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Reassessing Malaysia's Export Opportunities in the TPP

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Abstract

The main economic motivation for forging bilateral, regional and multilateral agreements for Malaysia is to enhance the export opportunities for its firms as it is relatively dependent on trade for supporting growth. There is an extensive literature on the Trans-Pacific Partnership (TPP) since negotiations were started five years ago and this literature continues to grow after the agreement was signed in February 2016. The literature identifies some overall gains for Malaysia and some sectoral gains, especially in textiles and apparel. The objective of this paper is to re-assess these export opportunities, using a comparative country perspective since the TPP has 12 founding members. It uses three main trade indicators, namely differences in exports shares, extensive and intensive margins to compare Malaysia with Vietnam, Malaysia's main competitor for the US market as Vietnam, like Malaysia, also does not have an existing Free Trade Agreement (FTA) with the US. All three indicators show that Malaysia is rapidly losing grounds against Vietnam in textile and apparel but maintains an advantage in the information technology and communication (ICT) sector. The paper also discusses the implications of these findings on the export opportunities for Malaysia's firms under tariff liberalization in the TPP and closes with some policy suggestions.

Keywords: Trade, Trans-Pacific Partnership, Malaysia

JEL Codes: F14, F15, O24, L6

Reassessing Malaysia's Export Opportunities in the TPP

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1. Introduction

Malaysia's dependence on trade can be attributed to its geographical location and the relatively small size of its domestic economy compared to most of its regional neighbours. The use of foreign direct investment (FDI) as a tool for industrial development has further strengthened this dependence as a majority of these FDI used their investments in Malaysia and the region to forge regional production networks for enhancing their cost and efficiency of production. This gave rise to a flow of 'back and forth' trade, especially in intermediate goods, leading to a progressive increase in the share of merchandise trade in GDP to a peak of 193% in 2000, before falling steadily to 131% in 2014 (ADB, 2015).

Accessing markets for exports is therefore a critical component of Malaysia's trade policy. For example, although Malaysia's original motivation for joining the Association of Southeast Asian Nations (ASEAN) may have been geopolitically driven, the economic rationales grew stronger over time, particularly in the wake of the 1973-75 recession in the U.K. and the USA. ASEAN's subsequent Free Trade Area or the ASEAN Free Trade (AFTA), promulgated in 1992 is Malaysia's first venture into regional Free Trade Agreements (FTAs). Malaysia is also a member of the ASEAN Economic Community (AEC) that evolved from the AFTA. The AEC was subsequently launched in 2015.

At the same time, Malaysia became a founding member of the World Trade Organization (WTO) in 1995. However, the protracted negotiations under the Doha Round of the WTO for further multilateral liberalization led to a flurry of bilateral and regional initiatives in Southeast Asia, including Malaysia, as alternative trade liberalization commitments to the WTO. To date, Malaysia has signed and ratified seven bilateral agreements and it is a party to the ASEAN-Plus agreements with China, Japan, Korea, India and Australia and New Zealand. It is also in the process of negotiating another four FTAs.

Malaysia joined the Trans Pacific Partnership (TPP) in the third round of negotiations in October 2010 and signed the agreement in February 2016 with the other 11 founding members. The agreement has not been ratified and Malaysia plans to ratify it within two years.¹ The agreement will cover a market of 800 million people with a combined GDP of USD 27.5 trillion and one of the important economic motivations for signing the agreement is the increase in market access for Malaysian exporters.

The objective of this paper is to re-assess Malaysia's export opportunities in the TPP as increasing merchandise exports is important at this juncture in Malaysia's development because services exports are still weak. At the same time, the continuing fiscal deficit since the Asian Financial Crisis (AFC) and narrowing trade surplus in recent years have raised fears of the possible emergence of a twin deficit.

¹ The expected date for the agreement to enter into force is early 2018. If all the signatories have not ratified within two years of the date of signature, then if at least six of the signatories, which together account for at least 85% of the combined gross domestic product (GDP) of the original signatories have ratified, 60 days after the expiry of this period, the agreement will still enter into force.

The paper is divided in the following sections: a literature review synthesizes the existing studies in section 2, followed by a brief overview of Malaysia's trade with TPP countries. The trade analysis in the paper is covered in section 4 while the impact of tariff cuts on selected sectors is examined in Section 5. The conclusion in the last section summarizes the key findings and some policy suggestions for moving forward.

2. Literature Review

Since the TPP has 30 chapters, there is an extensive literature that examines the agreement from various perspectives, such as governance, comparisons of commitments in the TPP with other FTAs, specific issues such as access to medicine, dispute settlement, labor etc. In line with the objective of this paper, the literature review in this section will only cover market access issues.

The Malaysian government commissioned two studies, one from Institute for Strategic and International Studies (ISIS, 2015, and another from Pricewaterhouse Coopers (PwC), 2015). The former used combined discussions with key stakeholders, perception, factual and impact analysis based on the final text of the agreement to examine the impact of the TPP on Malaysia's security, social and economic environment. The economic analysis indicates a positive impact due to improved market access to four 'new' FTA markets or markets with no prior FTAs with Malaysia, namely, the US, Canada, Mexico, and Peru. In the sectoral analysis, exporters of products such as electrical and electronic, chemical, palm oil, rubber, wood, and textile products, as well as automotive parts and components are expected to become more competitive than the non-TPP countries which is not surprising since tariffs and non-tariff measures will be eliminated progressively in TPP partner countries.

The second study combined a dynamic multi-regional Computable General Equilibrium (CGE) model with in-depth sectoral analysis on five pre-agreed sectors with the Ministry of International Trade and Industry (MITI), namely construction, electrical and electronics ("E&E"), oil and gas ("O&G"), palm oil and textiles. The CGE model was built on the latest Global Trade Analysis Trade Project (GTAP) 9 database released in May 2015, with 2004, 2007 and 2011 as the reference years and 140 regions for all 57 GTAP commodities. The CGE analysis show that Malaysia will stand to gain cumulatively from USD107 billion to USD211 billion over 2018-2027 due to elimination of all tariffs and a reduction of non-tariff measures (NTMs) by 25-50 per cent. Approximately 90 per cent of the gains are driven by the reduction in NTMs. The sectoral analysis, based on secondary trade and industry data analysis and stakeholder consultation, indicate overall positive gains for textiles, E&E, automotive, plastics and wood sectors.

Several other CGE models have also measured the impact of the TPP on member and non-member countries. Of these, some earlier studies especially those before 2016, are not based on the actual text but rather a hypothetical TPP agreement (see for example Petri et al., 2012). Petri and Plummer (2016) subsequently updated their 2012 study using the TPP tariff schedule and non-tariff barriers (NTBs) adjusted for the difference between the Korea-US FTA template that was used in the 2012 study and the published TPP text. They found large gains for Japan, Malaysia and Vietnam. World Bank (2016)'s CGE model using the same methodology as Petri and Plummer (2016) also indicates that by 2030, the TPP could potentially raise members' GDP by 0.4 per cent to 10 per cent. Malaysia and Vietnam are the largest gainers (10 per cent and 8 per cent respectively by 2030) due to the removal of import tariffs and NTMs at home and in their large export markets. The textile and garment sector is singled out to be a sector

that will gain in terms of increased output and exports due to the prevalence of relatively high tariffs and NTMs and the comparative advantage of TPP member countries like Vietnam in this sector.

The Penang Institute conducted two studies; one examining the impact of the TPP on Penang and another assessing the competitiveness of Malaysian firms measured against their peers using a sample of firms from TPP countries as well as non-TPP countries. Using several financial indicators as measures of competitiveness, the latter study (Lim 2016) found that Malaysia has only a handful of firms that are internationally competitive and are in general disadvantaged by size compared to their international counterparts. This has implications on the export capabilities of Malaysian firms and their ability to take advantage of the benefits from tariff and non-tariff liberalization in the TPP agreement, after ratification.

Based on the literature review, sectoral studies have already been conducted mainly based on CGE analysis, secondary data and in consultation with stakeholders. We propose to use constructed trade indicators for comparisons with Malaysia's key competitor/s in the TPP to reassess the export opportunities of Malaysia in its key manufacturing export, namely information and communication technology (ICT) and textile and apparel, given that the latter is identified as a key beneficiary sector from the TPP. A comparative analysis, based on a common set of indicators, is important as the TPP is not a bilateral agreement and enhanced market access is available for all the 12 members of the TPP.

3. Overview of Malaysia's Trade with TPP Countries

Table 1 shows that import and export to TPP countries amount to 57 per cent of Malaysia's total trade in 2000 but this has declined gradually to over 42 percent in 2014 due mainly to the fall in the share of the US and the converse rise of China's share (Tham and Kam 2016). Note that there is a trade surplus throughout this period.

The relative importance of each TPP member country in Malaysia's exports is shown in Table 2. In terms of total trade, Singapore, Japan and the US contribute up to 80 per cent and 83 per cent respectively of Malaysia's total exports and total manufacturing exports to the TPP countries. In the case of ICT exports, the share of these three countries goes up to 88 per cent while the share for Malaysia's textiles exports for these three countries is 78 per cent. Excluding Singapore, the US is the largest export destination for Malaysia's ICT exports and it is also the single largest destination (56 per cent) for its textiles exports to the TPP countries.

We will focus our trade analysis the following section on the US market alone since it is the only country within the top three TPP trade partner countries without an FTA with Malaysia. There are, however, four other TPP countries without an FTA with the US: namely Japan, New Zealand, Brunei, and Vietnam. We therefore include Vietnam in our trade analysis on exports to the US as these are two developing TPP member countries with significant manufacturing development but without an FTA with the US.

Table 1: Malaysia Trade with TPP Countries,² 2000-2014

	Export to TPP countries (USD Billions)	Share of TPP export to total export	Import Total (USD Billions)	Share of TPP import to total import	Trade Balance (X-M), USD Billions
2000	56.0	0.57	45.6	0.56	10.4
2001	48.8	0.55	38.1	0.52	10.7
2002	50.5	0.54	39.4	0.50	11.2
2003	53.4	0.51	39.3	0.48	14.1
2004	63.1	0.50	47.3	0.45	15.8
2005	71.6	0.51	49.1	0.43	22.6
2006	78.6	0.49	54.4	0.41	24.2
2007	81.0	0.46	57.9	0.40	23.1
2008	89.0	0.45	61.4	0.39	27.6
2009	65.7	0.42	49.3	0.40	16.4
2010	81.4	0.41	64.8	0.39	16.6
2011	90.2	0.40	73.3	0.39	16.9
2012	95.4	0.42	74.3	0.38	21.2
2013	93.4	0.41	73.7	0.36	19.7
2014	97.8	0.42	72.5	0.35	25.3

Source: Tham and Kam 2016

Table 2. Distribution of Malaysia's trade and exports to TPP countries, 2014 (%)

	Total	Manufacturing	ICT	Textiles
Australia	10.30	7.41	4.21	9.16
Brunei Darussalam	0.88	0.57	0.10	0.30
Canada	0.83	1.22	0.68	3.37
Chile	0.18	0.25	0.14	1.01
Japan	25.84	16.95	16.60	16.05
Mexico	1.63	2.49	3.57	1.37
New Zealand	1.64	0.75	0.61	0.76
Peru	0.10	0.14	0.10	0.55
Singapore	34.00	34.64	37.78	6.11
USA	20.14	30.70	33.24	56.04
Viet Nam	4.48	4.87	2.97	5.29
Total	100.00	100.00	100.00	100.00

Source: UNCOMTRADE database

² Aggregate of 11 countries – Australia, Brunei, Canada, Chile, Japan, Mexico, New Zealand, Peru, Singapore, USA, Vietnam.

