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NEW ASEAN MEMBER COUNTRIES' EXPORTS TO JAPAN: AN ASSESSMENT OF THE NEW GOODS MARGIN[1]

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Abstract: Growth in exports along extensive margins has been observed during periods of trade liberalization. A rise in new goods margins is important for developing countries as this is a sign of increasing productivity of local firms and a move from overdependence on a small basket of goods. Adapting the methodology of Kehoe and Ruhl,[3] this study evaluates the changes in the share of total value of the least traded export goods from new ASEAN member countries to Japan before and after the ratification of the ASEAN-Japan FTA. For each of the four countries, a baseline of HS lines of products comprising near 10% of total export value in 2009 was created from the BACI dataset. The analyses show that by 2018 the share of least traded goods to Japan have risen to almost 69% of total export value for Cambodia, 57% for Myanmar and 55% for Laos. For Vietnam, the rise is a modest 29%.

Keywords: Export diversification, Free trade agreement, Extensive margin, New goods margin

INTRODUCTION

The signing of a free trade agreement is a mark of trade liberalization among signatories. Given this, this study considers the signing of the ASEAN-Japan Comprehensive Economic Partnership Agreement (AJCEP) as a trade liberalization event that should result not only in higher levels of exports to Japan from the four new ASEAN member countries (Cambodia, Laos, Myanmar and Vietnam) but also a more diverse basket of exported goods.[4]

A more diverse set of exports or changes in the new goods margin as measured by increases in the share of least traded goods in a country's total exports is important for developing countries, especially those that are small in trade. A rise in the new goods margin signals an increase in the competitiveness of local firms to the point they are productive enough to export to a larger, foreign market, as implied by Marc Melitz's *new* new trade theory.[5] Furthermore, a wider range of export

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[3] Timothy J. Kehoe, and Kim J. Ruhl. "How important is the new goods margin in international trade?" *Journal of Political Economy* 121, no. 2 (2013): 358-392.
[4] The 10 members of the Association of Southeast Asian Nations include Brunei, Indonesia, Malaysia, Philippines, Thailand, Singapore, and the new member CLMV countries comprising Cambodia, Laos, Myanmar, and Vietnam
[5] Marc J. Melitz, "The impact of trade on intra-industry reallocations and aggregate industry productivity." *econometrica* 71, no. 6 (2003): 1695-1725.

goods leads them away from too much dependence on a narrow set of export goods, which according to the Prebisch-Singer hypothesis[6], may expose them to instability in export earnings.

This study traces the evolution of the share of least traded goods in the total value of exports from Cambodia, Laos, Myanmar, and Vietnam (CLMV) from 2009 to 2018. Changes in least traded goods occur in the extensive margin of trade, specifically changes in the number of export product lines. While studies have shown that growth in exports occur mostly on the intensive margin, that is, changes in export levels among products where trade already exists, this study focuses on the product margin as this may have a higher significance for countries that are low in income or small in trade.

This study adapts the methodology by Kehoe and Ruhl in determining the basket of goods that are least traded between Japan and the CLMV countries. The study then traces the evolution of the importance of this basket relative to the share of total exports over a period that includes years shortly before and after the signing of the ASEAN-Japan free trade agreement (FTA) in 2008.

The concept of export diversification is nothing new, and many terms in the literature have been used to refer to it in different ways either directly or indirectly. These include product differentiation[7], product variety[8], product spectrum[9], export variety[10], export composition[11], export diversity[12], export mix[13], export variations[14] and export portfolio[15].

Recent studies have further delineated specific concepts related to export diversification. The World Bank has for example produced a highly readable primer.[16] One important clarification it underlines is that export diversification does not only concern diversity of products, where a country makes a conscious shift from producing and exporting traditional to non-traditional products, or low-value to high-value products. It also concerns diversity among the destinations where exports will be shipped – from traditional to non-traditional markets as well as the sectors involved in producing such products. Another research refers to the first type is what is also called as product-extensive while the latter refers to the what is called as geographic-extensive, as both occur on the extensive margins of trade as opposed to the intensive margins of trade.[17]

Hence growth in the extensive margins of diversification means growth through new export lines, either being having new products or new markets. Growth along the intensive margins of

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[6] According to the Prebisch-Singer hypothesis, a developing country's terms of trade decline over time as the price of commodities which most developing countries export decline relative to the price of manufactured goods. (Feenstra and Taylor 2014)

[7] Paul R. Krugman, "Increasing returns, monopolistic competition, and international trade." *Journal of International Economics* 9, no. 4 (1979): 469-479.

[8] Michael Funke and Ralf Ruhwedel, "Export variety and export performance: empirical evidence from East Asia." *Journal of Asian Economics* 12, no. 4 (2001): 493-505.

[9] Michael Funke and Ralf Ruhwedel. "Export variety and economic growth in East European transition economies." *Economics of Transition* 13, no. 1 (2005): 25-50.

[10] Robert Feenstra and Hiau Looi Kee, "Export variety and country productivity: Estimating the monopolistic competition model with endogenous productivity." *Journal of International Economics* 74, no. 2 (2008): 500-518.

[11] Jesús Crespo Cuaresma and Julia Wörz, "On export composition and growth." *Review of World Economics* 141, no. 1 (2005): 33-49.

[12] David Hummels and Peter J Klenow. "The variety and quality of a nation's exports." *American Economic Review* 95, no. 3 (2005): 704-723.

[13] Salomon Samen. "A primer on export diversification: key concepts, theoretical underpinnings and empirical evidence." *Growth and Crisis Unit World Bank Institute* 1 (2010): 1-23.

