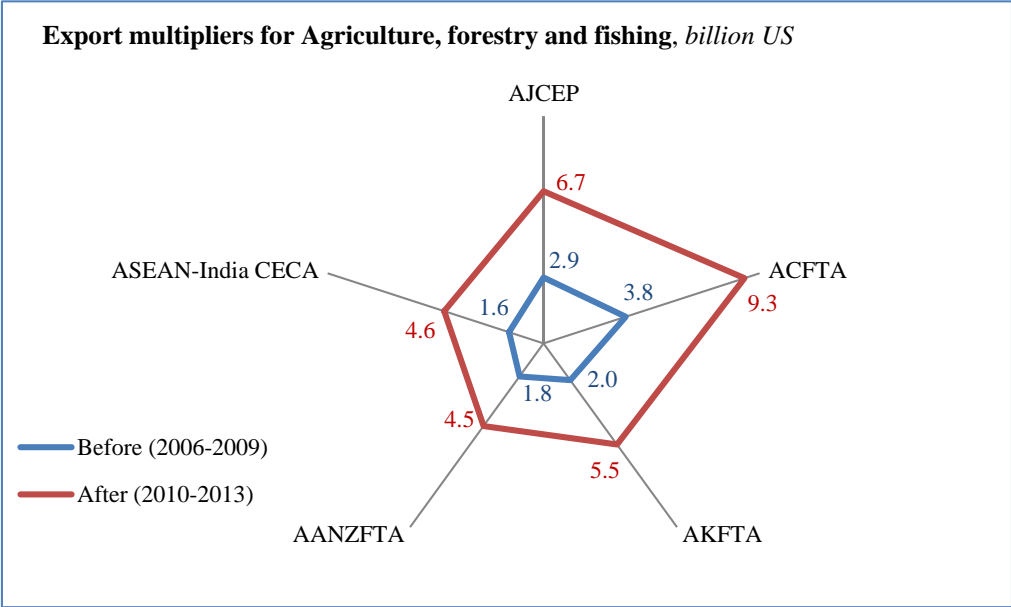


Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

Figure 2a shows an increase in the value of Vietnam’s exports to the five trading groups under consideration. The annual average value of Vietnam’s exports observed from 2006 to 2009 (before the FTAs) and from 2010 to 2013 (after the FTAs) nearly doubled (58.2 to 107.6 billion USD). Compare this with the total effect in Figure 2b including multiplier effects

within the Vietnamese economy, which shows an increase of slightly more than double (110.5 to 234.8 billion USD). For example, although the direct effects of Vietnam’s exports to such as AJCEP and ACFTA were similar (26.4 billion USD), the total effect (direct and indirect effects) of Vietnam’s exports to AJCEP and ACFTA were different (57.5 and 60.3 billion USD). So the economic benefits of ACFTA due to exports is greater than of the AJCEP. Therefore Figure 2b shows that exports to the five FTAs had positive impact on the Vietnamese economy. There was a particularly large positive effect of exports to the AKFTA (20.1 totals with 9.9 direct before, compared with 44.5 total and 18.9 direct after).

Figure 3: Multiplier effects for agriculture, forestry and fishing exports to the five partners before and after the FTAs

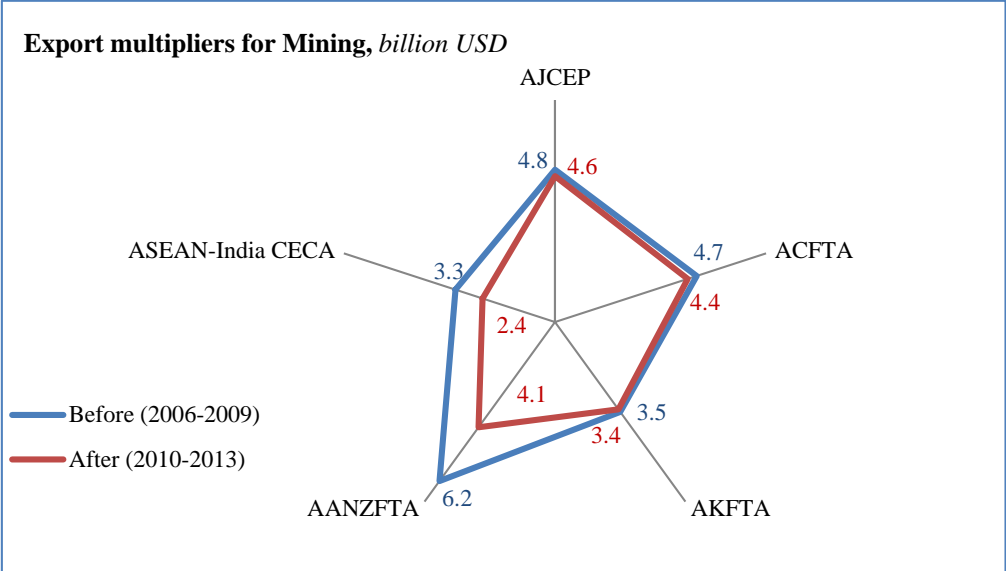


Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

Even before the entry in to force of the FTAs, there was a significant increase in the value of Vietnam’s exports of agriculture, forestry and fishing products to the five trading partners (see Figure 3). Comparing the annual average value of Vietnam’s exports of agriculture, forestry and finishing observed from 2006 to 2009 (before FTA) and from 2010 to 2013 (after FTA), we observe that the amount more than doubled (12.1 to 30.6 billion USD). However, the extent of increase from each FTA was not uniform. Vietnam’s exports to Korea, Australia and New Zealand increased 2, 1.5 and 1.5 times, respectively. Vietnam’s exports to China and Japan increased 1.33 and 1.25 times, respectively. To sum up, we find that exports of agriculture, forestry and finishing industries had a significant impact on the Vietnam

economy. China and Japan were largest destinations in absolute terms, while Korea showed significant growth.