4. Comparative Trade Analysis: Malaysia and Vietnam

First, we examine the overall export competitiveness of Malaysia and Vietnam in the US market using the differences in both country's export shares in the US – based on our constructed indicator called the Export Share Difference Analysis (ESDA). The method is as follows:

$$ESDA = \left(\frac{X_{j,i,n,t}}{\sum_z X_{z,i,n,t}} - \frac{X_{k,i,n,t}}{\sum_z X_{z,i,n,t}} \right) * 100$$

$X_{j,i,n,t}$ = export of country (j) in goods (i) to country (n) at year (t)

$X_{k,i,n,t}$ = export of country (k) in goods (i) to country (n) at year (t)

$\sum_z X_{z,i,n,t}$ = Total (z) country exports of goods (i) into country (n) at year (t)

$\frac{X_{j,i,n,t}}{\sum_z X_{z,i,n,t}}$ = is the export share of country (j) in total z countries (or world) exports into country (n) in sector (i) at year (t)

$\frac{X_{k,i,n,t}}{\sum_z X_{z,i,n,t}}$ = is the export share of country (k) in total z countries (or world) exports to country (n) in sector (i) at year (t)

If $ESDA > 0$, export share of country (j) in country (n) > export share of country (k) in country (n)

Basically, in this study, j = Malaysia and k = Vietnam and n = USA.

In year t,

$$ESDA = \left(\left(\frac{\text{Malaysia exports of } i \text{ to USA in year } t}{\text{World exports of } i \text{ to USA in year } t} \right) - \left(\frac{\text{Vietnam exports of } i \text{ to USA in year } t}{\text{World exports of } i \text{ to USA in year } t} \right) \right) * 100$$

- $ESDA > 0$ means Malaysia's export share into US is more than/higher than Vietnam's share in US market
- $ESDA < 0$ means Vietnam share in US market is more than/higher than Malaysia's export in to US
- Declining ESDA means Vietnam is gaining more share in the US market compared to Malaysia
- Increasing ESDA means Malaysia is gaining more share in in the US market compared to Vietnam

Figure 1 shows that Malaysia export share in the US is higher than Vietnam in beverages and tobacco; crude materials, inedible, except fuels; animal and vegetable oils, fats and waxes; chemicals and related products, n.e.s., machinery and transport equipment; commodities and transactions not classified elsewhere in the SITC and ICT. Of all these goods, the difference in market share is largest³ in animal and vegetable oils because it is a major export for Malaysia and not for Vietnam. Since 2000, Malaysia has larger share of this product relative to Vietnam owing to the large US import of palm oil from Malaysia. With the exception of a small drop in 2008 Malaysia leads this product category in terms of export shares in the US. The decline after 2010 is because of the drop in Malaysia's share in the US while Vietnam's rise is too small and its share is negligible.

Malaysia's core manufacturing exports to the US (machinery and transport equipment and ICT) are all losing their respective market shares to Vietnam. In fact, Malaysia manufacturing exports, in aggregate, has been losing its market share in the US relative to Vietnam since 2000. In 2013, Vietnam's market share in the US market for manufacturing exports has exceeded Malaysia's market share. Malaysia has also lost its export share to Vietnam in industries such as textiles, manufactured goods classified chiefly by material, and miscellaneous manufactured articles. In short, Malaysia has either lost or is losing its US market share to Vietnam in almost all products after the 2008 GFC, with textiles having the biggest loss.

We have disaggregated the ICT products in Figure 2. Although Malaysia's ESDA in ICT remains positive since 2000, it is also losing its market share to Vietnam. Electronic components remain the most important ICT export product for Malaysia in the US market. After the 2008 GFC, while other ICT products have experienced a loss in its export share to Vietnam, electronic components have actually increased its share in the US compared to Vietnam. Malaysia has experienced the biggest decline in its US market share to Vietnam in computer and peripherals products.

Disaggregating the textile products, Figure 3 shows that Malaysia used to have a higher US market share than Vietnam from 2000 to 2002. However, by 2005, Malaysia has lost its US market share in all sub-sectors of textiles to Vietnam, with the full abolition of the quota system under the Multi-fibre Arrangement (MFA) in that year (Esho 2015). The sharpest decline is in clothing and accessories. Malaysia did regain some market share over Vietnam in textile fibres from 2008 to 2010 but this is still less than Vietnam's share in the US market.

Bearing the above analysis in mind, it is important for Malaysia to ratify the TPPA for the above trend will be further exacerbated if Vietnam ratifies while Malaysia does not since the former will have increased market access to the US while the latter will not.

Intensive and Extensive Margins

Malaysia's loss in market share in exports to the US may be attributed to changes in product variety or per unit value of product exported. To further analyze these two conjectures, we invoke two important concepts in export expansion –the *extensive* and *intensive* margin. Extensive margin is referred to as the increase in diversity or variety of exports. Intensive margin points to the average value per product exported. WITS (2013) defined both margins in a series of scenarios. Intensive margin represents either an increase, decrease or extinction of products in established markets while extensive margin indicates either new products in new

³ Because the difference is so much larger than other products, it requires a different axis in Figure 1.

or existing markets; or existing products in new markets. Since this study focuses on the US market alone, we define extensive margin as product diversification in established markets. Since there is only one destination country, extensive margin is the simple count of the number of products exported from country of origin (o) to destination market (d), N_{od} . Intensive margin is the export value of country origin to destination, Ex_{od} per product traded, which is (Ex_{od}/N_{od}) .

Figure 4 shows the extensive and intensive margins of Malaysia and Vietnam manufacturing exports to the USA from 2000 to 2014. Malaysia has higher number of manufactured exports to the USA compared to Vietnam. However, as the figure suggests, the variety of Malaysia's export products to the US has stagnated over the years.⁴ Vietnam on the other hand, has increased in its variety of exports and hence it is rapidly narrowing its product variety gap with Malaysia.

The trend in intensive margin shows that although Malaysia has more variety of exports to the US, but the value of per export good has been declining compared to Vietnam. The decline started in 2005 where one possible explanation is that higher value products are being exported to China, especially in the ICT sector (Tham and Kam 2015). On the other hand, Vietnam's intensive margin of exports has surpassed Malaysia's in 2011, implying that the country is capturing more value for its exports compared to Malaysia since that year.

We move our focus to the main competing manufacturing industries – textiles and clothing and the ICT. Before 2002, Figure 5 shows that Malaysia exported more variety of textile and clothing to the US compared to Vietnam. However, after the US extension of normal trade relations (NTR) status to Vietnam in 2001, the number of products have risen sharply from 2000 to 2002, overtaking Malaysia. While Malaysia's extensive margin has been trending downward, Vietnam's number of product variety has remained more or less consistent over the years.

The steeper increase in intensive margin shows that Vietnamese textile and clothing products have increased in value at a faster rate than Malaysia's. This pattern is similar in all the textile and clothing sub-sectors with the exception of textiles fibers. Extensive margin patterns have been flat for Malaysia since 2000 in the textile and yarn (SITC 65) and clothing and accessories (SITC 84) sectors while it shows sharp increases from 2000 to 2002 for Vietnam before staying consistently at a higher margin than Malaysia. Malaysia however, have exported more types of textiles fibers to the US than Vietnam. Intensive margin however, shows that they are of lower value compared to the higher value segment that is dominated by Vietnam. The divergence in intensive margin after 2004 is visible in both sub-sectors with Vietnam moving ahead of Malaysia into more valuable exports of textile products.

Malaysia, on the other hand, fares better than Vietnam in the ICT and its sub-sectors, although the difference is narrowing over time. Figure 6, based on the extensive and intensive margins, suggests that Malaysia's exports in ICT to the US are more diversified and of higher value

⁴ The extensive margin method measures an increase in variety of exports. Since it indicates the number of product line exports, it should be interpreted with caution. A rise in extensive margin here may imply an entry of new product or entry of a previously exited product. A decline may also imply an exit of existing products or lower number of entry of new product with higher number of products exiting. The extensive margin merely shows at a particular period time whether the varieties have either increased or decreased.

compared to Vietnam. In all the ICT subsectors, Malaysia has more diversity in its exports to the US, with consumer electronic equipment leading in the number of product lines. Malaysia is consistently ahead of Vietnam in electronic component exports, be it in the extensive or intensive margin, especially after the Global Financial Crisis where the value per product of electronic component has increased sharply leading to a significant gap with Vietnam. There are also segments in this sector where the extensive margin is reducing in tandem with an increasing intensive margin. This indicates a narrowing in number of exports into higher value niche segment of the market, as seen in the communications equipment and miscellaneous electronics sector.

There are signs, however, that warrant concerns for Malaysia despite its dominance in the ICT sector. In terms of the intensive margin, there is a downward trend since 2005. This means the increase in product value in the electronic component; communications equipment and miscellaneous electronic has been offset by the significant declining values of consumer electronic equipment and computer and peripheral equipment exports. Despite contributing most in terms of product variety, both intensive and extensive margins of consumer electronic equipment export are declining. In comparison, Vietnam has rising extensive and intensive margins in ICT. Vietnam is getting more similar to Malaysia in the number of ICT products and has a sharp increase in the value of these products from 2011. This significant increase is attributed to the growth in value of communications and equipment and computer and peripheral equipment exports. In this sector, Vietnam is closing the gap with Malaysia in terms of number of products entering the US market and in 2014, it even surpassed Malaysia in its intensive margin of trade. In short, Vietnam is catching up with Malaysia in the ICT sector.