[14] Olivier Cadot, Céline Carrère, and Vanessa Strauss-Kahn, "Export diversification: what's behind the hump?." *Review of Economics and Statistics* 93, no. 2 (2011): 590-605.

[15] Connie Bayudan-Dacuycuy, "The Philippine export portfolio in the product space: potentials, possibilities and policy challenges." *Economics Bulletin* 32, no. 1 (2012): 59-66.

[16] Salomon Samen. "A primer on export diversification: key concepts, theoretical underpinnings and empirical evidence." *Growth and Crisis Unit World Bank Institute* 1 (2010): 1-23.

[17] Alberto Amurgo-Pacheco and Martha Denisse Pierola. "Patterns of Export Diversification in Developing Countries : Intensive and Extensive Margins." *Policy Research Working Paper*; No. 4473. World Bank, Washington, DC (2008).

diversification on the other hand means growth in exports through increased volume in products that are already being traded.[18]

This paper concentrates on the effects of product-extensive margins and argues that improvements along these lines are important for countries that are small in trade such as Cambodia, Laos and Myanmar.

ASEAN-JAPAN COMPREHENSIVE ECONOMIC PARTNERSHIP AGREEMENT

On April 14, 2008, the 10 member states of the Association of Southeast Asian Nations (ASEAN) and Japan signed the ASEAN-Japan Comprehensive Economic Partnership Agreement (AJCEP). The signing is the culmination of a process that started with the signing of a framework agreement in at the ASEAN-Japan summit in Bali in 2003, followed by 11 rounds of negotiations that ended in 2007. The agreement entered into force the following October among the signatories, with Cambodia being the last country in November 2009. [19]

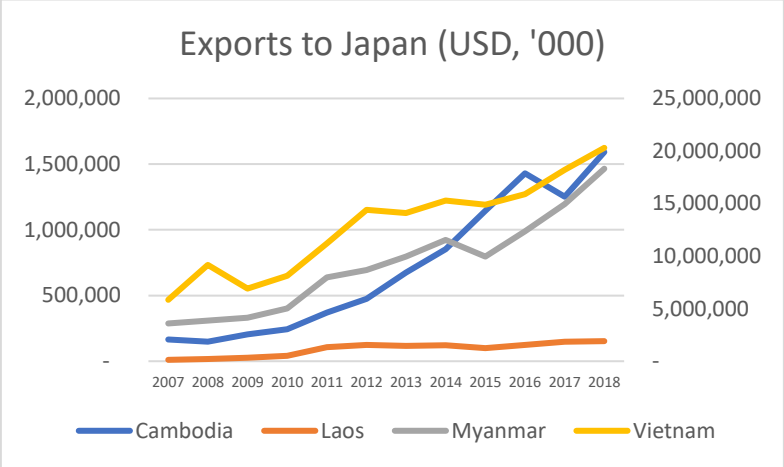
The AJCEP is the second FTA the bloc has signed with a bilateral partner with the first being with the People's Republic of China. Other FTAs have since been concluded with Korea, Australia and New Zealand, India, and Hong Kong. All ten members of the ASEAN are also signatories to the Regional Comprehensive Economic Partnership (RCEP) agreement alongside China, Japan, Korea, Australia, and New Zealand, which was signed in 2020. As one of the ASEAN+1 FTAs, the AJCEP is quite significant for new member countries such as Myanmar, Laos and Cambodia, which do not have bilateral FTAs with Japan, as compared to the other seven. In fact, these three countries do not have their own bilateral FTAs with any country at the time of writing.[20] AJCEP qualifies as what is normally called a deep trade agreement as it covers policy areas apart from trade, such as market access, rules of origin and safety standards. Included in its 67 provisions are articles on investments as well as economic cooperation in several fields including energy, environment, intellectual property rights, competition policy, SMEs and human resource development.[21] [22]

Japan was one of the earliest dialogue partners of ASEAN, establishing relations with the organization in 1973. Japan is now the bloc's fourth-largest trading partner with merchandise trade amounting to nearly USD230 billion in 2019 and the second-largest source of foreign direct investments to the bloc.[23] To support the AJCEP, the Japanese government has set aside $52 million, with $42 million budgeted for economic integration programs specifically for the new ASEAN member countries.[24]

In Figure 1, we see the evolution of the exports to Japan from the more recent members of ASEAN: Cambodia, Laos, Myanmar, and Vietnam. The data comes from the BACI dataset from CEPII. [25] Total exports for Cambodia, Myanmar and Vietnam in general have increased since 2007. Exports from both Cambodia and Myanmar are around USD 1.5 billion while Vietnam's exports rose

[18] Olivier Cadot, Céline Carrère, and Vanessa Strauss-Kahn, "Export diversification: what's behind the hump?." *Review of Economics and Statistics* 93, no. 2 (2011): 590-605.
[19] MITI, "Malaysia's Free Trade Agreements". n.d., https://fta.miti.gov.my/index.php/pages/view/asean-japan?mid=36.
[20] WTO, "Regional Trade Agreements Database". 2021. https://rtais.wto.org/UI/PublicSearchByCr.aspx
[21] Aaditya Mattoo, Nadia Rocha and Michele Ruta. *Handbook of deep trade agreements*. Washington, DC: World Bank. (2020).
[22] MOFA Japan, "ASEAN-Japan Comprehensive Economic Partnership Agreement". 2020. https://www.mofa.go.jp/policy/economy/fta/asean.html.
[23] Asean, "Asean-Japan Economic Relation." n.d. https://asean.org/our-communities/economic-community/integration-with-global-economy/asean-japan-economic-relation/.
[24] JAIF, "ASEAN-Japan Comprehensive Economic Partnership (AJCEP)" n.d., https://jaif.asean.org/jaif-component/asean-japan-comprehensive-economic-partnership-ajcep/.
[25] Guillaume Gaulier and Soledad Zignago, "Baci: international trade database at the product-level (the 1994-2007 version)." (2010).

to USD 20.3 billion by 2018. Laos exports look very low in level terms, but it had the highest rate of change rising from USD 10 million in 2007 to USD 152 million in 2018.