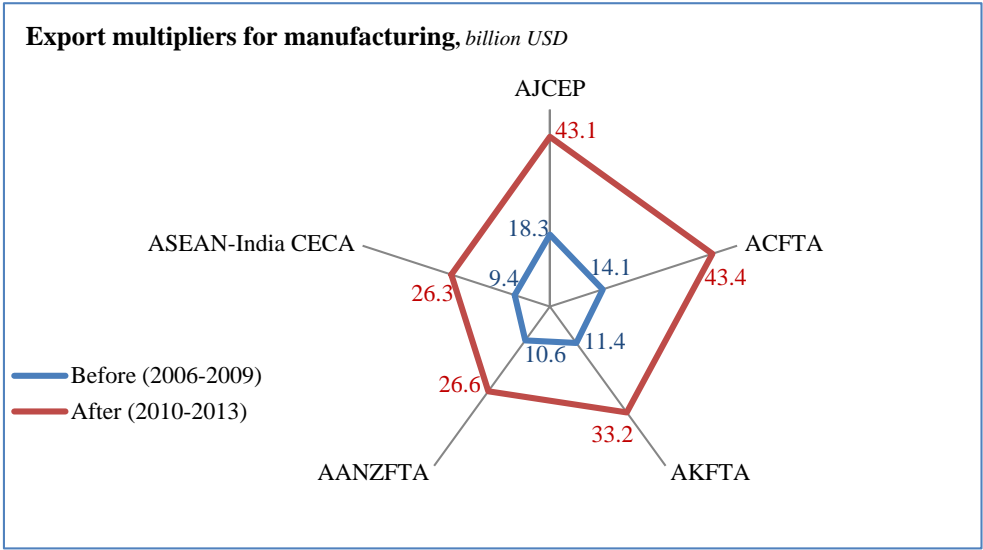
Figure 4: Multiplier effects of Vietnam’s Mining exports before - after the FTAs



Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

Figure 4 shows that there was a decrease in the multiplier effects of Vietnam’s exports of mining goods to the five trading partners. Comparing 2006 to 2009 (before FTA) and 2010 to 2013 (after FTA), there was a decrease of 12.7% or 5 billion USD. We conclude that mining exports to the five FTAs have not had a significant impact on the Vietnamese economy.

Figure 5: Multiplier effects of Vietnam’s Manufacturing exports before - after the FTAs



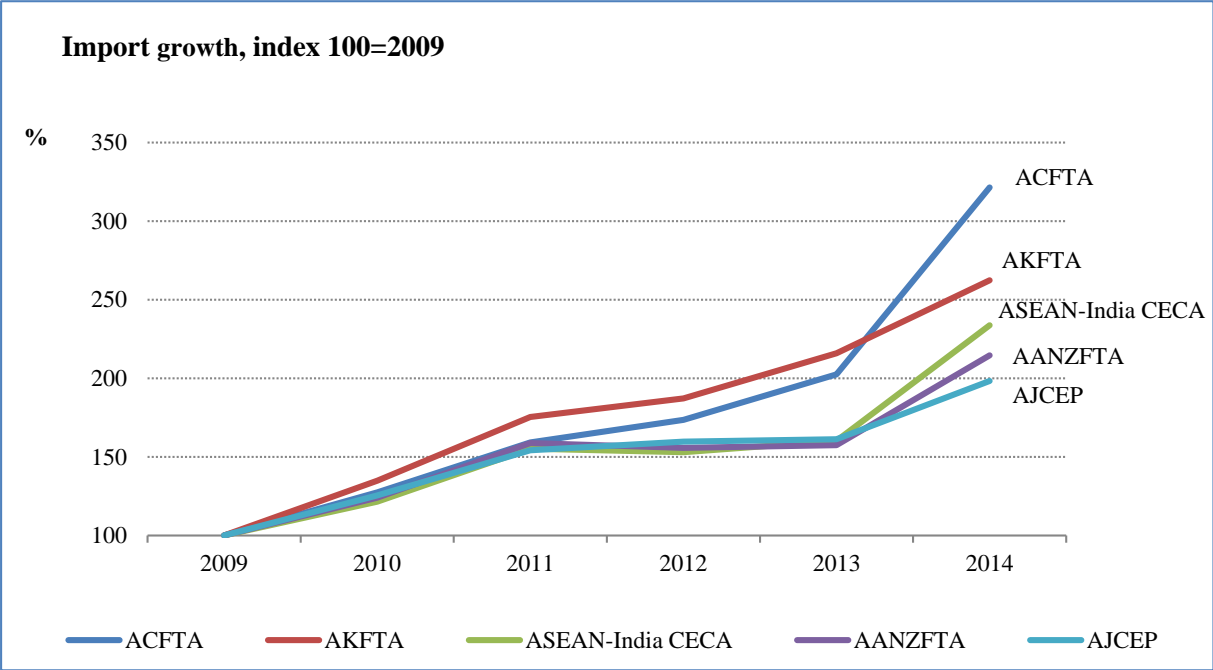
Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

As can be seen from Figure 5, Vietnam’s exports of manufactured goods grew by 112%, comparing the period before the FTAs from 2006 to 2009 with after the FTAs from 2010 to 2013. China and Japan were the largest destinations in absolute terms, while Korea and India showed the most growth. We find that China, Japan and Korea were the most important markets for Vietnam’s manufacturing exports.