Figure 1: ESDA between Malaysia and Vietnam in the US (as a total world export to US)

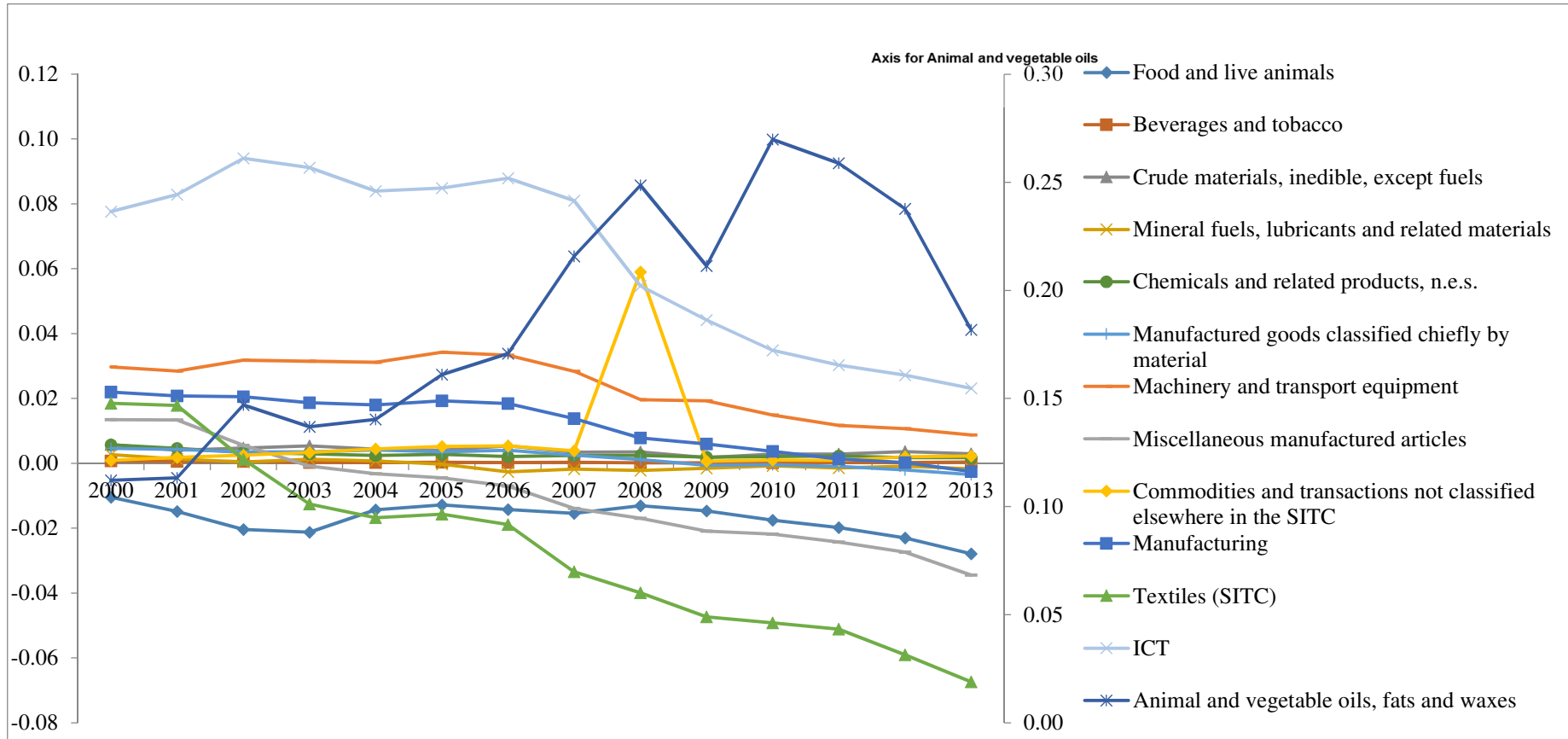


Figure 2: ESDA in ICT export share between Malaysia and Vietnam in the US, (as a total world export to US)

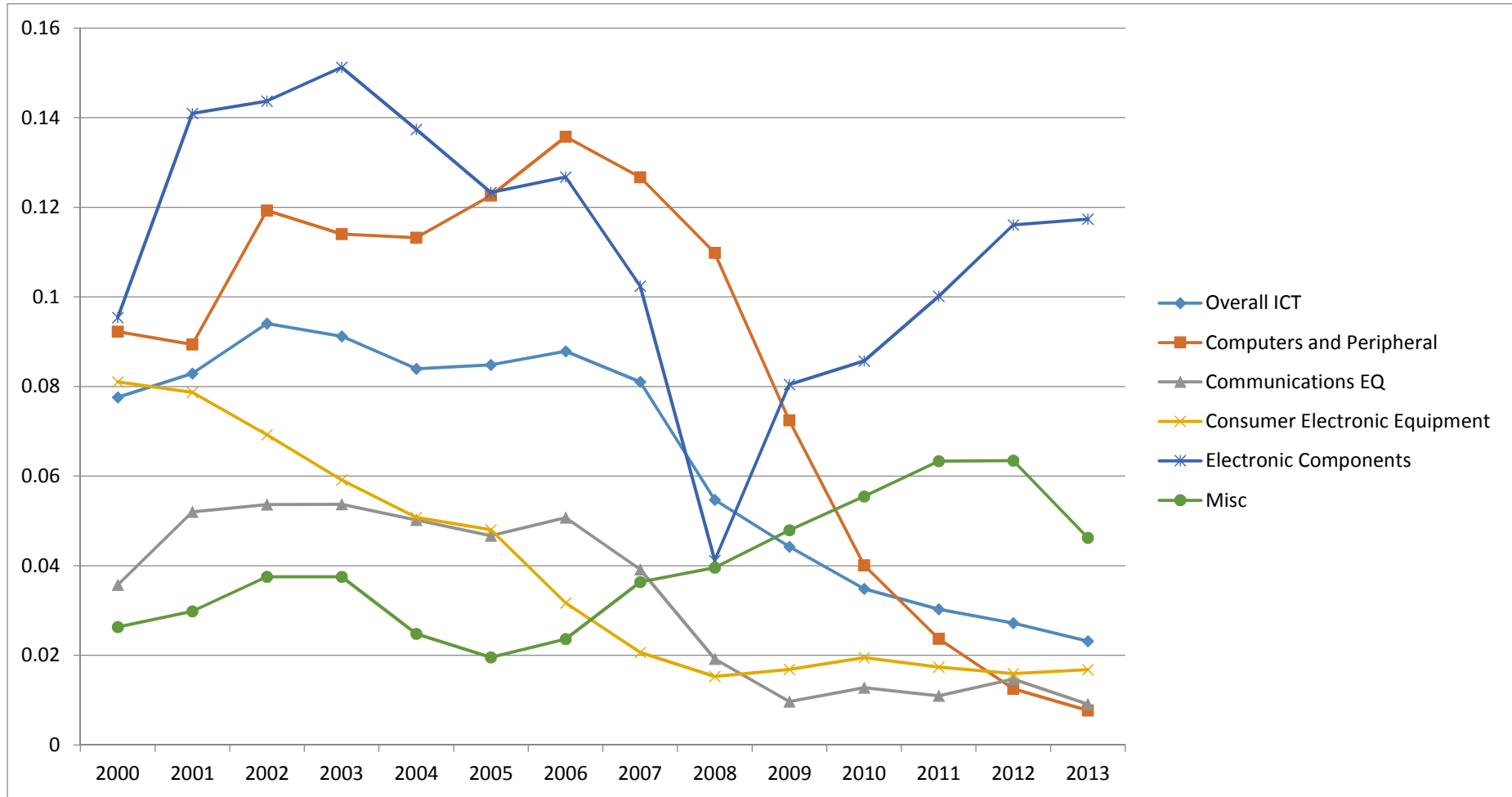


Figure 3: ESDA in Textile export share between Malaysia and Vietnam in the US, (as a total world export to US)