Data source: CEPII
Note: Vietnam exports on the right axis, figures in current USD
Figure 1: CLMV exports to Japan

THEORETICAL ISSUES

Theoretical issues have been raised with regards to export diversification. One IMF staff paper conducted a theoretical analysis that questions export diversification and asked why it does not occur "naturally". It asked whether low-income countries had enough basic resources to make the expansion of their portfolio possible at all. Using the Heckscher-Ohlin model, it was able to show that "exporting one more good incorporates the uncertainty of producing" that extra good.[26]

However, another paper contests that the usual classical theories of trade are insufficient to explain trade diversification. It thus refers to newer theories, specifically that of Marc Melitz. [27] Under this model, a country's firms face a larger market size due to international trade. Their market expands because apart from the domestic market, they can now sell their products in the foreign market. However not all firms are built the same. Some display internal economies of scale due to higher productivity, and thus would be able to sell more and potentially export in these new markets. Over time, production becomes more concentrated among these more productive firms as the inefficient ones eventually die off. Additionally, it has been noted that shifts of production toward firms that are more efficient are "most pronounced" among countries that are small in trade but later have economic ties with larger economies.[28]

We must remember that fixed trade costs at the border present a barrier for firms to export. If these trade costs are lowered, because of free trade agreements such as AJCEP, there will be two expected results. First the volume of exports entering the market will be higher as the barriers to entry are now lower. Second is that the range of goods will widen as small firms are now able to go past the lower threshold while larger firms will expand the variety that they will export. The link has been

[26] Dean A. Derosa. "Increasing export diversification in commodity exporting countries: a theoretical analysis." *Staff Papers (IMF) 39*, no. 3 (1992): 572-595.
[27] Alberto Amurgo-Pacheco and Martha Denisse Pierola. "Patterns of Export Diversification in Developing Countries : Intensive and Extensive Margins." Policy Research Working Paper; No. 4473. World Bank, Washington, DC (2008).
[28] Paul Krugman, Maurice Obstfeld, and Marc Melitz. *International Economics: Theory & Policy* (The Pearson Series in Economics, 2012), 205

traced among different sources of trade frictions such as distance, transport costs and tariffs and how they affect a country's productivity growth through export variety. [29]

At this point, we turn to the gains that result from increased trade and export diversification. A study measuring dynamic gains of trade has identified six channels between trade policy and economic growth where such gains possibly appear, as denoted by respective theories suggesting as such.[30] These six channels were then grouped under "three broad categories, namely: government policy (macroeconomic policies, size of government), allocation and distribution (price distortion, factor accumulation), and technological transmissions (technology transmissions, foreign direct investment)". He proposed that collectively, they "adequately capture most if not all the total effect of policy on growth". In the same manner, however, this also simultaneously reiterates that trade policies' impact on economic growth cannot be reduced to a single channel alone.

A seminal paper titled the "Stages of Diversification" looked at the association between sectoral concentration and per capita income. [31] It used Herfindahl indices and sectoral data from 1969–1997. What they found was a U-shaped pattern over time. This means that developing countries first move from concentration to diversification up to a point where they get richer (around USD 9,000) and switch back to specializing again. The latter is termed in the literature as reconcentration.

There have also been further theoretical discussions on the specific role of the government in designing the export product mix. Should the government have a hand in which products should belong in the export mix or should it let the market decide? One theoretical framework suggests government intervention might be necessary in determining which products it can produce best. [32] This is because product discoveries left to the markets might prove to be costly, as some products eventually need to be "pruned" out.

Researchers have found that externalities for goods are not the same and that "intervention might be needed to encourage such goods more than the market would naturally do." However, they warned that measuring these externalities is very difficult. They add that the "lack of robust empirical indicators to help select products for special treatment and the overwhelming evidence of heterogeneity within goods should shift the debate" from which goods a country should produce to how to produce what it already produces even better. [33]

ARGUMENTS FOR DIVERSIFICATION

The signing of a free trade agreement is a mark of trade liberalization among signatories. Given this we consider the signing of the ASEAN-Japan free trade agreement (AJCEP) as a trade liberalization event that should result not only in higher levels of exports between CLVM countries and Japan but also a more diverse basket of exports.

Melitz's *new* new trade theory states that firms that display internal economies of scale due to higher productivity, and thus would be able to sell more and potentially export in these new markets. As stated earlier, shifts of production toward firms that are more efficient have been observed to be more significant in countries that are small in trade, such as Cambodia, Laos, and Myanmar which with larger economies, such as Japan. If trade costs deriving from tariffs are lowered by liberalization events such as AJCEP, it is expected that firms will export more goods and more variety of goods.

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[29] Robert Feenstra and Hiau Looi Kee. "On the measurement of product variety in trade." *American Economic Review* 94, no. 2 (2004): 145-149.

[30] Romain Wacziarg, "Measuring the dynamic gains from trade". The World Bank Development Economics, Development Prospects Group." *Policy research working paper*, wps (2001).

[31] Jean Imbs and Romain Wacziarg, "Stages of diversification." *American Economic Review* 93, no. 1 (2003): 63-86.

[32] Ricardo Hausmann and Dani Rodrik, "Economic development as self-discovery". *Journal of Development Economics*, 72, no. 2 (2003): 603-633.

[33] Daniel Lederman and William Maloney. "Does what you export matter?: In search of empirical guidance for industrial policies." (World Bank Publications, 2012).