To sum up, we find that export flows to the trading partners show strong increases as a result of the FTAs. The manufacturing and agriculture (including forestry and fishing) industries in particular have increased significantly. However the multiplier effects of these increases in exports were in line with the general rate of growth of the Vietnamese economy

2. Vietnam’s imports from the five trading partners

Figure 6: Vietnam’s import growth rate from the five partners after the FTA

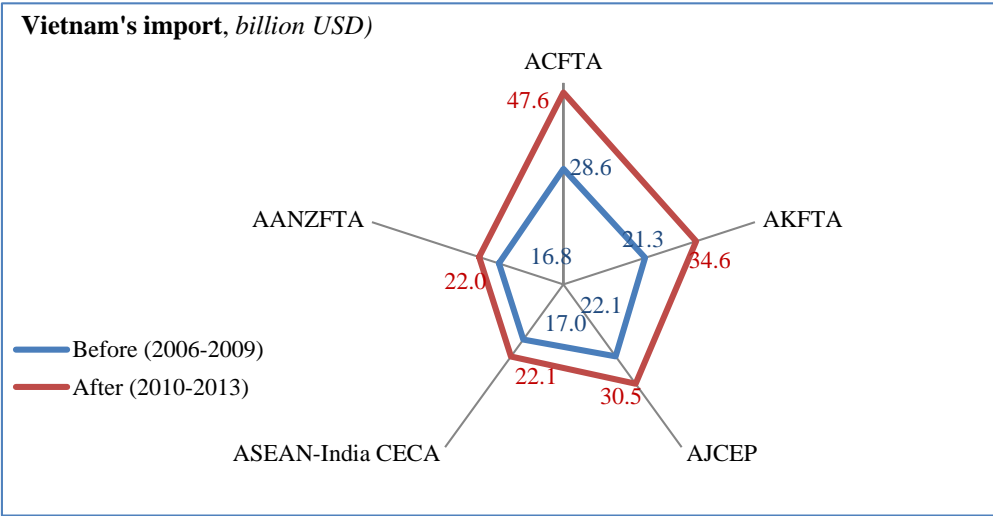


Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

Note: The year 2009 is used as the base year (equal to 100). Vietnam exports in the four years following the enforcement of FTA is given.

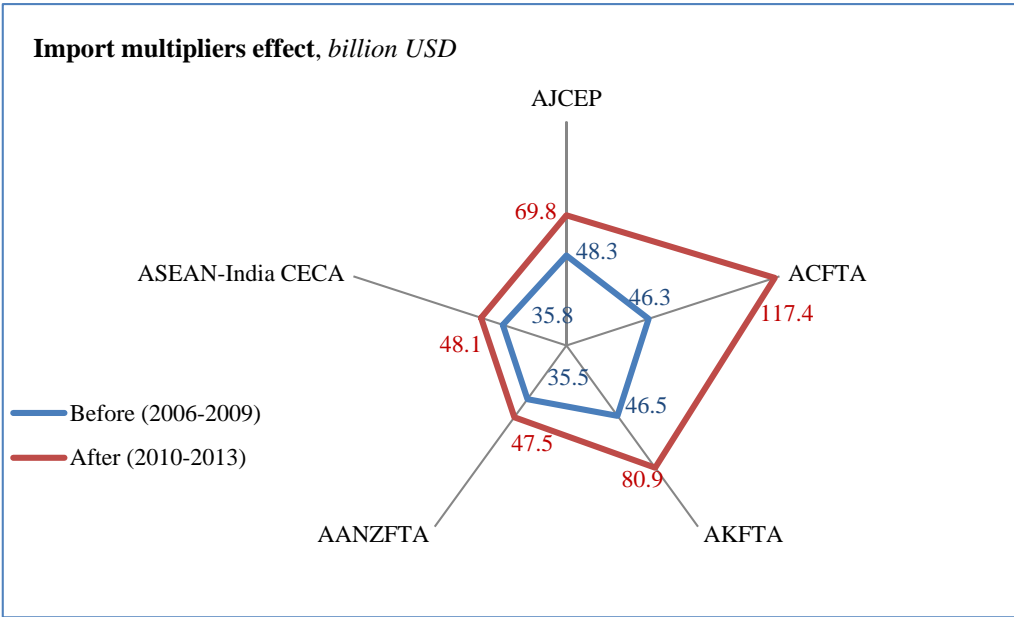
Figure 6 shows the upward trend of imports in the years following the introduction of these five FTAs. The ACFTA and AKFTA had the fastest import growth rates. The AJCEP, AANZFETA and ASEAN-India CECA have shown significant growth in the first two year with a slowdown since 2012.

Figure 7a: Vietnam’s imports from the five trading groups before and after the FTAs



Source data: Trade Map

Figure 7b: Multiplier effects of Vietnam’s imports before and after the FTAs

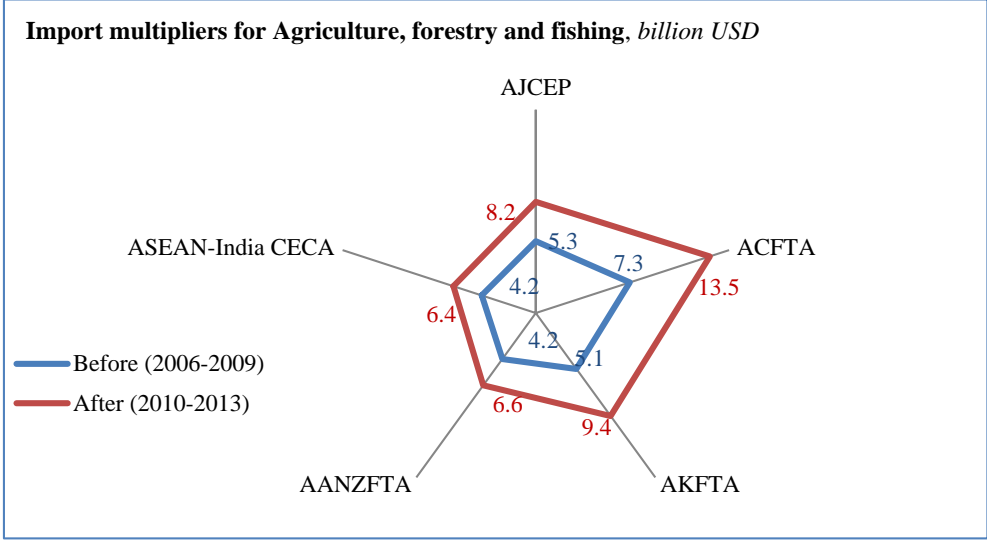


Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

It can be seen from Figures 7a and 7b that there were significant increases in the value of Vietnam’s imports from the five trading groups. The total value of Vietnam’s imports from these partners averaged 51 billion USD per annum from 2006 to 2009 (before the FTA), versus 105 billion USD from 2010 to 2013 (after the FTA), slightly less than double. After including multiplier effects, the increase is from 151 to 212 billion USD.