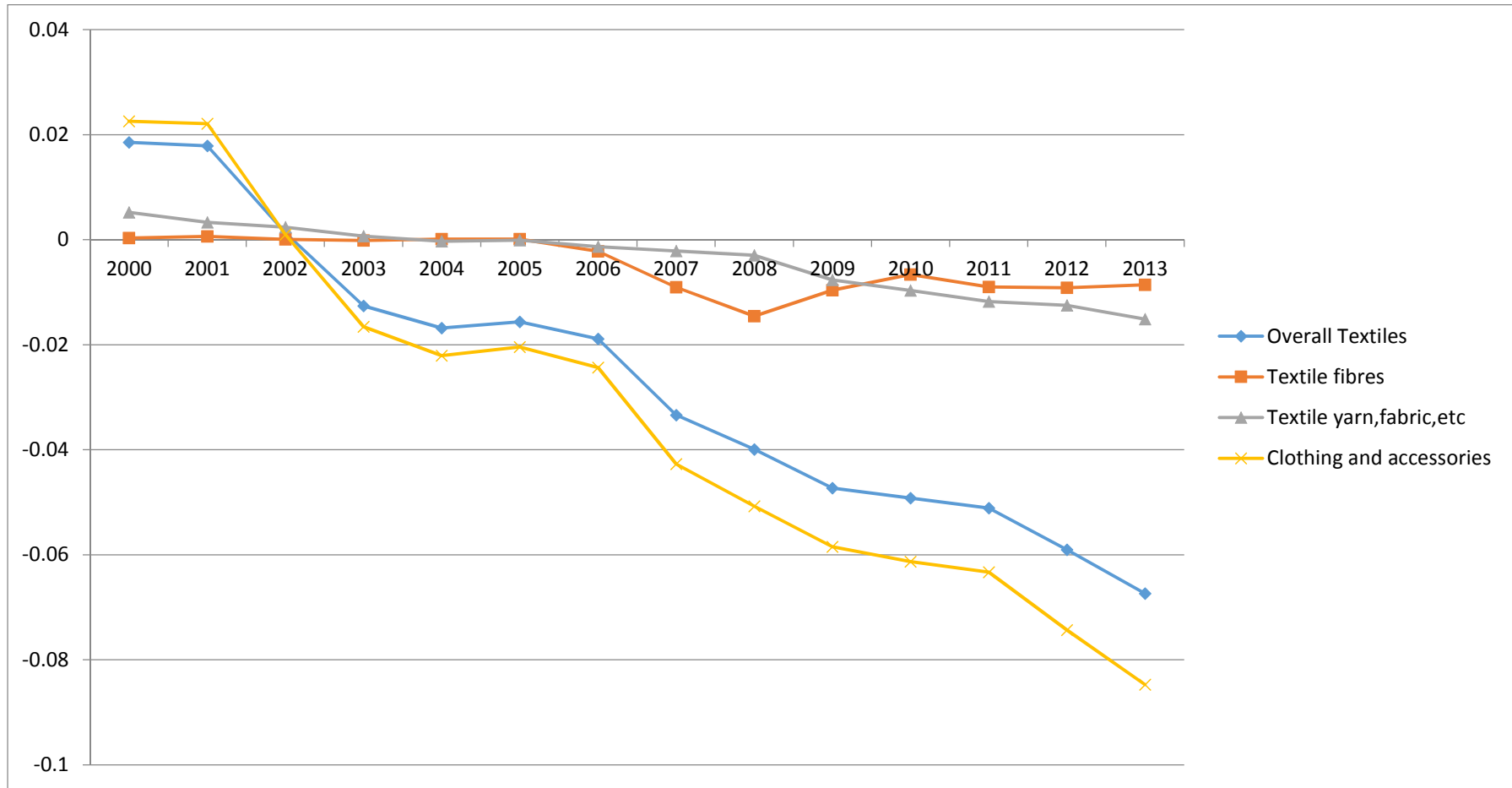
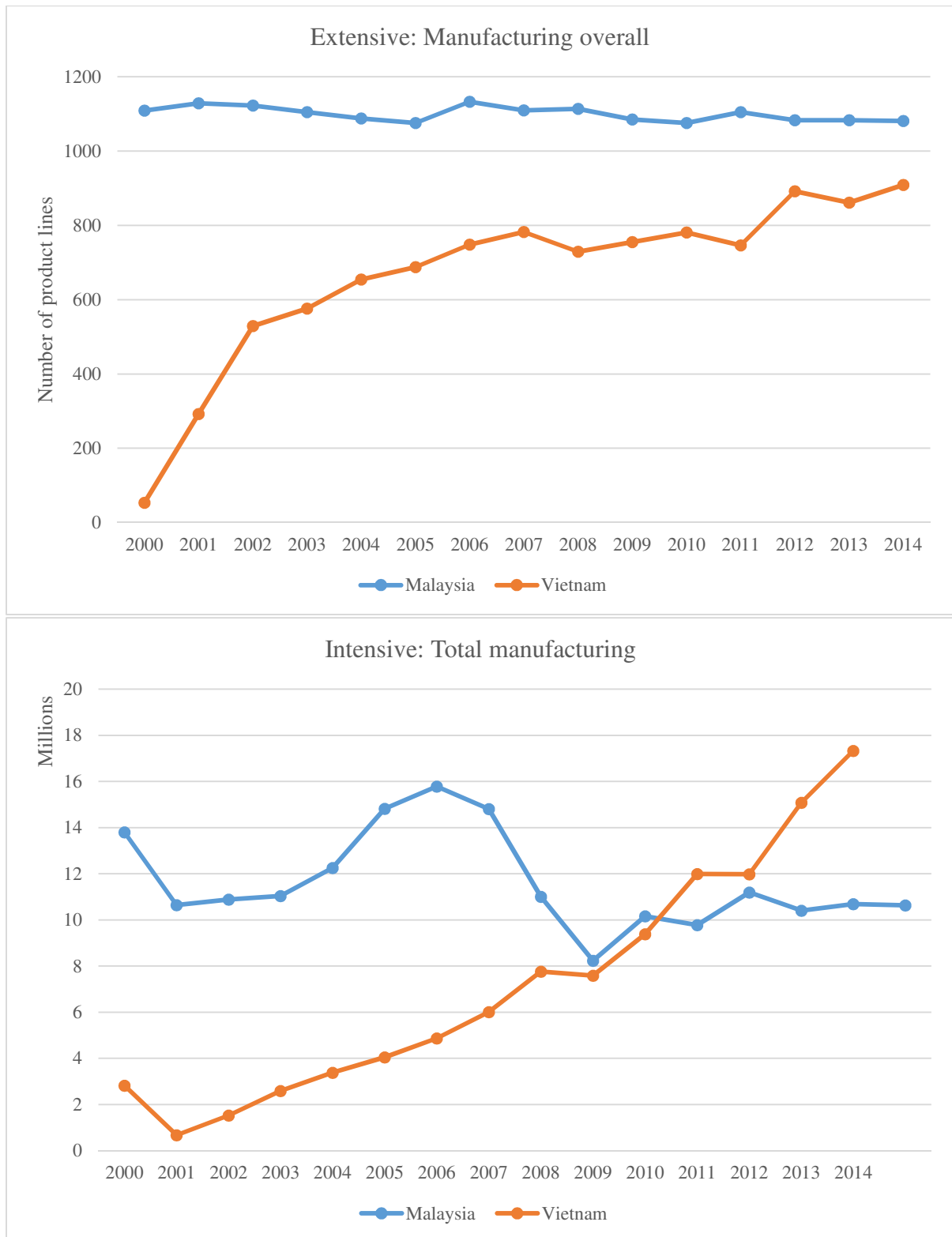
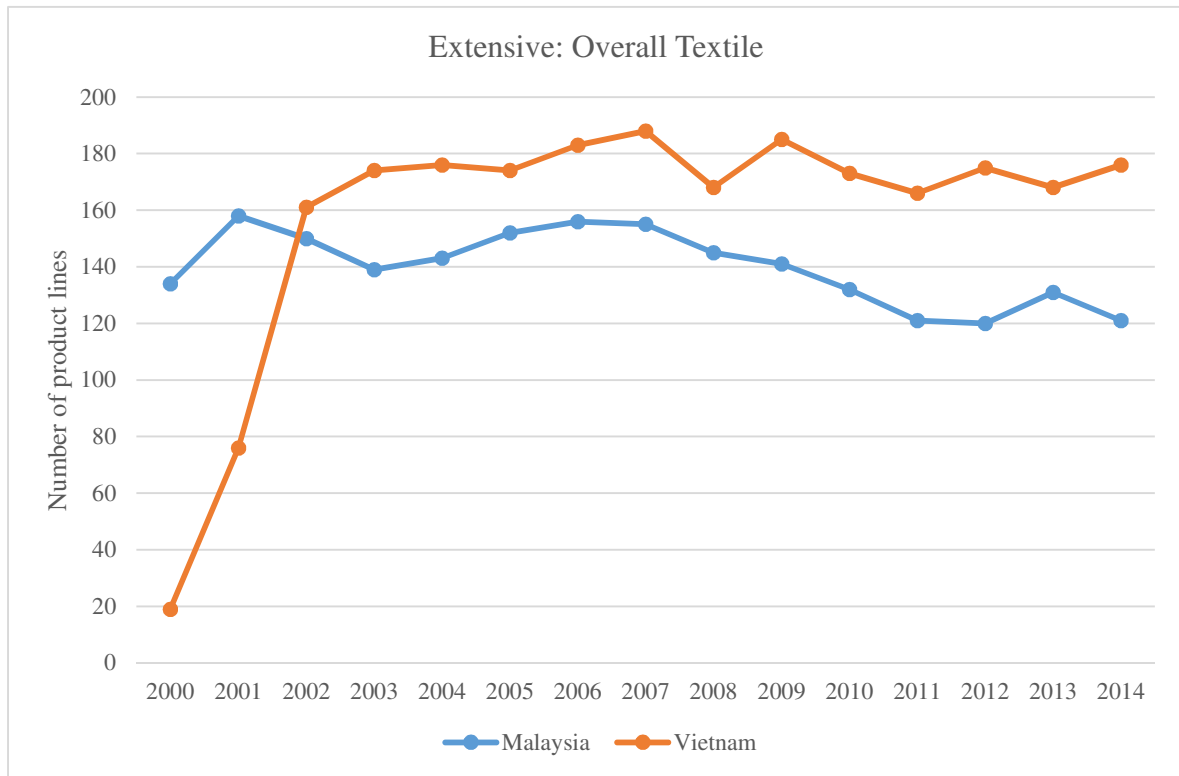


Figure 4: Extensive vs Intensive Margin Manufacturing Exports to the USA

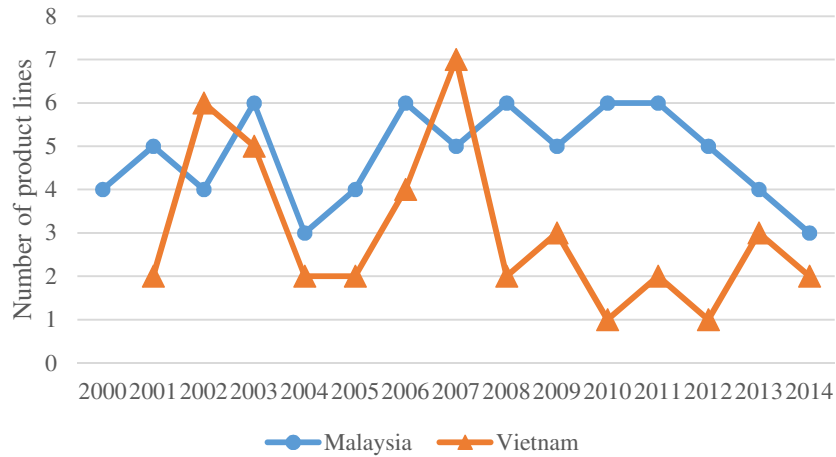


Source: Calculated from UN Comtrade

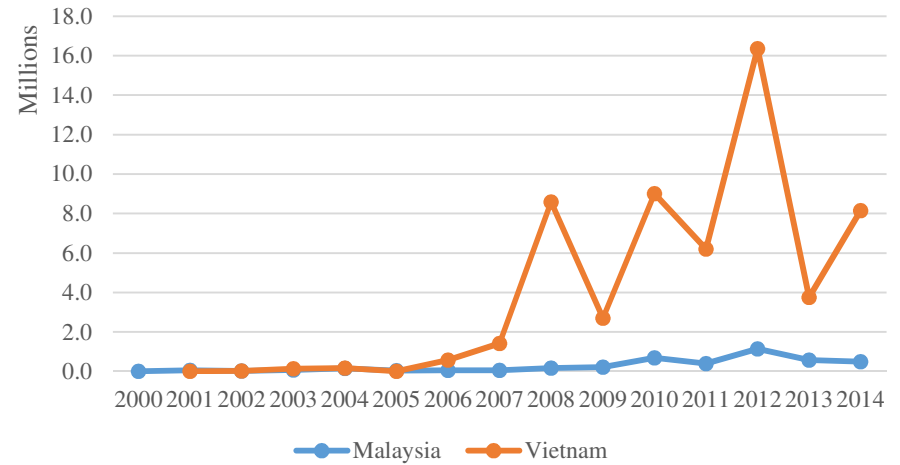
Figure 5: Extensive vs Intensive Margins for Textiles, clothing and accessories (SITC)