There are many reasons why developing countries are encouraged to diversify its exports because it helps "lower instability in export earnings, expand export revenues, upgrade value-added, and enhance growth through many channels".[34] Following the Prebisch-Singer hypothesis, a country that decides to specialize in a small group of products, specifically primary commodities, may face instability in its export earnings. Export diversity therefore helps mitigate economic and political risks. It is no surprise that export diversity has been encouraged as part of a country's development agenda.

On the other hand, other studies export diversification per se is a not associated with economic growth but rather that the high-tech, that is higher value-added goods, form a larger share of developing country's exports.[35]

From 2014, the Asian Development Bank published a series of country diagnostic reports that included those for Cambodia, Laos and Myanmar which includes assessment of their export performance and potential. A country diagnostic report was not made for Vietnam in this series, which the author presumes is because the country already enjoys substantial export success. The reports show that even though they were similar with diversification as viewed through the lens of indicators, especially for Cambodia, Laos and Myanmar, the trade profiles and challenges of each individual country are different. The following include highlights of their findings.

At the time of the report, Cambodia's exports were heavily concentrated both in markets and products. The country was heavily reliant on the export of garments, which exposed its vulnerability to any sudden, significant shifts in demand or supply in this sector. This included changes in the trade preferences that the country also heavily relied on. However, the same report also noted that the country was slowly shifting away from its traditional markets (the European Union, Canada, and the United States) to destinations closer to home such as China, Japan, and Korea. Likewise, the same can be said for its range of goods which has since widened.[36]

Laos's exports meanwhile were similarly concentrated in a small range of products, specifically exports based on natural resources. It also had a narrow list of destination countries, with China and Vietnam accounting for around three-fourths of all its exports. These goods however were low in added value, showing the country's poor performance with regards to increasing the economic complexity of the products it produces and exports. The ADB also warned that dependency on these resources has already resulted in indications of "Dutch disease". [37]

The exports of Myanmar on the other hand displayed low levels of diversification because the overall structure of its economy was also low in diversification.[38] However its government had recognized this and sought to change it by trying to expand its export base and pursuing related policies to support this. These included the opening of export processing zones and increasing capacity building, alongside efforts to shift the overall economy from being mainly agricultural to one with a strong manufacturing and services sector.[39]

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[34] Salomon Samen. "A primer on export diversification: key concepts, theoretical underpinnings and empirical evidence." *Growth and Crisis Unit World Bank Institute* 1 (2010): 1-23.

[35] Carlos A. Carrasco and Edgar Demetrio Tovar-García, "Trade and growth in developing countries: the role of export composition, import composition and export diversification." *Economic Change and Restructuring* 54, no. 4 (2021): 919-941..

[36] ADB, *Cambodia: Diversifying Beyond Garments and Tourism*. *Country Diagnostic Study*. (Manila, Asian Development Bank, 2014).

[37] ADB, *Lao PDR Accelerating Structural Transformation for Inclusive Growth*. (Manila, Asian Development Bank, 2017).

[38] ADB, *Myanmar Unlocking the potential. Country Diagnostic Study*. (Manila, Asian Development Bank, 2014).

[39] Daw Zin Naing, "Trade policy reform in Myanmar." Asia-Pacific Trade Economists Conference: Trade in the Asian century-delivering on the promise of economic prosperity. Bangkok: UN-ESCAP. (2014) From http://www. unescap. org/sites/default/files/Trade% 20policy% 20reform-Myanmar-% 20as% 20of

EMPIRICAL ISSUES

Many cross-country studies show that import growth happens along the intensive margins. But growth along the extensive margins is said to be more important for developing countries[40]. If one goes back to the trade-growth-development nexus, we are reminded that low-income countries can benefit from trade which can result in higher living standards. [41] One avenue is through export-led growth. But for this to happen, a country needs to be trade competitive. Performance in the extensive margin alongside the intensive margin is just two of the four indicators of trade competitiveness. (The other two are improvements in the quality of exports and the survival rate of new exporters). [42] But export diversification is just one strategy among the many that countries take in their grander "plan of embarking on export-led growth". [43]

The measure of diversification most often used is a concentration ratio, whether it is on products or markets. Other measures include "the commodity-specific cumulative export experience function (CSCEEF), the absolute deviation of the country commodity shares, the commodity specific traditionalist index (CSTI) and its variance." [44]

One highly cited paper uses three standard concentration measure: the Herfindahl concentration index, the Gini inequality index, and Theil index.[45] The Herfindahl concentration index is an industrial or sectoral concentration ratio. It is a normalized ratio between 0 and 1 that uses the number of exports for a certain product line, shares of export lines against total exports and the number of export lines. The Gini index of inequality on the other hand is based on the cumulative export shares and the number of export lines. The Theil index, on the other hand, is an entropy measure of inequalities that happen within groups and between groups.