Of the six partners, China and Korea were the largest sources of imports, accounting for 47.6 and 34.6 billion USD, respectively, annual average from 2010 to 2013. After including multiplier effects the impact was even greater (an increase from 46.3 to 117.4 billion USD for the ACFTA, and an increase from 46.5 to 80.9 billion USD for the AKFTA).

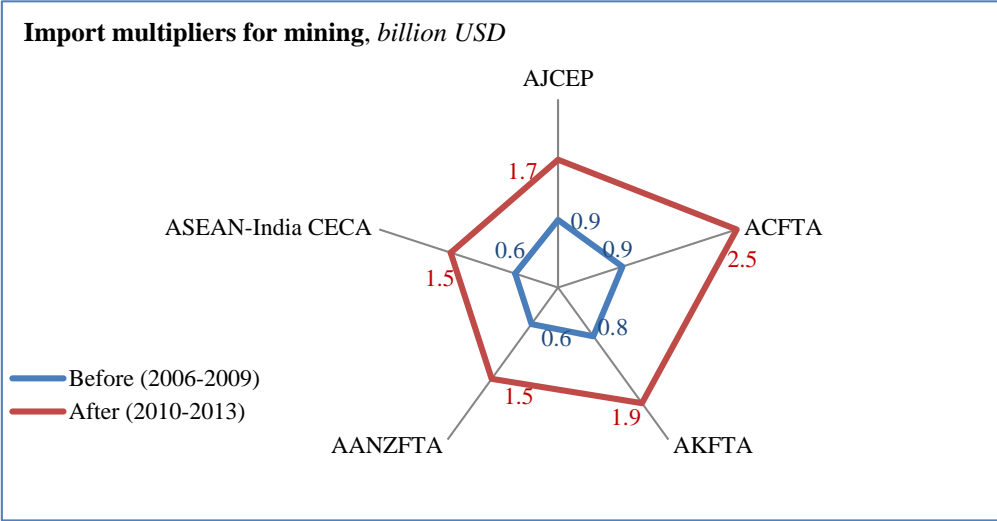
Figure 8: Multiplier effects of Vietnam’s Agriculture, forestry and fishing imports



Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

Figure 8 shows a rapid increase in the value of Vietnam’s imports of agriculture, forestry and fishing products from the five trading partners. The total value of these imports averaged 26.1 billion USD per annum from 2006 to 2009 (before the FTA), versus 44.1 billion USD from 2010 to 2013 (after the FTA), slightly less than double. China and Korea were the largest sources of these imports.

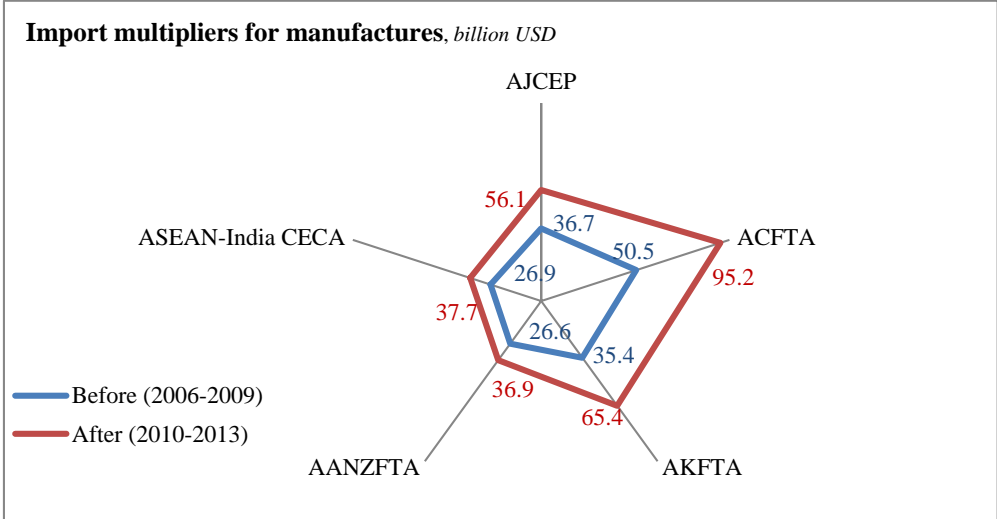
Figure 9: Multiplier effects of Vietnam’s Mining imports



Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

Figure 9 shows a significant increase in the value of Vietnam’s imports of minerals from the five trading groups. The total value of these imports averaged 5 billion USD per annum from 2006 to 2009 (before the FTA), versus 11 billion USD from 2010 to 2013 (after the FTA), slightly more than double. All five partners played a significant role in these imports.

Figure 10: Imports Manufactures from the five trading groups before and after FTA