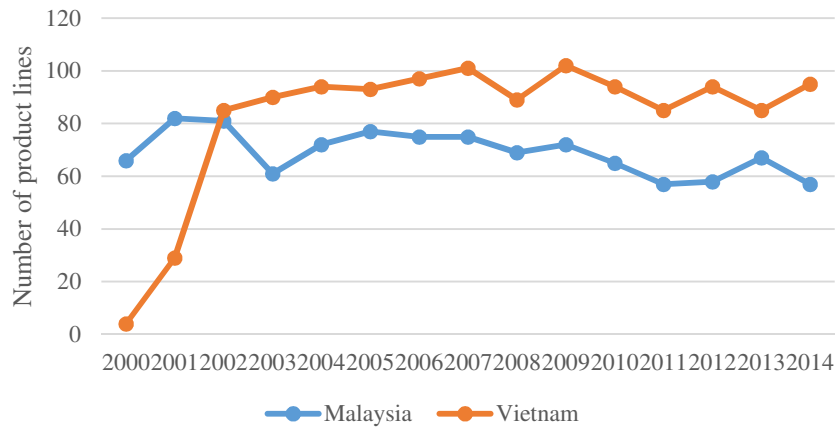
Extensive: Textile Fibres (SITC 26)



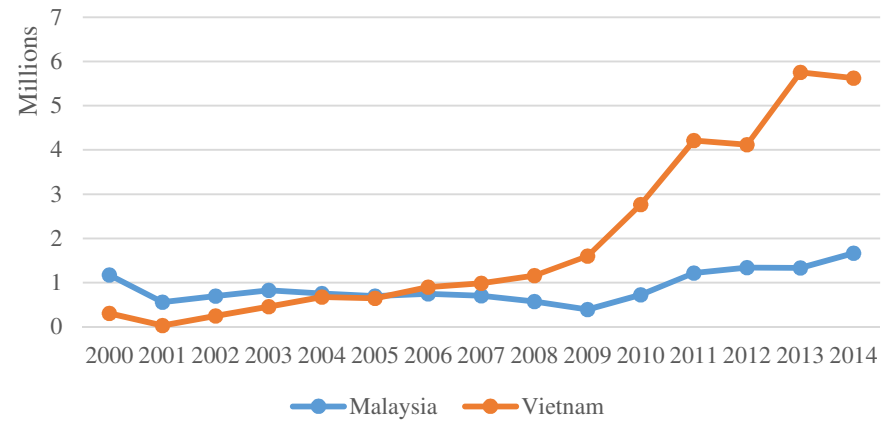
Intensive: Textile Fibres (SITC 26)



Extensive: Textile Yarn, Fabric etc. (SITC 65)



Intensive: Textile Yarn, Fabric etc. (SITC 65)



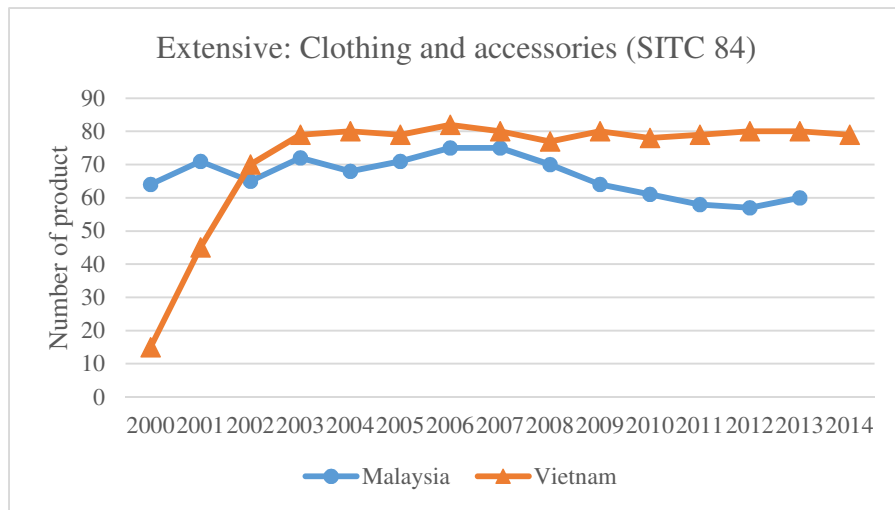
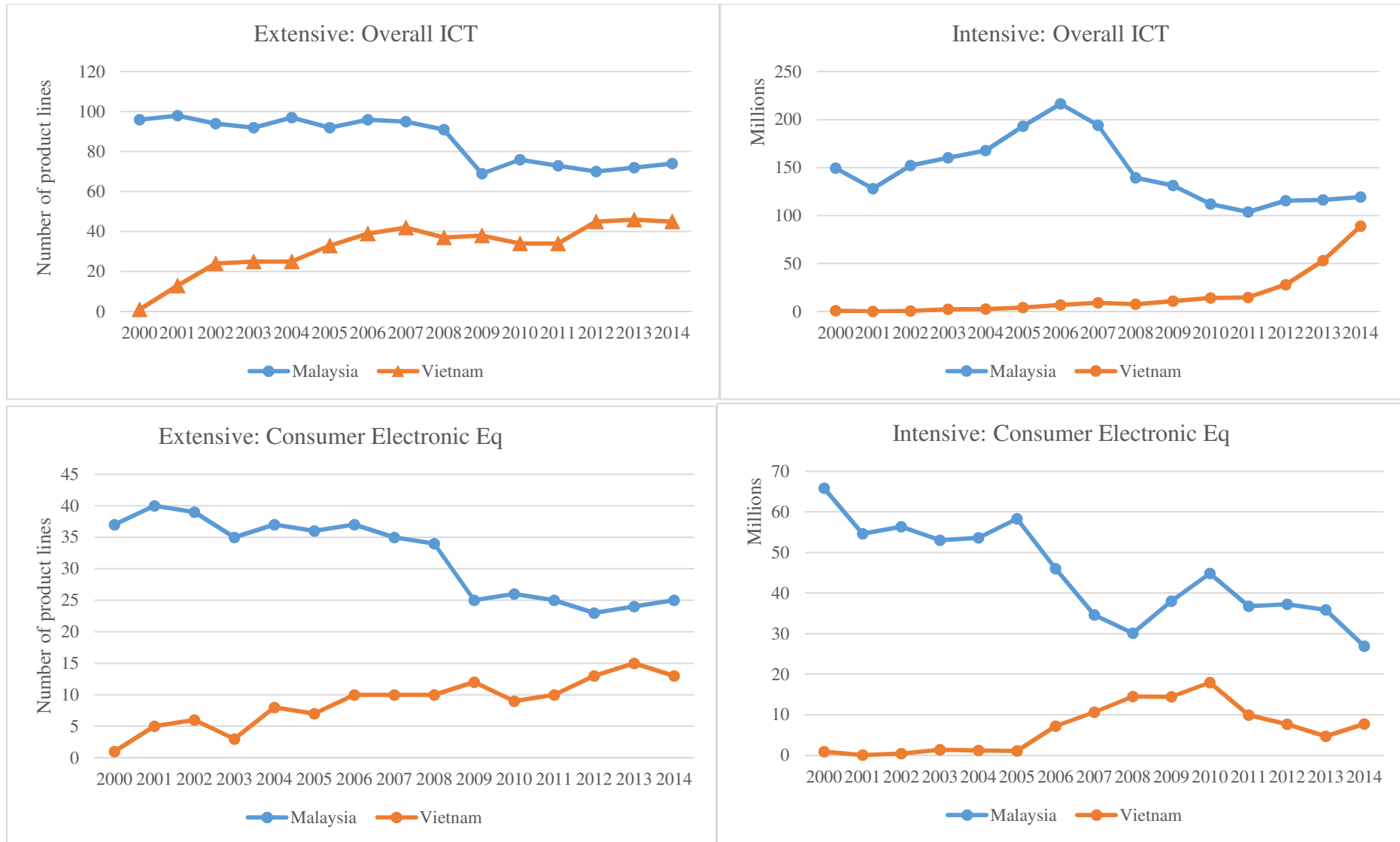
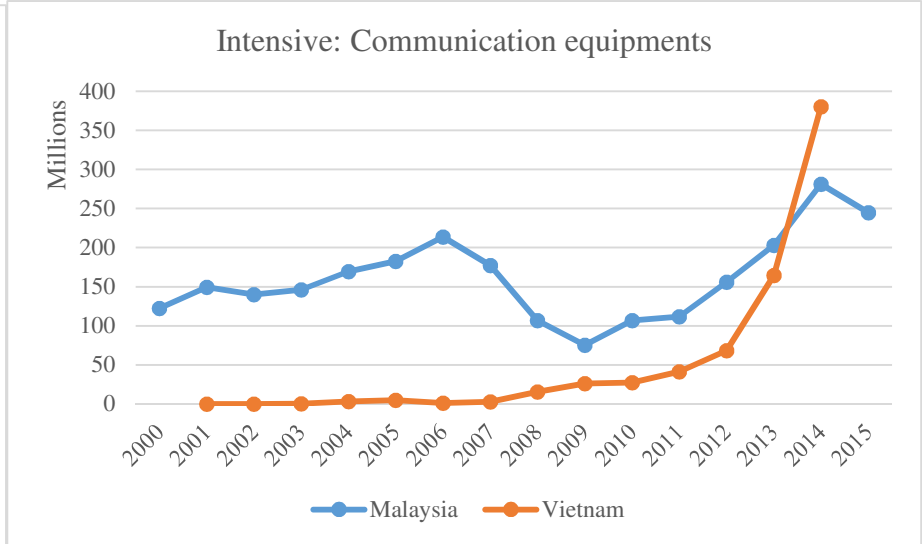
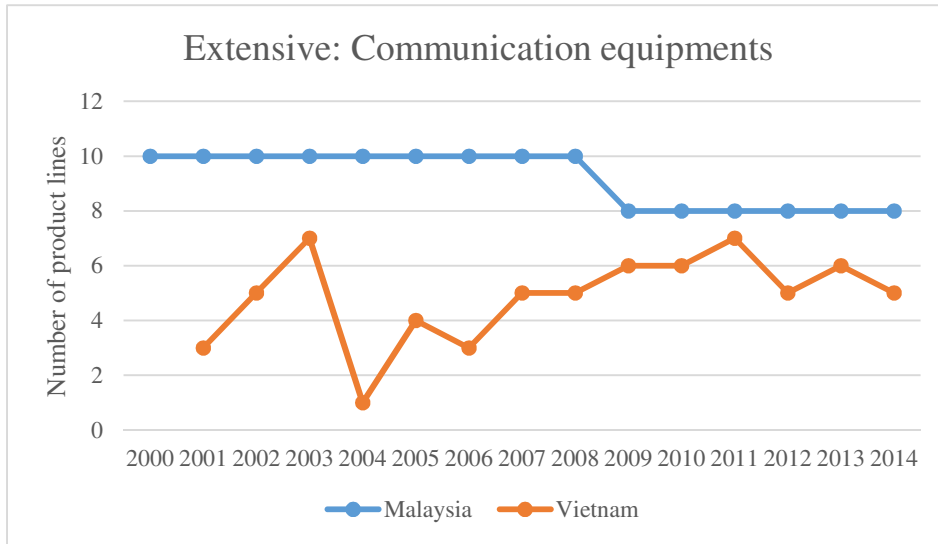
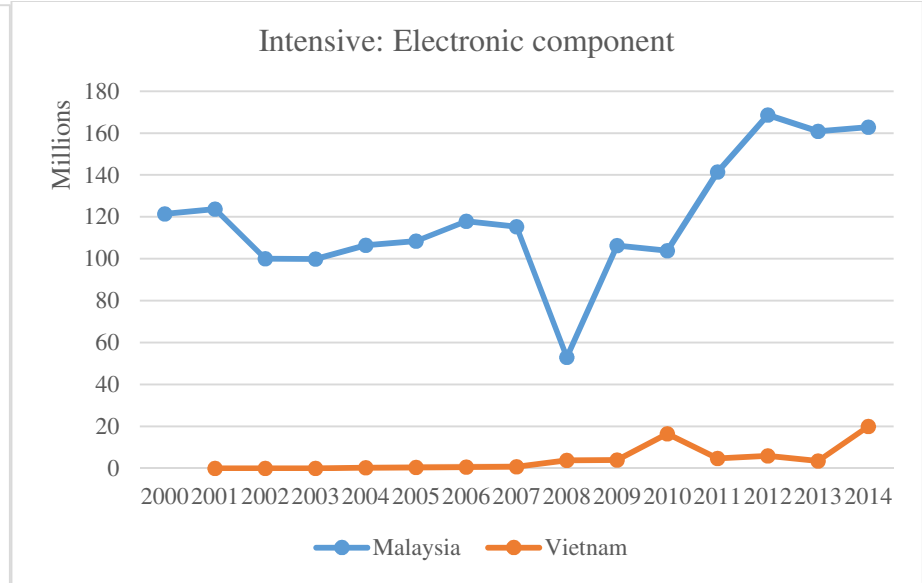
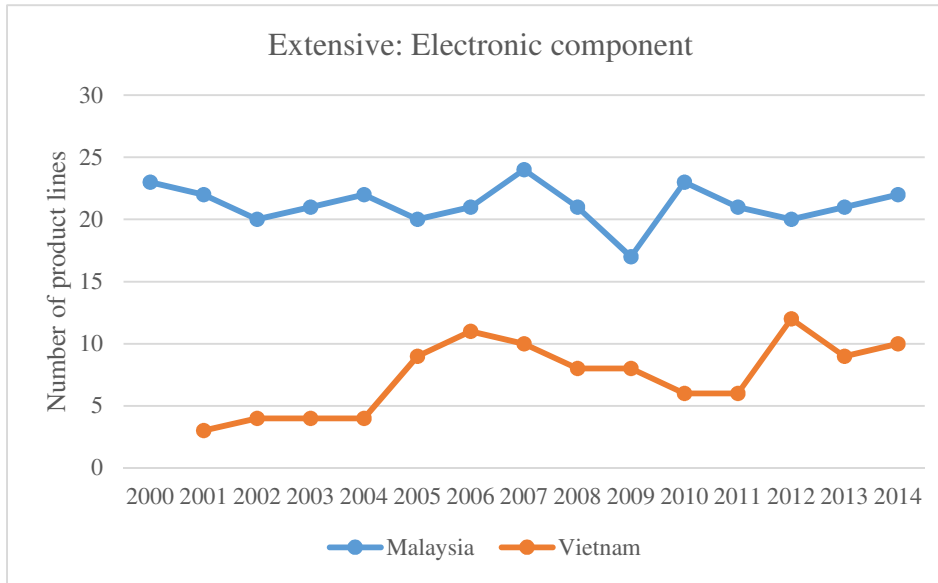
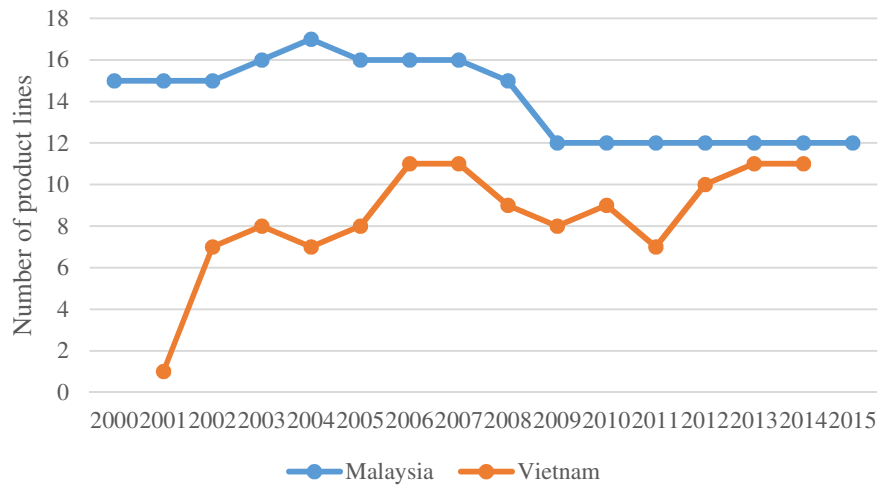