Growth in international trade is of high interest for researchers and policymakers, and they would like to find out where this growth is happening. Is it happening on the intensive margin or at the extensive margin? There is a general agreement to what growth along the intensive margin means. A country pair is already assumed to have existing trade for a particular basket of products and a growth in intensive margin shows if there is an increase over a period for this same group of products. In essence, it is more of the same. When it comes to the extensive margin, the definition seems to vary. Multiple studies have been shown to have differing definitions depending on the levels of aggregation, either at firm level, product level or country level.[46]

Frequently observed definitions are changes in the number of goods and changes in the number of products. The two are both components of the extensive margin with changes in the number of goods as product-intensive (new goods in new and old markets) while the changes in the number of

[40] Elodie Mania and Arsène Rieber, "Product export diversification and sustainable economic growth in developing countries." *Structural change and economic dynamics* 51 (2019): 138-151.
[41] Hoekman (2017) writes that trade is just one among many channels that can raise the income of households. true long-term sustained gains that are relevant to sustained economic development cannot result from just one policy but through the interaction of the different mechanisms such as macroeconomic and non-trade policies through a prolonged period.
[42] Guilherme Reis and Thomas Farole, "Trade competitiveness diagnostic toolkit". (World Bank Publications, 2012).
[43] Salomon Samen. "A primer on export diversification: key concepts, theoretical underpinnings and empirical evidence." *Growth and Crisis Unit World Bank Institute* 1 (2010): 1-23.
[44] Salomon Samen. "A primer on export diversification: key concepts, theoretical underpinnings and empirical evidence." *Growth and Crisis Unit World Bank Institute* 1 (2010): 1-23.
[45] Olivier Cadot, Céline Carrère, and Vanessa Strauss-Kahn, "Export diversification: what's behind the hump?." *Review of Economics and Statistics* 93, no. 2 (2011): 590-605.
[46] JMC Santos Silva, Silvana Tenreyro, and Kehai Wei. "Estimating the extensive margin of trade." *Journal of International Economics* 93, no. 1 (2014): 67-75

markets are dubbed as geographic extensive (new and old goods in new markets), definitions that are relevant to multi-country analysis. [47]

The studies whose main concern is on export diversification, including this one, look at growth in the extensive margin primarily as increases in the variety of export product lines, meaning that these exports have never been exported between the country pair, but have since started following an event. In the literature this has been termed as the new goods margin, new product margin or trade in new goods. In the IMF's measurement of diversification indices, the intensive Theil index looks at changes in traditional products while the extensive Theil index looks at changes in new products. The index therefore is the sum of intensive (within) and extensive (between) components at the product level.

What qualifies as a "new" good is determined by how the previous no trade condition is defined. Kehoe and Ruhl, whose methodology this paper adapts, note that there are disparities among studies that determine the threshold to what is traded, with some classifying a no-trade transaction as $0, while others using a threshold of $50,000. They argue that the presence of this cut-off can overlook low-value trade which might have a significant importance especially for countries that are small in trade, such as Cambodia, Laos, and Myanmar. This is precisely the reason why they use their methodology of "least traded goods" which this study adapts to capture the importance of these low-value trade as relative to a country's total exports.

The range of studies that have tracked the impact of trade policies on the intensive and extensive margins are wide, but of particular interest in this study is the impact on developing countries. Kehoe and Ruhl's own study looked at changes along the extensive margin, with a survey that following structural changes in countries such as China, Chile and Korea and important liberalization events such as China joining the WTO (World Trade Organization) or the signing of North American Free Trade Agreement (NAFTA) and the US-Canada FTA. Their survey found that least traded goods accounted for at least 30% or more of trade after country pairs experience trade liberalization.

Apart from trade agreements, the impact of specific trade measures on the extensive margin have also been assessed by other studies. One found bilateral tariff reduction delivering rises on extensive margins "in most cases".[48] Another however argues that on their own tariff reductions have a minor effect on the extensive margins for developing countries, writing that breadth and depth of industrial capacity instead have a higher impact rather than market access.[49]

Trade facilitation measures can affect the gains along the extensive margins.[50] Export promotion activities too can result in a rise in both the number of new products exported and new markets.[51] Standards between developed and developing countries can have a significant impact; one study found a 50% increase along the extensive margins for the trade partners that are low-income.[52] Another study found that industrial standards are "positively correlated with both the intensive and extensive margins" but the different standards display different effects on a firm's export

[47] Alberto Amurgo-Pacheco and Martha Denisse Pierola. 2008. "Patterns of export diversification in developing countries: Intensive and extensive margins". World Bank Policy Research Working Paper No. 4473.
[48] Robert Feenstra and Hong Ma, "Trade facilitation and the extensive margin of exports." *The Japanese Economic Review* 65, no. 2 (2014): 158-177.
[49] Eugene Bempong Nyantakyi, Steven Husted, and Shuichiro Nishioka, "Trade Frictions and Market Access of Developing Countries: A Product-level Empirical Investigation." *Review of International Economics* 23, no. 5 (2015): 924-945.
[50] Maria Persson, "Trade facilitation and the extensive margin." *The Journal of International Trade & Economic Development* 22, no. 5 (2013): 658-693.
[51] Christian Volpe Martincus and Jerónimo Carballo, "Is export promotion effective in developing countries? Firm-level evidence on the intensive and the extensive margins of exports." *Journal of International Economics* 76, no. 1 (2008): 89-106.
[52] Ben Shepherd, "Product standards, harmonization, and trade: evidence from the extensive margin." Vol. 4390. (World Bank Publications, 2007).

decisions. [53] Safety and phytosanitary standards similarly can have varying effects depending on the size of the firm, with one study finding that in that heterogenous effects of these policies, and that they can reduce the probability of exporting by as much as 4%.[54] Another observed that firms export less new products to countries with a higher number of non-tariff measures (NTMs) as compared to those with less NTMs. [55]

Trade policies alone may not completely explain increases in export diversification. Though these policies are negotiated and signed by governments, at the end of the day, it is the countries' firms that do the exporting. Thus, firm characteristics need to be considered as well. Firm level studies underline the role of firms in export diversification. A study of Brazilian firms showed that firms that are larger in size, have a higher domestic power and with stronger emphasis on research and development are more likely to diversify.[56] Likewise access to export finance can also be a crucial determinant of new exporting firms in a country.[57] [58]

With regards to Kehoe and Ruhl's least traded goods methodology, there have been very few studies that have employed it, and most are on high income countries or groups of countries. These include trade between Japan and China and Austrian trade following the enlargement of EU membership in 2004.[59] [60]