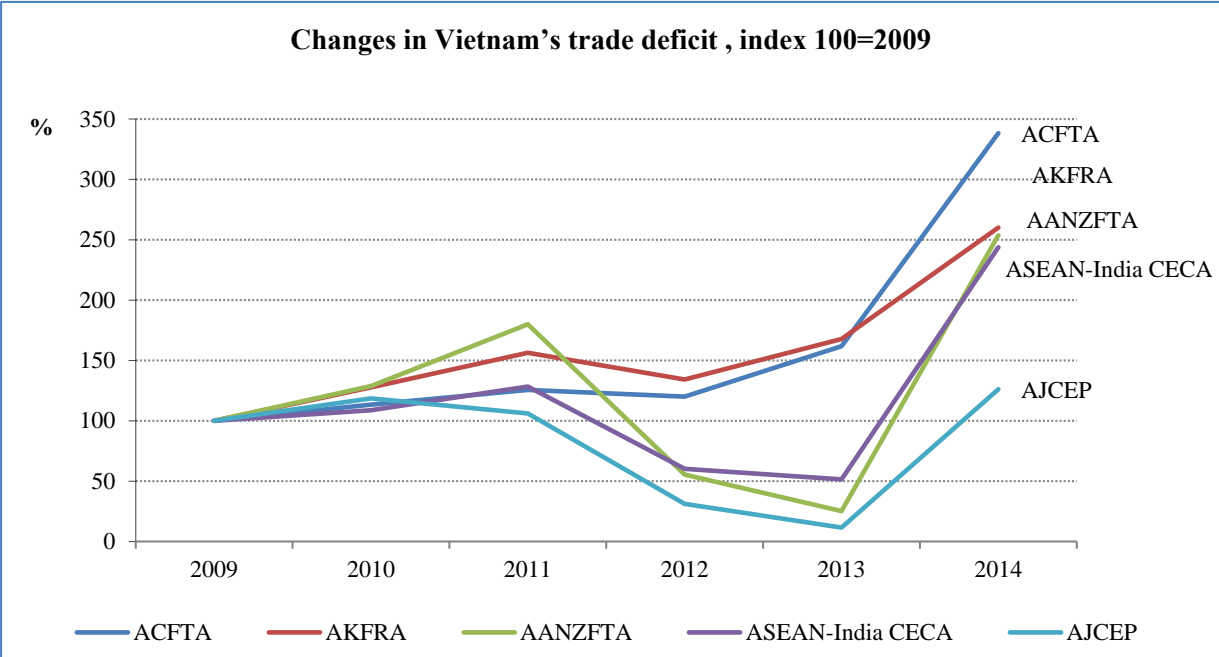
Source data: Trade Map

As is illustrated by Figure 10, there was a significant increase in manufacturing imports from the five trading groups. The total value of these imports averaged 176 billion USD per annum from 2006 to 2009 (before the FTA), versus 291 billion USD from 2010 to 2013 (after the FTA). ACFTA and AKFTA were the largest importers.

In conclusion, there was a significant increase in the multiplier effects of imports from all of the five partners after the FTAs went into effect. This has greatly impacted Vietnam’s balance of trade.

B. Trade Balance

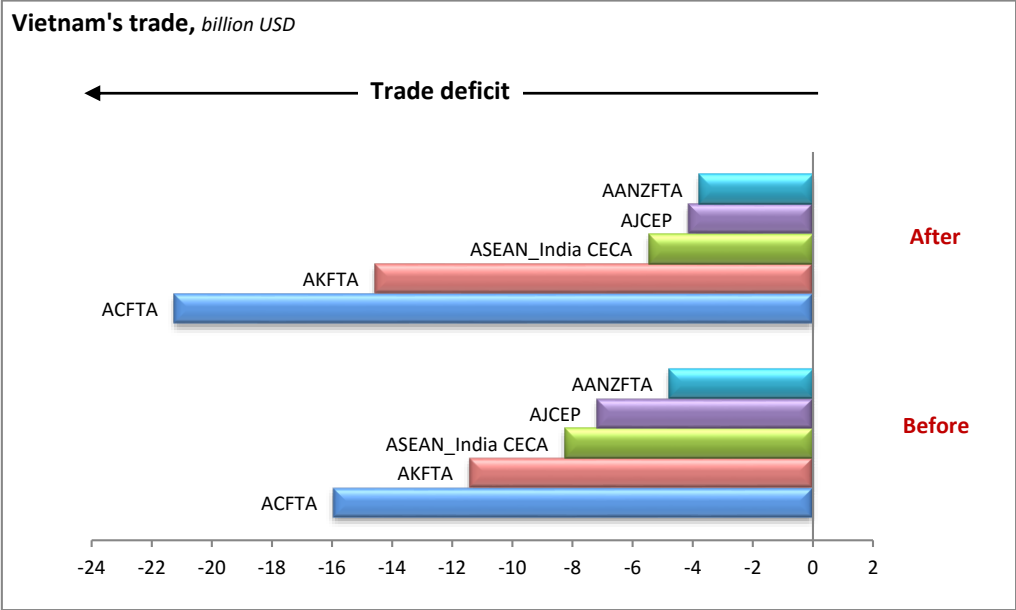
Figure 11: Changes in Vietnam’s trade deficit to the five partners after the FTAs



Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

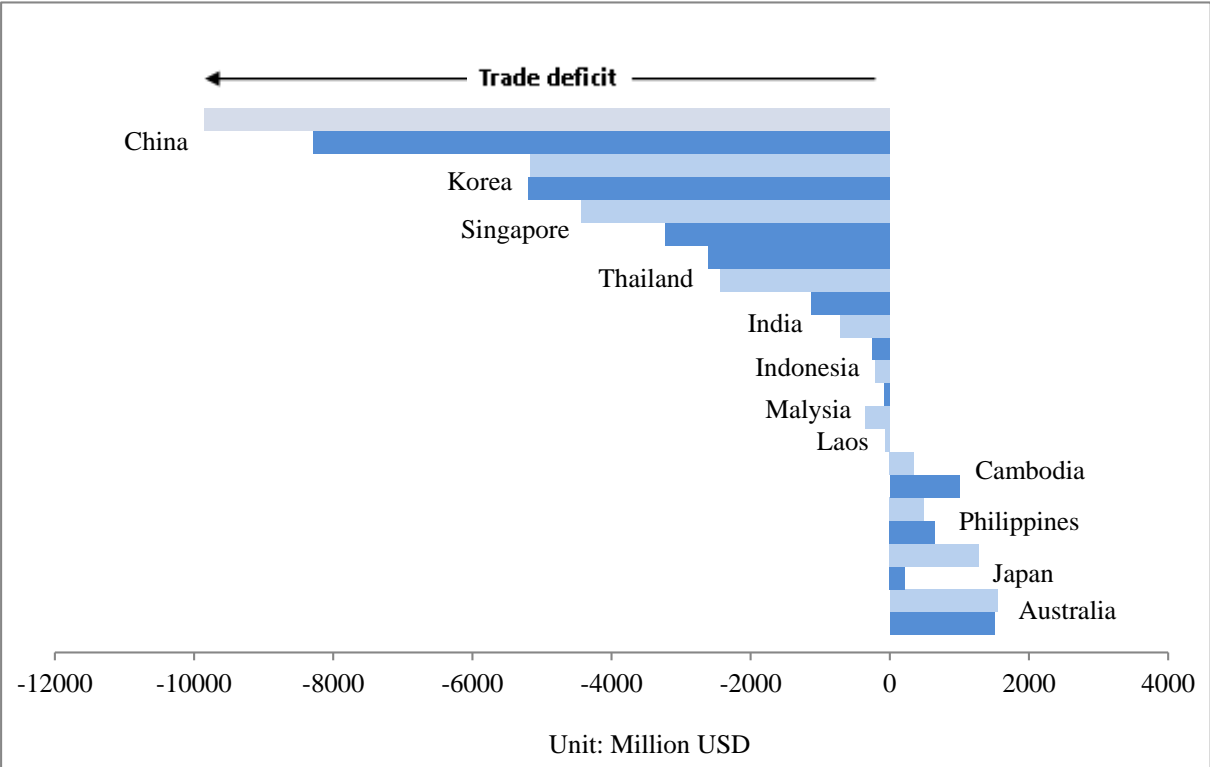
Note: The 2009 is used as the base year (equal to 100). Vietnam exports in the four years following the enforcement of the FTAs is given.

Figure 12: Vietnam’s international trade balance to the five trading groups before and after the FTA



Source data: Trade Map

Figure 13: Trade surplus and deficit by country (from two data source)



Source data: Trade Map

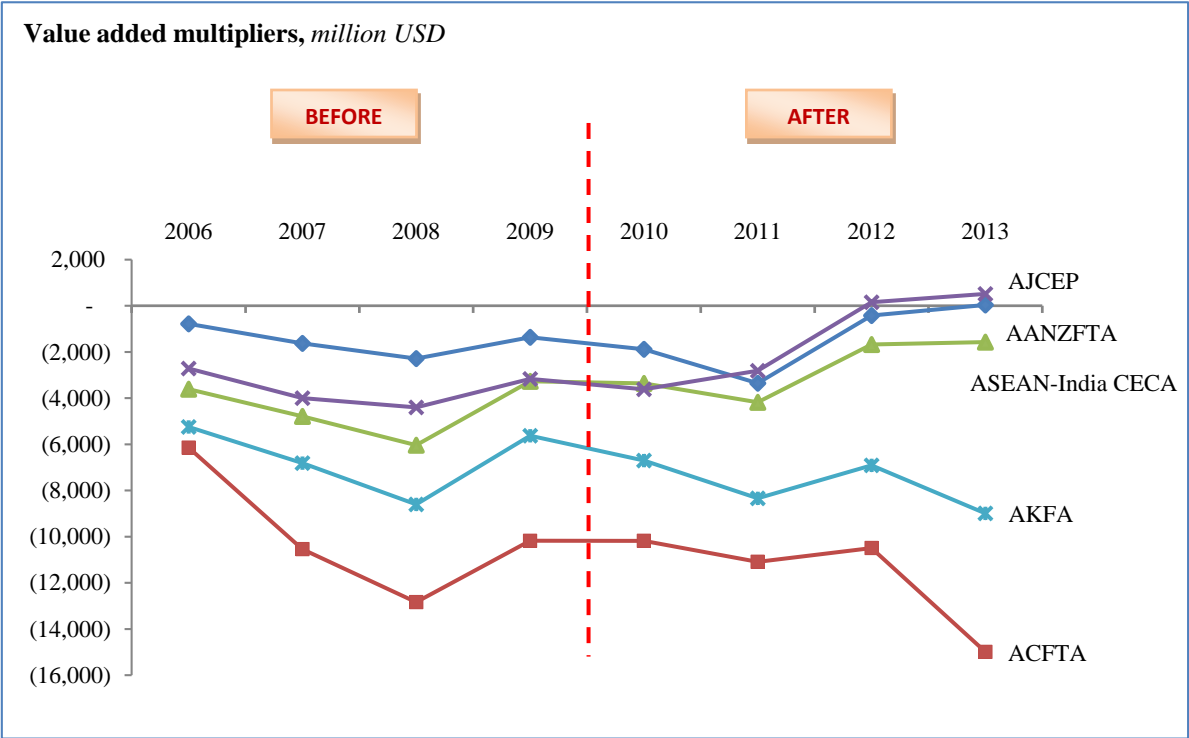
- Data from Vietnam
- Data from partners

It is clear from the Figure 11, 12 and 13 that Vietnam has had an upward trend in its international trade deficit with the five trading partners, especially with members of the ACFTA and of ACFTA including ASEAN (Singapore and Thailand in particular). The net result has been a persistent and generally worsening deficit for Vietnam which had a high trade deficit with these five trading groups, especially the ACFTA and AKFTA.