Figure 6: ICT (HS 96 based on OECD definition)

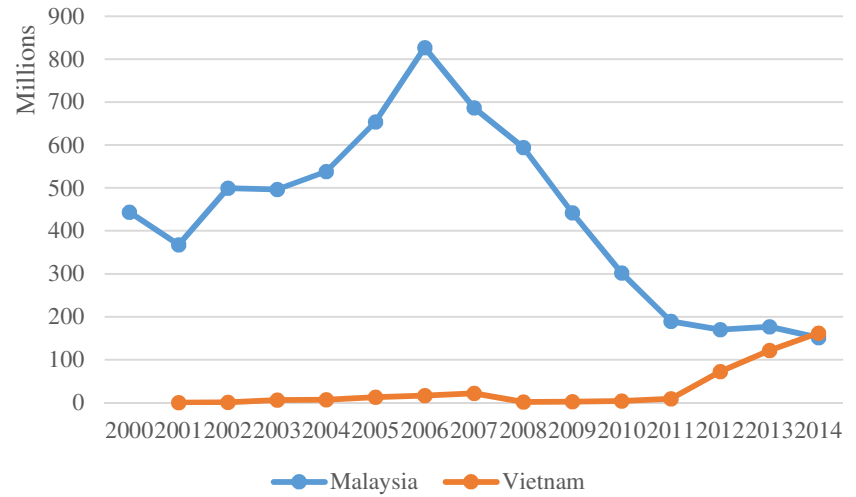




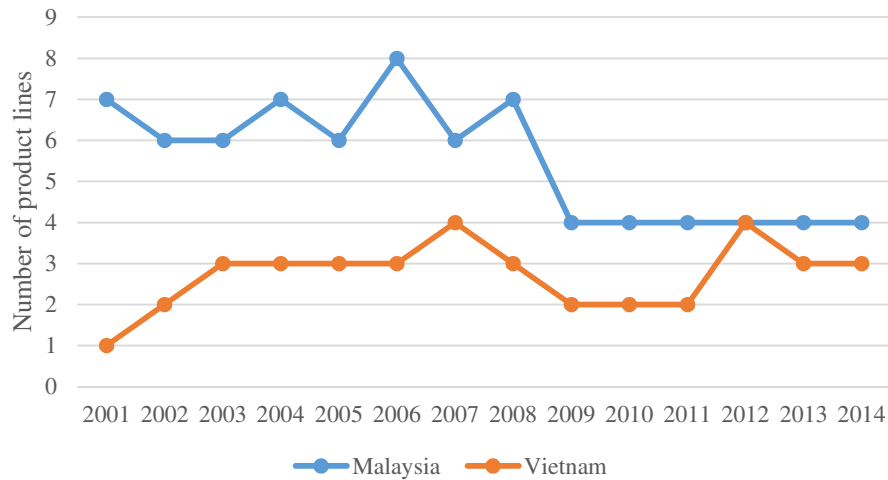
Extensive: Computer and peripheral equipment



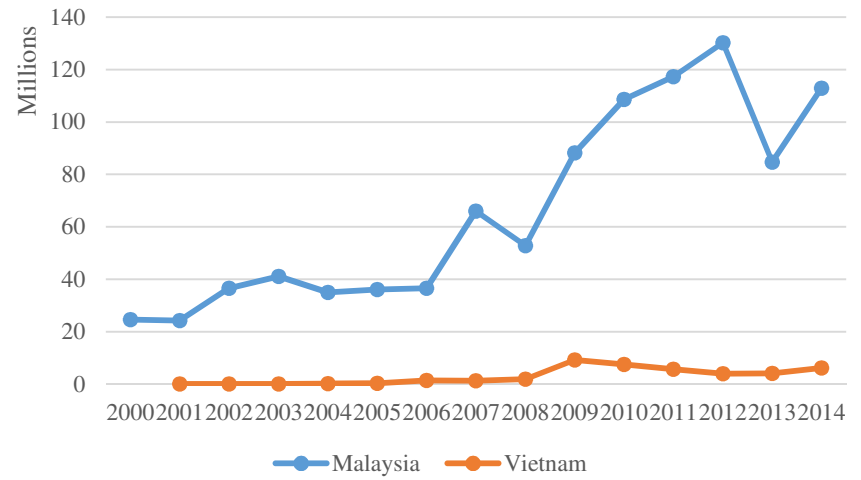
Intensive: Computer and peripheral equipment



Extensive: Misc electronics



Intensive: Misc Electronics



5. Impact of Tariff Liberalization on Selected Sectors in Malaysia

Although tariffs among TPP countries are already relatively low, tariff reduction schedules in the TPP agreement can further open up market access for certain products. The average effective tariff for intra-TPP trade is low, at about 2.4 per cent, but high tariff peaks are prevalent to protect sensitive products.

5.1 Textile and Apparel

In the case of textiles and apparel, existing tariffs in the US varies according to categories of products such as yarn, woven fabric, knit fabric, non-woven fabric, industrial fabric and apparel and this can range from 0 – 32 per cent (MKMA undated). Tariff liberalization is progressive by phases over 13 years, as shown in Table 3.