The methodology has also been used for country-specific assessment such as one on South Korea and its free trade agreements.[61] The impact of EU enlargement as a trade liberalizing event has been assessed for the three Baltic countries and seven other new EU member states.[62] [63] Another study covered countries that mostly represent a large percentage of world trade including Australia, Brazil, Germany, the United States, and the United Kingdom. [64] To the best of the author's knowledge, a recent evaluation of Mongolia's exports is the only study that uses Kehoe and Ruhl's methodology exclusively for a developing country. [65]

DATA AND RESEARCH METHODOLOGY

[53] Maggie Xiaoyang Chen, John S. Wilson, and Tsunehiro Otsuki, "Standards and export decisions: Firm-level evidence from developing countries." *The Journal of International Trade & Economic Development* 17, no. 4 (2008): 501-523.
[54] Fontagné, Lionel, Gianluca Orefice, Roberta Piermartini, and Nadia Rocha. "Product standards and margins of trade: Firm-level evidence." *Journal of International Economics* 97, no. 1 (2015): 29-44.
[55] Costas Arkolakis, Sharat Ganapati, and Marc-Andreas Muendler. "The extensive margin of exporting products: A firm-level analysis." *American Economic Journal: Macroeconomics* 13, no. 4 (2021): 182-245.
[56] Xavier Cirera, Anabel Marin, and Ricardo Markwald, "Explaining export diversification through firm innovation decisions: The case of Brazil." *Research Policy* 44, no. 10 (2015): 1962-1973.
[57] Nieminen, Mika. "Multidimensional financial development, exporter behavior and export diversification." *Economic Modelling* 93 (2020): 1-12.
[58] Paulo José Regis. "The extensive and intensive margins of exports of firms in developing and emerging countries." *International Review of Economics & Finance* 56 (2018): 39-4
[59] Dalton, John T. "The new goods margin in Japanese–Chinese trade." *Japan and the World Economy* 31 (2014): 8-13.
[60] Dalton, John T. "The evolution of taxes and hours worked in Austria, 1970–2005." *Macroeconomic Dynamics* 19, no. 8 (2015): 1800-1815.
[61] Sang-Wook Stanley Cho, Hansoo Choi, and Julián P. Díaz, "Do free trade agreements increase the new goods margin? Evidence from Korea." *Open Economies Review* 29, no. 5 (2018): 1095-1122.
[62] Sang-Wook Stanley Cho, and Julián P. Díaz, "The new goods margin in new markets." *Journal of Comparative Economics* 46, no. 1 (2018): 78-93.
[63] Sang-Wook Stanley Cho, and Julián P. Díaz, "The dynamics of trade margins: Evidence from the European integration." *Economics Letters* 167 (2018): 90-96.
[64] Brandon Malloy. "Decomposing episodes of large growth in international trade." *Review of International Economics* 29, no. 2 (2021): 228-267.
[65] Chingunjav Amarsanaa and Yoshinori Kurokawa. "The extensive margin of international trade in a transition economy: the case of Mongolia." *Comparative Economic Studies* 63, no. 4 (2021): 648-673.

This study uses the BACI dataset from the *Centre d'Études Prospectives and d'Informations Internationales* (CEPII) which contains disaggregated bilateral trade flows on products at the six-digit level. The dataset has the advantage of having bilateral trade flows at the product level, and of accounting for reimports unlike raw data from UN Comtrade. The specific version of the BACI dataset that was used was the HS Revision 3 (2007), with bilateral trade data on 5,050 product lines. The data's scope includes years 2007 to 2018, unlike succeeding HS revisions for 2012 and 2017. These later revisions do not include the reference year 2009, which is the year when the ASEAN-Japan FTA started taking full effect for signatories. However, one should avoid the mixing of versions HS codes as this might result in overestimation. [66]

In the analysis of new goods margins, one needs to have data on zero trade flows and not just least traded products. The main BACI dataset, however, only contains non-zero trade flows. Therefore, the base dataset needs to be merged with BACI's supplementary dataset that contains true zero trade flows.

Four subsets were then created to contain trade data between Japan and each of the CLMV ASEAN member countries. Following the Kehoe and Ruhl methodology, a baseline year for 2009 was composed using a three-year average for years 2007 to 2009. Data for the following years until 2018 were kept as is.

As mentioned above, this methodology distinguishes itself from those of previous studies on new goods margins in its treatment of non-traded goods. Earlier studies would use a zero-dollar cut-off. In one case they cite, it is $50,000.[67] They stress that these dollar cut-offs can present a bias against countries that are small in trade which exports a very limited amount of goods. Such dollar cut-offs would also overlook the relative importance of these goods to these economies. Hence, in their methodology, they can take account of changes in goods that have zero trade, while at the same time "capture the growth in trade of goods that are small, but positive."[68] This also makes countries with a very small basket of export products such as Cambodia more comparable with those with a wider range of exports such as Vietnam.

Rather than sticking to zero-traded goods, their methodology focuses on "least traded goods". Their definition of non-traded goods includes not just zero-traded goods but also goods traded in small value. This recognizes the fact that small dollar values of the exports may go unreported or that there is variance in the "minimum reporting level" across countries.

This study follows their methodology insofar as in the construction of a base year for least traded goods, which is composed of the average of the first three years in the dataset, 2007 to 2009. Taking a three-year average, according to Kehoe and Ruhl, reduces the "ordering's dependence" on the base year that was selected. The dataset is then sorted so that the lines of products that are least traded goods are pulled into a bin representing the country's bottom 10 per cent share in total value of trade.