C. Multiplier effects

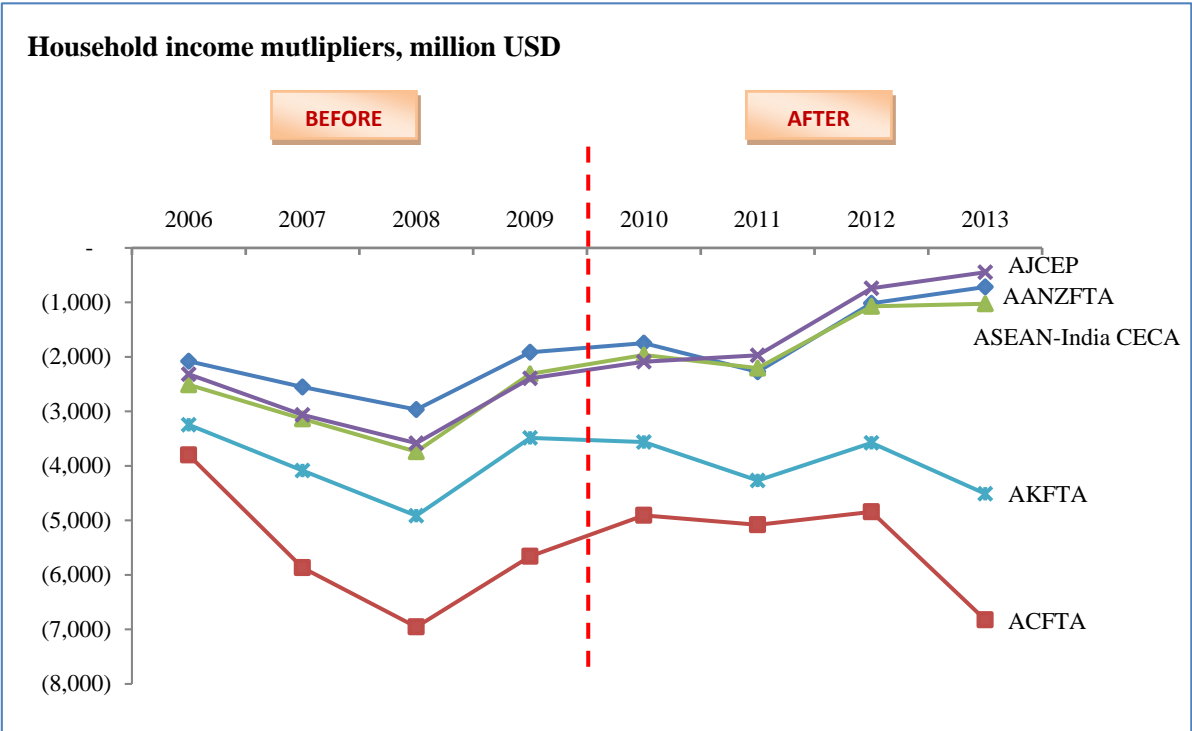
In this section, value added, income and employment multiplier effects on Vietnamese economy will be analysed. These are based on the Extended I-O Tables for 2007 and 2011. Line graphs and tables will be used to present the information from these models.

Figure 14: Value Added Multipliers



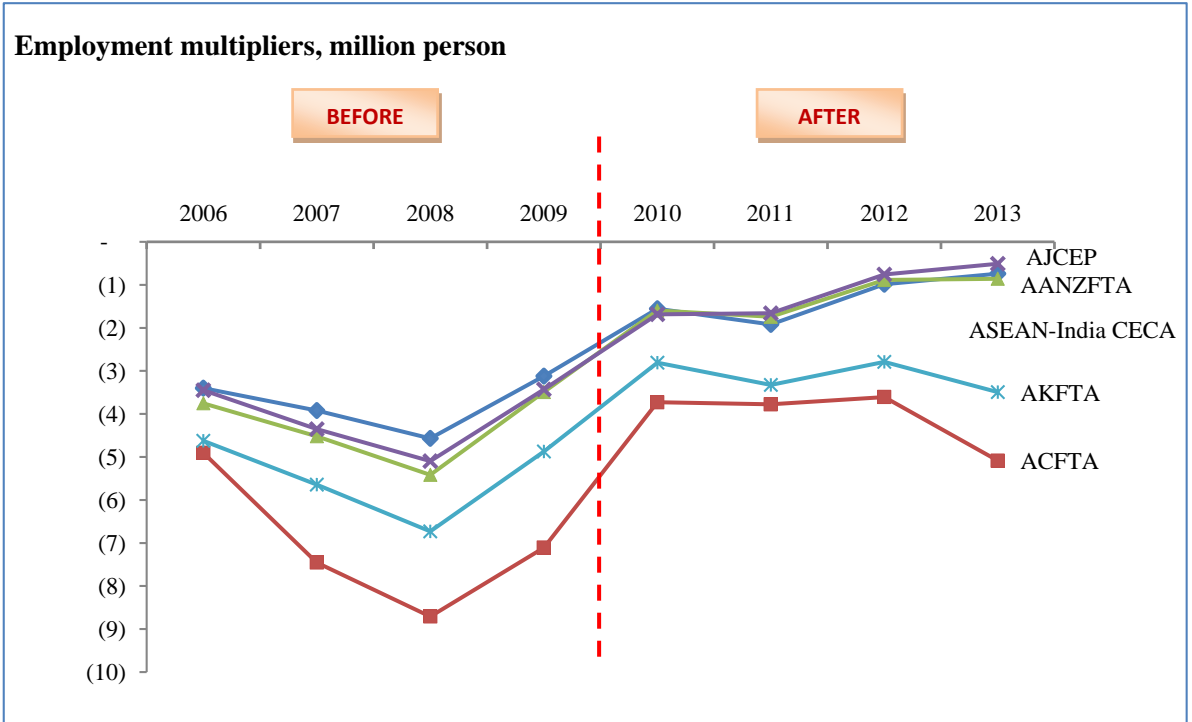
Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

Figure 14: Household Income Multipliers



Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

Figure 15: Employment Multipliers



Source data: Trade Map, General Statistics Office of Vietnam and Central Institute for Economic Management of Vietnam

To sum up, the five trading blocs have had overall negative effects on Vietnam economy, particularly on employment. The effects of the ACFTA and AKFTA are particularly large and have a downward trend. The effects of the AJCEP, AANZFTA and ASEAN-India CECA are improving – if this trend continues they will soon have an overall positive effect.

D. Trade indicators

In this section, we use trade indicators to examine whether pairs of economies are complementary or competitive. Four trade indices will be analysed to determine complementarity or competitiveness of economies. We focus on the five Vietnam's FTAs with 5 dialogue partners: Australia & New Zealand, China, India, Japan and Korea.