Table 3. Duty Elimination for Textile and Apparel Exports to the USA

Time-line	Percentage of Tariff Line Eliminated under the TPP	Percentage of Total Export to US
Entry into Force	1,1,78 lines (72.9%)	36.7%
Duty Free Year 5	117 lines (7%)	3.0%
Duty Free Year 11	145 lines (8.97%)	46.86%
Duty Free Year 13	177 lines (10.95%)	13.44%

Source: MKMA, 2016

In terms of market access, the reduction in tariffs for 73 per cent of the textile and clothing (t&c) tariff lines, covering 37 per cent of total exports to the US is deemed to be a substantial gain for this sector as without the TPP, only 11 per cent of the t&c tariff lines are duty free and they only make up 0.9 per cent of total exports.

However, the TPP applies relatively stringent rules of origin (ROO). In the case of textiles and apparel, the TPP applies the yarn-forward principle, meaning textile products must be produced in TPP countries from yarn forward. Therefore, for apparel products to be eligible for preferential treatment, the fabric must be made of yarn spun in TPP countries. However, four exceptions are allowed: (i) certain materials listed in the short supply list⁵ can be sourced from outside TPP, (ii) certain manufacturing phases (for example, dyeing, weaving, etc.) can be conducted outside TPP; and (iii) a country may be able to use non-TPP materials in exchange for its export of certain textile goods to another country.

⁵ According to USITC undated, (page 261), “The TPP’s short supply list contains a total of 194 inputs (fibers, yarns, and fabrics) considered to be in short supply in the TPP countries. Of the 194 products on the list, 8 are temporary (eligible for 5 years from entry into force (EIF)); the remainder are permanent.”

The ability in both countries to capture the tariff cuts from the US therefore depends very much on their ability to fulfil the yarn forward rule, and/or being able to match demand for a firm's product with the yarn from TPP countries or from the SSL.

Based on the share of domestic value added to exports in Table 4, both countries utilize imported inputs for their production. In fact, the share for Vietnam in 2011, the latest year of data available, is higher for overall manufactures and for textile, textile products, leather and footwear compared to Malaysia.

Table 4. Domestic Value-Added in Gross Exports, Malaysia and Vietnam, 2011

			Share of Domestic Value Added to Gross Exports
• Total Manufactures	Malaysia	2011	0.44
	Viet Nam	2011	0.57
• Textiles, textile products, leather and footwear	Malaysia	2011	0.51
	Viet Nam	2011	0.63
• Computer, Electronic and optical equipment	Malaysia	2011	0.33
	Viet Nam	2011	0.30

Source: OECD, TiVA data

The ability to meet the yarn forward rule can be inferred from the share of TPP and non-TPP countries in Malaysia and Vietnam's respective imports of yarn and fabric. For Malaysia, out of the top ten importing countries in 2014, 14.6 per cent are imported from Japan, Vietnam and the US, while 73 per cent are imported from top seven non-TPP countries, with China providing 44.6 per cent of the share of imported yarn and fabric. For Vietnam, China provides up to 47.5 per cent share of imported yarn and fabric, while the top seven non-TPP countries provide a share of 80.7 per cent. Japan, Malaysia and the US provide a share of 7.9 per cent.

There are two major products reported to be given duty free access upon ETF, namely men's or boys' shirt, not knitted/crocheted, of cotton; and women's or girls' blouses and shirts, not knitted/crocheted, cotton, but both are offered to Malaysia and Vietnam (Tan 2016). Hence the exporters of these two goods from Malaysia will have to compete directly with Vietnam for the US market as well as meet the yarn forward rule/tap on the SSL.

According to PwC (2015), there are about 1,000 downstream players in the market, whereas the upstream players are comprised of over 900 companies. The SME Corp of Malaysia, however, states that there are 10,047 SMEs in the textile and wearing apparel sector based on the Economic Census, 2011. Out of these 9,123 are micro enterprises (91 per cent), while 872 are small-sized (9 per cent) and only 52 are medium-sized (0.5 per cent).⁶ Although data is not available, it is likely that most of the SMEs are not exporters and will not stand to gain from the tariff reduction.

The trade analysis indicates that Malaysia has an advantage in the upstream component or the production of textile fibres, as it has the raw materials (resin) from the petrochemical industry in the country. There are multinationals such as Toray (Japan), Recron (India) and local large producers - Ramatex in the textile segment of the industry that are reportedly vertically integrated groups and where the output is mainly exported (Esho 2015). In the garment side, Malaysia producers are OEM and non-OEM suppliers as well as “specialty store of private label apparel” (SPA) (Esho 2015).

By contrast, the Vietnamese textile industry, with more than 3,800 companies, is the country’s leading export sector (ITA2016). The country ranks sixth worldwide in textile and apparel exports, third in the world for exports of clothing (The Cotton Textiles Export Promotion Council 2015). It is not in the top ten exporter of textile but it is instead the third largest importer of textiles in the world.

In the medium and longer term, both countries hope to attract foreign direct investment (FDI) in their respective textile industry. To promote investments in this sector, the government has targeted several textile products/activities to be considered for tax incentives under the Promotion of Investment Act, 1986. These are natural or man-made fibres, yarn of natural or man-made fibres, woven fabrics, knitted fabrics, finishing of fabrics such as bleaching, dyeing and printing, non-woven fabrics, specialized apparel, technical or functional textile and textile products (see MIDA website, www.mida.gov.my).

Likewise, Vietnam is also seeking for FDI in this sector. According to Vietnam Investment Review, “a new wave of foreign investments in the spinning, weaving, and dyeing sectors has been kicked off, since investors can see the profits they can gain from the TPP.” (Seiko Consult undated, page 7). According to one estimate, foreign manufacturers have invested more than \$1 billion in Vietnam’s textile and apparel sector in anticipation of a TPP agreement. Major Chinese companies, such as Texhong and Pacific Textile, are opening new textile plants in Vietnam, partly attracted by lower labor costs and lower tariffs under the TPP. Textile and garment manufacturers based in Japan, Hong Kong, South Korea, Taiwan, Austria, and Australia are also setting up new production or have expanded current production in Vietnam.

In summary, even though there are potential gains in the US market, these gains can only be realized if Malaysia’s firms are able to compete successfully against Vietnam and meet the yarn forward rule. The biggest gainers are the multinationals that are vertically integrated firms and large domestic producers and not the small enterprises.

⁶ <http://www.smecorp.gov.my/index.php/en/policies/2015-12-21-09-09-49/sme-statistics>, accessed 8 July 2016.

5.2 *Impact on the ICT Sector*

Tariff reduction is less important for this sector as already exports duty-free to all TPP countries through the WTO's Information Technology Agreement and the zero-tariff relationship the US has created with Mexico, Canada, Australia, Singapore, Chile, and Peru through FTAs. As noted by PwC (2015), Malaysia's E&E exports to the US is expected to be the largest beneficiary of lower tariff lines in the TPPA countries given that the US is Malaysia's 3rd largest E&E export destination. Whilst an elimination of all tariffs would lower the average tariff rate for E&E exports to the US by only 0.61 per cent, this would have resulted in tariff savings of RM158.2 million in 2014. This is equivalent to 0.5 per cent of Malaysia's E&E exports to the US or 0.1 per cent of Malaysia's total E&E exports in 2014.

The ICT sector has considerably less SMEs compared to textiles and clothing. Data from SME Corp indicates that there are 1,068 SMEs, out of which 231 are micro, 639 small and 198 are medium. According to MIDA (undated), semiconductors are the largest export contributor in the E&E exports of the country. Most of these exports are contributed by the 50 odd multinationals in this sub-sector such as Intel, AMD, Freescale Semiconductor, Texas Instrument etc. The electronics component also received the largest approved investment in 2014. There are also some Integrated Circuit (IC) design firms providing IC design services for their own products or outsourced products.

The trade analysis in this paper indicates that Malaysia is still ahead of Vietnam due to Malaysia's early mover advantage as it opened up for FDI in this sector in the early 1970s while Vietnam embarked on FDI-led manufacturing development in the second half of 1980s. Even then, Vietnam's FDI was steered to joint-ventures with state-owned enterprises in heavy industries so that Vietnam effectively joined regional production networks only after FDI reforms in the late 1990s (Tham and Kam 2016). However, the OECD TiVA data in Table 4 shows that the domestic value added content of gross exports is about the same for both Malaysia and Vietnam in 2011, indicating the dependence on imported inputs in both countries, with Malaysia having a slightly higher domestic value added content.

It is as pointed out by PwC (2015) and Semiconductor Industry Association of the US (SIA 2016), the governance issues in the TPP agreement that can influence the future of trade in this sector, such as encryption (in Annex 8-B of the [Technical Barriers to Trade](#)), trade secrets (in the chapter on IPR), and rules governing the state-owned enterprises (SOEs). Where each country will be located in the global value chain in this sector after the TPP has levelled the playing field in terms of the governance structures of each country, including labor laws, will depend on how fast each country can move into R&D and innovation.

The emergence of wafer fabrication and R&D centres is an indicator of functional upgrading in this sector. According to Shan and Rasiah (2015), foreign MNCs in Malaysia have established four chip design centres, one R&D support facility, five wafer fabrication plants and 28 assembly and test plants while national firms have two wafer fabrication plants and seven assembly and test plants (Table 2). They attribute the "shift to wafer fabrication" to the investment grants offered to foreign firms. Therefore, a few firms such as Infineon, OSRAM and ON Semiconductor have embarked on wafer fabrication in Malaysia since 2005.

Table 5. Integrated Circuit (IC) Firms in Malaysia, China and Vietnam, 2011

Countries	National					Foreign					
	RD	CD	SRD	WF	AT	RD	CD	SRD	WF	AT	
China	1	3*	2#	25	34	0	11	8	6	58	148*#
Malaysia	0	0	0	2	6	0	4	1	5	25	43
Vietnam	0	1	0	1	0	0	3	1	0	2	8

Notes: RD, CD, SRD, WF, AT refer respectively to R&D, Chip Design, Support R&D, Wafer Fabrication and Assembly and Test operations.

Firms are defined by the registration status, and hence, some subsidiaries of the same firm are counted more than once;

* denotes firms having both R&D and chip design in the same registration premises;

denotes firms having both R&D and other supportive R&D in the same premises.

Source: Shan and Rasiah 2015.