Here the study departs from Kehoe and Ruhl's methodology in two ways. First, it does not split the codes of a particular line of good across bins, which is necessary if one is to stick to a clean 10 per cent share of value of total trade. This would mean the number of product lines for this bin might have a remainder value for the line of good instead of a whole number. But keeping this remainder value is not informative as this analysis is concerned with performance of the whole number lines of products

[66] Ignacio Del Rosal, "EU Enlargement and the New Goods Margin in Austrian Trade: Comment." *Open Economies Review 28*, no. 4 (2017): 795-803.
[67] Simon J. Evenett, and Anthony J. Venables. "Export growth in developing countries: Market entry and bilateral trade flows." (2002).
[68] Timothy J. Kehoe, and Kim J. Ruhl, "How important is the new goods margin in international trade?." *Journal of Political Economy* 121, no. 2 (2013): 358-392.

across the chosen period. So, this study opts for a threshold of near 10 per cent rather than a strict 10 per cent.

As this study opts not to split values of lines of products across the bins, for certain countries with a very high concentration of exports on one product such as Cambodia, a clean split across 10 bins is not possible. Nevertheless, this is seen as inconsequential for this study, as it is concerned with the performance of the products in the first bin, the least traded goods. After all, the study is less concerned with the performance of the traded goods in the other nine bins.[69] In effect, splitting the sample into least traded goods and non-least traded goods is sufficient for reaching the objectives of this study.

EMPIRICAL EVIDENCE

No of product lines (2009)	Cambodia	Myanmar	Laos	Vietnam
Least traded goods	5,037	5,025	5,029	4,810
Traded goods	12	25	21	240

Table 1: Number of product lines (exports to Japan)

The first computation looks at the share of trade taken up by a country's set of least traded goods. The analysis shows that for Cambodia, Laos and Myanmar, exports to Japan were narrow before the signing of the ASEAN-Japan FTA as shown in Table 1. Around 90% of Cambodia's exports to Japan were covered by just 12 product lines for the 2009 baseline year.[70] For Laos, it was just 21 product lines while Myanmar had 25 product lines. Vietnam, which is suggested earlier as already an exporting success, provides a useful contrast to this ASEAN subgrouping. For the study's 2009 base year, the country had a far wider and more diverse basket of export products with 240 product lines already being exported to Japan.

Cambodia's export profile to Japan, however, was initially skewed. Around 43% of this was just for one product line, footwear with HS code 640399. By 2018, after more products were exported, the trade value share of footwear would significantly drop to just 7%. For Laos, the most dominant export product was non-coniferous wood products (HS code 440929) with 14% share of total exports. By 2018, however, its importance remained steady at 11% share of total exports.

Meanwhile for Myanmar, shrimp and prawn exports (HS code 030613) accounted for 17% of the total share of exports. This will fall to around 2% of the total share of exports. For Vietnam, petroleum oils were its most important export to Japan at the baseline, but at just 17% of total exports, which will fall to just 1% by 2018.

	Cambodia	Myanmar	Laos	Vietnam
2009	9.50%	9.90%	9.80%	10.00%
2010	17.40%	15.90%	17.40%	15.80%
2011	20.20%	23.70%	41.00%	15.90%
2012	30.00%	26.60%	41.00%	13.40%
2013	40.40%	28.40%	40.70%	16.50%
2014	52.20%	37.60%	47.90%	19.80%
2015	56.00%	42.80%	46.00%	22.40%

[69] Malloy (2021) split his discussion on least traded goods (less than 10%), mid-traded goods (10-50%) and most-traded goods (above 50%)

[70] Traded goods list for Cambodia was recalibrated from originally 13 products to exclude one product line: antiques, which was traded during the base years but cease to trade in the succeeding years. Prior to recalibration, the results were unstable. Further research may be necessary on the impact of discontinued exports.

2016	58.20%	49.50%	54.70%	26.10%
2017	65.20%	49.50%	58.40%	27.20%
2018	68.70%	56.70%	54.90%	28.60%

Table 2: Share of least traded goods in total exports to Japan

The second computation looks at the how the basket of least traded goods would evolve among the selected countries from 2009 to 2018, which can be seen in Table 2. The share of least traded goods in Cambodia's total exports for the period grew nearly seven times, expanding from 9.5% to 68.7% at the end of the period. The expansion is progressive, with an initial doubling of share in 2011, after the ASEAN-Japan FTA went into effect in Cambodia. The rise in the share of these new goods is notable considering Cambodia, as written earlier, only exported 12 lines of goods of Japan in 2009, the smallest number among the four countries surveyed. Among the top five new goods were three different lines of clothing apparel and accessories, as well as electric conductors for vehicles, and containers.