Table 1: Revealed symmetric comparative advantage – FTA

RSCA of Vietnam relative to:	AANZFTA		ACFTA		ASEAN_INDIA CECA		AJCEP		AKFTA	
	Before	After	Before	After	Before	After	Before	After	Before	After
Agriculture, forestry and fishing	0.47	0.33	0.71	0.66	0.53	0.40	0.73	0.62	0.67	0.57
Mining	0.18	(0.36)	0.69	0.37	0.45	(0.00)	0.64	0.18	0.57	0.11
Manufactures	(0.08)	0.03	(0.14)	(0.06)	(0.11)	(0.03)	(0.14)	(0.05)	(0.13)	(0.04)
Utilities	(0.97)	(1.00)	(0.95)	(1.00)	(0.99)	(1.00)	(0.96)	(1.00)	(0.97)	(1.00)

Source data: Trade Map

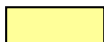
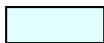
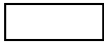
	RSCA > 0 and After > Before	→ comparative advantage and trend to increase
	RSCA > 0 and After ≤ Before	→ comparative advantage
	RSCA < 0	→ no comparative advantage

Table 2: Bilateral trade intensity index – FTA

TII between Vietnam and:	ASEAN_AU/NZ		ACFTA		ASEAN_INDIA CECA		AJCEP		AKFTA	
	Before	After	Before	After	Before	After	Before	After	Before	After
Agriculture, forestry and fishing	1.66	2.08	2.35	1.84	1.25	1.94	0.89	1.20	1.35	1.65
Mining	9.85	6.48	2.80	1.86	2.91	1.69	2.53	2.54	2.88	2.68
Manufactures	2.32	2.07	1.53	1.55	2.17	2.02	3.08	2.59	2.26	2.26
Utilities	-	-	-	-	-	-	-	-	-	-

Source data: Trade Map

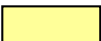
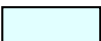

	TII After ≥ 1 and After > Before	→ bilateral trade flows larger than expected, trend to increase
	TII After ≥ 1 and After \leq Before	→ bilateral trade flows larger than expected
	TII After < 1	→ bilateral trade flows smaller than expected

Table 3: Trade specialisation index – FTA

TSI between Vietnam and:	ASEAN_AU/NZ		ACFTA		ASEAN_INDIA CECA		AJCEP		AKFTA	
	Before	After	Before	After	Before	After	Before	After	Before	After
Agriculture, forestry and fishing	(0.33)	(0.25)	0.33	0.43	(0.34)	(0.12)	(0.11)	0.05	(0.13)	0.03
Mining	0.94	0.60	0.89	0.58	0.88	0.39	0.92	0.65	0.90	0.56
Manufactures	(0.46)	(0.17)	(0.60)	(0.40)	(0.50)	(0.18)	(0.35)	(0.14)	(0.53)	(0.34)
Utilities	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	-	(1.00)	(1.00)	(1.00)	(1.00)

Source data: Trade Map

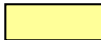
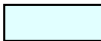
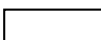
	TSI > 0.5 and After > Before	→ trade specialisation and trend to increase
	TSI > 0.5 and After \leq Before	→ trade specialisation
	TSI < 0.5	→ no trade specialisation

Table 4: Intra-industry trade index – FTA

IIT between Vietnam and:	ASEAN_AU/NZ		ACFTA		ASEAN_INDIA CECA		AJCEP		AKFTA	
	Before	After	Before	After	Before	After	Before	After	Before	After
Agriculture, forestry and fishing	0.67	0.75	0.67	0.57	0.66	0.88	0.89	0.95	0.87	0.97
Mining	0.06	0.40	0.11	0.42	0.12	0.61	0.08	0.35	0.10	0.44
Manufactures	0.54	0.83	0.40	0.60	0.50	0.82	0.65	0.86	0.47	0.66
Utilities	-	-	-	-	-	-	-	-	-	-

Source data: Trade Map

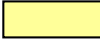
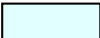
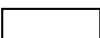
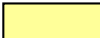
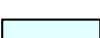
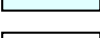
	IIT > 0.5 and After > Before → intra-industry trade and trend to increase
	IIT > 0.5 and After ≤ Before → intra-industry trade
	IIT < 0.5 → no have intra-industry trade

Table 5: Trade complementarity index – FTA

TCI between Vietnam's exports and:	ASEAN_AU/NZ		ACFTA		ASEAN_INDIA CECA		AJCEP		AKFTA	
	Before	After	Before	After	Before	After	Before	After	Before	After
Agriculture, forestry and fishing	0.96	0.97	0.97	0.98	0.96	0.97	0.97	0.97	0.96	0.97
Mining	0.96	0.99	0.98	0.95	0.99	0.95	1.00	0.94	0.99	0.96
Manufactures	0.92	0.98	0.92	0.98	0.95	0.98	0.97	0.97	0.95	0.99
Utilities	-	-	-	-	-	-	-	-	-	-

Source data: Trade Map

	After > Before → trade complementarity increasing
	After ≤ Before → trade complementarity
	- → no trade complementarity

In summary, the ACFTA and AKFTA were competitive economies while the AJCEP and AANZFTA were complementary economies. This helps explain the results of the previous section.

Conclusion

Free Trade Agreements are generally considered to have a positive long-term effect. This report shows however that the short-term multiplier effect of recent FTAs on the Vietnamese economy has been mixed. Comparative advantage analysis shows that the ACFTA and AKFTA were competitive economies, while the AJCEP, ASEAN-India CEPA and AANZFTA were complementary economies. This helps explain the short-term negative impacts. These results also suggest significant trade diversion as a result of these agreements. Finally, we find that the Vietnamese economy has significant comparative advantage in rice, apparel, furniture and footwear from these FTAs, which provides hope for the future.

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