But, Vietnam recognizes the need to attract FDI for improving its R&D. It has therefore rolled out the red carpet for foreign investors by amending its investment laws. For example, in July 2015, Vietnam adopted a “negative list” approach in its investment policy with the aim to further relax its FDI regulations (HKTDC 2016). Under the new rules, foreign businesses are allowed to operate in all areas except for six prohibited sectors, including certain specified drugs and chemicals, and specified wild plants and animals either under local law or the Convention on International Trade in Endangered Species (CITES). It has also reduced the list of conditional business sectors from 391 to 267. In the wake of the anti-Chinese riots which damaged foreign-invested factories in May 2014, the Vietnamese government announced a series of remedial measures, including tax breaks and land rent exemption, to compensate the affected companies. Reportedly, Vietnam's electronic industry has to date attracted US\$10 billion in FDI from electronics giants like Samsung, Foxconn, LG, Panasonic and Intel due to its lower labor costs and proximity to China-based suppliers.⁷

In 2016, Samsung is reportedly investing in a mobile R&D centre in Hanoi.⁸ Samsung will be developing the Samsung Electronic Ho Chi Minh City Complex (SEHC), that will contribute to the development of a Saigon Silicon City by 2020.⁹

Further R&D development in Malaysia and Vietnam will depend significantly on their respective human capital, not in terms of quantity but in terms of quality. At this point in time, Malaysia still has an advantage over Vietnam based on the human capital index in Table 6. How this will evolve in the future will depend on the respective government’s policies on education and training for the future needs of their respective countries.

⁷ Vietnam Trade Promotion Industry,

http://www.vietrade.gov.vn/en/index.php?option=com_content&view=article&id=2387:foreign-investors-keen-on-domestic-electronic-sector&catid=270:vietnam-industry-news&Itemid=363.

⁸ Hanoi Times 26 March 2016, <http://hanoitimes.com.vn/investment/opportunities/2016/03/81e0a132/samsung-electronics-to-invest-a-mobile-r-d-centre-in-hanoi/>.

⁹ <http://aecnewstoday.com/2016/vietnams-high-tech-hub-more-than-just-silicon-dreams/>.

Table 6. Human Capital Index, 2015 Ranking, ASEAN

Country	Rank	Score
Singapore	24	78.15
Philippines	46	71.24
Malaysia	52	70.24
Thailand	57	68.78
Vietnam	59	68.48
Indonesia	69	66.99
Cambodia	97	58.55
Lao PDR	105	56.16
Myanmar	112	52.97

Source: The Human Capital Report 2016, (World Economic Forum)

6. Conclusion and Policy Implications

The TPP is the most complex trade agreement that Malaysia has embarked to date. The ramifications of a being a signatory to such an agreement is still being explored in all partner countries, and non-partner countries such as China and India. The trade analysis in this paper highlights the intense export competition between Malaysia and Vietnam in two key sectors, namely textile and clothing and ICT.

The key findings in this paper are as follows: In terms of market access for these two sectors, accessing the benefits of the agreement will require the firms in Malaysia to first of all compete against Vietnam in the products scheduled for liberalization in the US market. At this point in time, Malaysia cannot compete on the basis of low labor costs and a continued dependency on unskilled foreign workers as the government does not have a consistent foreign worker's policy. Instead, firms should take advantage of the automation capital allowance announced in the 2015 Budget on 10 October 2014 to automate and upgrade their production processes. It should at the same time, leverage on the better infrastructure and logistic capabilities in the country to supply consistently quality products to large buyers in the US. Innovation in product quality is needed to differentiate Malaysia's textile and clothing products from Vietnam.

Second, continuous improvement in human capital is needed to keep ahead of Vietnam as well as to move up the value chain for both sectors. In the end, the capacity to export higher quality products to the US market will depend on this as tariff liberalization is stretched over a 13-year horizon and Vietnam will undoubtedly have exhausted its low labor costs advantage way before then. In the case of textiles and clothing, improving human capital will enable Malaysia to attract FDI into the yarn and fabric segment for fulfilling the yarn forward ruling. It will also allow the country to attract FDI into the R&D segment of the global value chain in electronics segment of the ICT sector.

Third, exports from these two sectors are largely driven by the MNCs and large local firms, especially the vertically integrated firms for the textile and clothing sector. Yet there is a large number of SMEs, especially in the textile and clothing sector. These firms are largely domestic market-oriented and will be under pressure to exit the industry unless they can improve their

productivity and enhance their efficiency and cost competitiveness. Internationalizing their operations is important for these firms to enjoy the benefits of the TPP. Since size does matter in a firm's capacity to export, it is important to consider extending the current incentive for merger and acquisition for small Malaysian service providers to manufacturers as well.

Finally, it is important to use the TPP initiatives to enhance the governance structure of a country as this is important for moving up the global value chain where information and IPR becomes increasingly important.

References

- Asian Development Bank (ADB) 2015. "Key Indicators for Asia and the Pacific 2015". Accessed 4 July 2016
<http://www.adb.org/sites/default/files/publication/175162/ki2015-rt-globalization.pdf>
- Esho, Hideki 2015. "Dynamics of the Textiles & Apparel Industries in Southeast Asia - A Preliminary Analysis". *Journal of International Economic Studies*, No.29, 85–106.
- Hausman, R., Hwang J., & Rodrik, D. 2005. "What you export matters". *Journal of Economic Growth*, 12(1), 1–25.
- HKTDC 2016. Vietnam Market Profile. Accessed 8 July 2016.
<http://emerging-markets-research.hktdc.com/business-news/article/Asia/Vietnam-Market-Profile/mp/en/1/1X000000/1X0010GK.htm>
- Institute of Strategic and International Studies (ISIS), 2015. "National Interest Analysis of Malaysia's Participation in the Trans-Pacific Partnership" Accessed 4 July 2016.
http://fta.miti.gov.my/miti-fta/resources/ISIS_The_Grand_Finale.pdf
- International Trade Administration (ITA) 2016. "2016 Top Markets Report Technical Textiles: Country Case Study – Vietnam." Accessed 7 July 2016.
http://trade.gov/topmarkets/pdf/Textiles_Vietnam.pdf
- Lim, Kim-Hwa 2016. "Trans-Pacific Partnership Agreement: Is Malaysia Winning the Battle But Losing the War?" Accessed 4 July 2016.
http://penanginstitute.org/v3/files/tppa/TPPCompetitivenessReport_20160119.pdf
- Malaysia Investment Development Authority (MIDA) undated. "Electrical and Electronics". Accessed 17 September 2016.
<http://www.mida.gov.my/home/electrical-and-electronic/posts/>
- Petri, Peter A., Michael G. Plummer, and Fan Zhai. 2012. "The Trans-Pacific Partnership and Asia-Pacific Integration: A Quantitative Assessment". Policy Analyses in International Economics 98. Washington: Peterson Institute for International Economics.

- Petri, P. & Plummer, M. 2016. “The Economic Effects of the Trans-Pacific Partnership: New Estimates.” Peterson Institute for International Economics Working Paper No. 16-2. Accessed 4 July 2016
<http://fta.miti.gov.my/miti-fta/resources/auto%20download%20images/572150da7772c.pdf>
- Pricewaterhouse Coopers (PwC) 2015. “Study on Potential Economic Impact of TPPA on the Malaysian Economy and Selected Key Economic Sectors”. Final Report. PwC Advisory Services Sdn. Bhd. Accessed 4 July 2016.
[http://fta.miti.gov.my/miti-fta/resources/TPPA_PwC_CBA_-Final_Report_021215_FINAL_\(corrected\).pdf](http://fta.miti.gov.my/miti-fta/resources/TPPA_PwC_CBA_-Final_Report_021215_FINAL_(corrected).pdf)
- Malaysian Knitting Manufacturers Association (MKMA) 2016. “Dialogue on Potential Impact of Trans-Pacific Partnership Agreement (TPPA) on the Textile & Apparel Industry in Malaysia”.
<http://www.mida.gov.my/home/2967/news/mida-holds-dialogue-to-address-investors-queries-on-tppa/>
- Semiconductor Industry Association (SIA) 2016. “U.S. Semiconductor Industry Supports the Trans-Pacific Partnership Agreement.” Accessed 8 July 2016.
http://www.semiconductors.org/issues/trade/global_policy_trade/
- Seiko Consult undated. “The Effects of TPP on Vietnam as a Member”. Accessed 17 September 2016.
http://www.seiko-ideas.com/viettrendy/The_effects_of_TPP_on_Vietnam_as_a_member.pdf
- Shan, Xiao Shan and Rasiah, Rajah, 2015. “Sticky Spots on Slippery Slopes: The Development of the Integrated Circuits industry in Emerging East Asia”. *Globelics Working Paper Series, No. 2015-05*.
<http://www.globelics.org/publication/sticky-spots-on-slippery-slopes-the-development-of-the-integrated-circuits-industry-in-emerging-east-asia/>
 Accessed 15 October 2015.
- Tan, Thian Poh 2016. ““Dialogue on Potential Impact of Trans-Pacific Partnership Agreement (TPPA) on the Textile & Apparel Industry in Malaysia”. Malaysian Textile Manufacturers Association (MTMA).
<http://www.mida.gov.my/home/2967/news/mida-holds-dialogue-to-address-investors-queries-on-tppa/>
- Tham, Siew Yean, and A.J.Y, Kam. 2015. “Trade in Value-Added: Case of Malaysia.” Economic Research Institute for ASEAN and East Asia (ERIA) Discussion Paper No. 2015-58. Jakarta: ERIA.
- Tham, Siew Yean and Andrew Kam Jia Yi 2016. “Malaysia’s International Trade Challenges towards 2020”. Paper presented at Conference on *The Malaysian Economy towards 2020: Issues and Challenges*, ISEAS-Yusof-Ishak Institute, Singapore, 22-23 March 2016.

The Cotton Textiles Export Promotion Council 2015. “Overview of Current Trade in Textile and Clothing”. Accessed 7 July 2016.

<http://www.texprocil.org/cdn/gallery/14/98d6768035ccb68981baea8c51e7c21e.pdf>

United States International Trade Commission (USITC) undated. “Trans Pacific Partnership Agreement: Likely Impact on the US Economy and on Specific Industry Sectors: Chapter 4”. Accessed 17 September 2016.

https://www.usitc.gov/publications/332/pub4607_chapter4.pdf

World Bank. 2016. “The Trans-Pacific Partnership and its Potential Economic Implications for Developing East Asia and Pacific.” In *Growing Challenges*, World Bank East Asia and Pacific Economic Update, April 2016. Washington, D.C.: The World Bank.

World Economic Forum, 2016. “The Human Capital Report 2016.” Accessed 17 September 2016.

<https://www.weforum.org/reports/the-human-capital-report-2016/>

WITS, 2013. “Online Trade Outcomes Indicator: User’s Manual”, World Integrated Trade Solution (WITS), World Bank. Accessed 28 June 2016.

<http://wits.worldbank.org/WITS/docs/TradeOutcomes-UserManual.pdf>