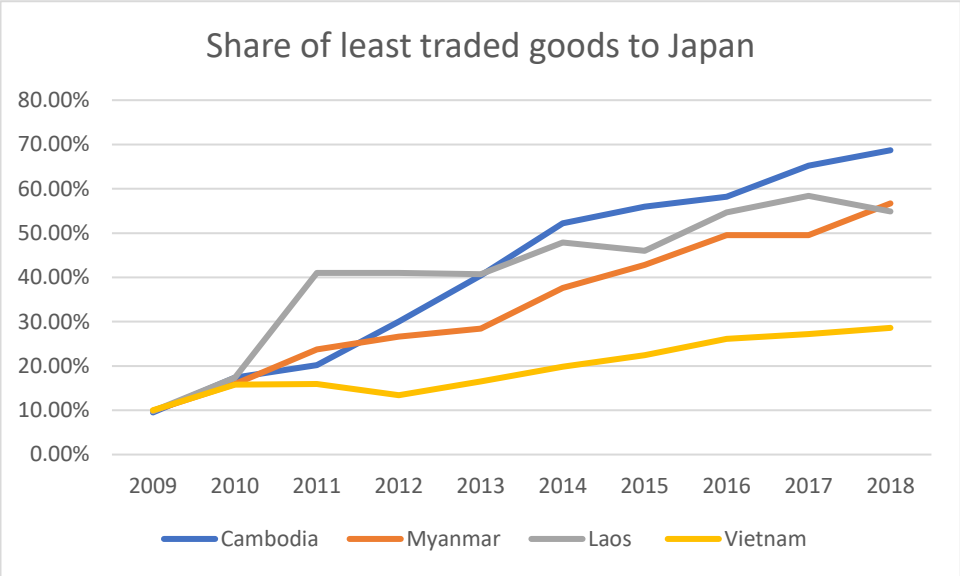

Figure 2: Share of least traded goods in total exports to Japan

The performance of least traded goods is similar for both Myanmar and Laos during the same period, rising from just below 10% in 2009 to 56.7% and 54.9% respectively by 2018. The two also had a similar number of initial basket of exports to Japan at the start of the survey period.
However, while the rise is steady for Myanmar goods, for Lao goods, it witnessed a sudden quadrupling in the share of exports in 2011, and it has stayed in that level or above since then. Furthermore, the country's exports to Japan showed movements to products with higher value. The top five exports from new goods include three different clothing apparel lines, and two product lines of electrical machinery and equipment. In the case of Myanmar, the top five new exports were all under the clothing and apparel category.

Again, Vietnam provides a good contrast for the other three countries in this grouping that are smaller in trade. The share of least traded goods for Vietnam grew the least in this grouping, with least traded goods' share rising from 10% to just 28.8%. Again, it needs to be reiterated that the country already had more traded goods at the start of the survey period, with around 240 product lines being exported to Japan even before the ASEAN-Japan FTA.

SUMMARY AND CONCLUSIONS

This study assesses the impact of a trade liberalization event on export diversification. It uses the case of the signing of AJCEP, the free trade agreement between ASEAN and Japan, as an example of a trade liberalizing event. It then evaluated the agreement's impact on the diversity of exports on the more recent members of ASEAN, which are Cambodia, Laos, Myanmar, and Vietnam. As this study concentrates on just one market, it focuses on the extensive margin on new goods and not new markets. As an indicator of changes in the product margin, the study uses least traded goods as an indicator based on the methodology by Kehoe and Ruhl, which they argue is more appropriate for countries that are small in trade with lower values in export goods. An increase in a wider range of exported goods is significant for these developing economies as it presents increased possibilities for foreign income. But more importantly, it weans them away from reliance on a narrow set of export goods, which according to the Prebisch-Singer hypothesis, may expose them to instability in export earnings.

This study found a substantial impact on export diversification between a small developing country and a large economy following a trade liberalization event. Using the changes in the share of least traded goods in total export share as an indicator, the results for Cambodia, Laos and Myanmar show that the range of export goods widens following a trade liberalizing policy, in this case AJCEP. For the surveyed period, least traded goods exported to Japan rose from an initial baseline of near 10 per cent to 56.70% for Myanmar, 54.90% for Laos, and 68.70% for Cambodia. These results are important for countries such as Cambodia and Laos, which as stated earlier, were very dependent on a narrow band of export products. Relying such a small basket of export goods as a source of foreign income entails risk as they can be exposed to sudden demand or supply shifts in these goods. Furthermore, the increase in the share of least traded goods point to an increasing productivity in exporting firms in these countries, as suggested under Melitz's *new* trade theory.

The contrasting result for Vietnam provides as another interesting insight in the links between export diversification, trade liberalization and a countries export profile. Over here, we see only a modest change in the share of exports of least traded goods to Japan, rising only to 28% from the base 10%. We remember that Vietnam was already exporting to Japan a far wider basket of goods to the country even before the signing of AJCEP. This shows that free trade agreements' impact on product margins may prove to be more important to countries that are smaller in trade such as Cambodia, Laos and Myanmar as compared to economies that are already established export powerhouses.

Finally, the results for Vietnam also bring to the fore the phenomenon of reconcentration or shift away from diversification as countries get richer, confirming the theory of "stages of diversification". This reconcentration has already been reported for Thailand's agricultural and manufacturing exports. [71]

The findings above can inform policies with respect to export diversification. The results for Myanmar underline the gains in the past decade that may have been erased due to the crisis resulting from the coup in February 2021. The country's economy can only regain its losses and prosper if and only if peace is restored. As for Laos and Cambodia, further investment in the capacity of locally based firms so that they can expand their product lines and move to higher value exports. To address reconcentration, Vietnam may need to reevaluate its production structure and assess if there are possibilities for new, higher value products it can venture into.

Further research on this topic could look at the other indicators for trade competitiveness for the CLMV countries during the designated period and in relation to exports to Japan. Another strand could be comparing the performance of least traded goods in CLMV countries to other countries where ASEAN has signed FTAs such as China and Korea but also Australia, New Zealand, and India.

[71] Juthathip Jongwanich. "Export diversification, margins and economic growth at industrial level: Evidence from Thailand." *The World Economy* 43, no. 10 (2020): 2674-2722.

Using the performance of least traded goods as an indicator can also be used in the assessment of similar trade agreements in other parts of the world, specifically those between a country or group of countries that are large in trade and countries whose trade profiles are like those of CLMV countries. Investigation can also be made on the links of other variables such as distance between country pairs on the performance of least traded goods. Preliminary findings from research by the author on the impact of the European Union's GSP+ program on the Philippines' extensive margin show modest increases in new products exported in larger EU economies but varying and unstable results for smaller economies.

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