A Longitudinal Analysis of the Comparative Advantage of Three Key Industries in Mexico, Vietnam, and Japan under Agreements for Trans-Pacific Partnership

Juan José Cabrera Lazarini and Alexander Wollenberg

***Abstract*—The overall purpose of this paper is to identify commercial opportunities between Mexico, Vietnam, and Japan in three industries - pharmaceutical, automotive and agroindustry by tracking the development of comparative advantages over the past decade in which these countries were part of various free trade agreements, including the Pacific Alliance (only Mexico and three other Latin American countries), the Trans-Pacific Partnership (TPP) and later the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP); both of the latter included all three - Japan, Mexico, and Vietnam. We used the concept of revealed comparative advantage (RCA) as the analytical framework. As new free trade agreements emerge, it is important to maximise the flow of goods and services among the countries involved. Therefore, it is imperative to define a systemic process to identify potential trade opportunities. The findings indicate that the conclusion of the TPP caused certain sectors to gain and certain sectors to lose relative comparative advantage, which would imply necessary structural changes for countries to invest in their competitive sectors. For example, Vietnam significantly lost comparative advantage in its agricultural sector relative to Mexico's following the launch of the TPP, which means Mexico could develop its agricultural sector further to support trade with Vietnam. On the other hand, the competitiveness of Vietnam's pharmaceutical industry relative to Mexico's has remained little changed, meaning that both countries should continue to focus resources and investments in the pharmaceutical industry relative to the bilateral trade volume between the two countries.**

***Index Terms*—Emerging markets, pacific alliance, trans-pacific partnership; global value chains, productivity, revealed comparative advantage.**

I. Introduction

In April 2011, Chile, Peru, Colombia and México agreed to launch the Pacific Alliance (PA) with the Lima Declaration [1], which came into force in 2012. According to the Declaration of Lima, the intention of the alliance is "to encourage regional integration, as well as greater growth, development and competitiveness" of the economies of their countries, while committing themselves to "progress towards the goal of achieving the free circulation of goods, services, capital and people." [1].

The Pacific Alliance is a free trade area for goods, with approximately 93% of all goods exempted from tariffs. In its current state, the level of liberalisation of the Pacific Alliance is limited to the trade of goods. Some attempts at greater liberalisation in the areas of financial markets have been made to ease the flow of capital through the integration of stock exchanges and common services in some embassies abroad, but not to the extent of the free movement of capital or other factors of production including services and labour. Due to its limited number of geographical area (fours countries in Latin America), the Pacific Alliance has potential to be flexible and responsive to changing economic conditions. In addition, the presence of pre-existing free trade and economic partnership agreements among individual member countries and outside regions (e.g. Mexico-EU-Japan, Peru-EU-Japan-China, Chile-Japan-Singapore FTAs) provide the Pacific Alliance with significant reach in international trade. However, economic integration also results in structural changes as exogenous factors resulting in market distortions (tariff and non-tariff barriers and other rules) are removed or harmonised. As several countries are likely to compete in similar industries, an analysis of relative competitiveness becomes necessary. The reduction of trade barriers alters supply and demand conditions for affected industries resulting in the necessity to analyse comparative advantage. Such analysis can have implications on the future deployment of industry value chains. Our study analyses the comparative advantage of three major industrial sectors of Japan, Mexico, and Vietnam. The inclusion criteria were share of contribution to the GDP and share of contribution to employment. We identified the automotive, agricultural, and pharmaceutical sectors to be three main contributing sectors in these countries and therefore included them in a longitudinal study spanning 2008 to 2018.

The revealed comparative advantage (RCA) indices offer a quantitative option to calculate the relative advantage or disadvantage of a country in a certain class of goods or services as evidenced by trade flows to identify sectors in which countries can supplement each other and focus resources on the industry in which they have higher productivity relative to the trade partner country. As part of this study, we conducted a qualitative comparison for the historical strengths and trends of the three sectors involved in terms of domestic production and international trade for both countries. In addition, we performed a quantitative comparison by calculating the RCA1 and RCA2 indices to identify comparative advantages for each sector and country.

Manuscript received April 16, 2021; revised December 8, 2021.

Juan José Cabrera Lazarini is with Tecnológico de Monterrey, Department of International Business and Logistics, Querétaro, México (e-mail: jcabrera@tec.mx).

Alexander Wollenberg is with Khalifa University, Department of Humanities and Social Sciences, Abu Dhabi, UAE (e-mail: alexander.wollenberg@ku.ac.ae).

doi: 10.18178/ijtef.2022.13.3.728

II. Literature Review

Several authors stress that competitiveness does not have a definition in economic theory [2], [3]. Competitiveness can be defined as the ability to face competition and to be successful when facing competition. Competitiveness would then be the ability to sell products that meet demand requirements (price, quality, quantity) and, at the same time, ensure profits over time that enable the firm to thrive. Competition may be within domestic markets (in which case firms, or sectors, in the same country are compared with each other) or international (in this case, comparisons are made between countries). Competitiveness is therefore a relative measure.

Several measures have been used to assess competitiveness. Measurement can be made according to two disciplines: i) the neoclassical economics which focuses on trade success and which measures competitiveness with the real exchange rate, comparative advantage indices, and export or import indices; and ii) the strategic management school which places emphasis on the firm's structure and strategy. In the latter, competitiveness is defined as cost leadership and non-price supremacy, with cost competitiveness measured according to various cost indicators, as well as productivity and efficiency. The latter can be separated into factors that are controlled by firms (e.g. size, structure, and social capital) and factors for which firms have no control (national factor endowments and demand conditions, policies, including free trade agreements and various levels of economic and political integration.

Extending competitiveness, Comparative Advantage (CA) theory has been fundamental in explaining international trade and has long been an underlying foundation for various measures of productivity including Revealed Comparative Advantage (RCA). The use of Comparative Advantage indices to explain international flow of goods and services has been extensively used. In its most basic definition, the principle of comparative advantage postulates that a nation will export those goods or services in which it has its greatest comparative advantage and import those in which it has the least comparative advantage [4].

The dynamics of comparative advantage could also be caused by the role of input trade [5], the friction in international trade and investment flows due to geography, institutions, transport, and information cost [6], the transmission of knowledge across borders [7], the technological differences across border [8], and the monopolistic competition in differentiated products with increasing returns to scale [9]. Reference [10] finds that comparative advantage is endogenously determined by past technological changes and innovation. Other applied economists, such as references [11]-[18] have made various empirical measures to quantify countries' comparative advantage.

Indices constructed from post-trade variables such as Trade, Production and Consumption are referred as Revealed Comparative Indices (RCA). Reference [19] concluded that indices based on real world post-trade observations may "reveal" much about the pattern of comparative advantage. According to reference [19], there are two types of RCA indices: 1) Those using data on trade as well as domestic consumption and production and 2) Those using only Trade, which has been proved to be positively correlated with CA.

Reference [20] proposed that "when using RCA, it should be adjusted such that it becomes symmetric around its neutral value. The proposed adjusted index is called 'revealed symmetric comparative advantage' (RSCA)."

All these proposals have been post-trade. In other words, indexes are calculated based on historical information to explain why the trade happened that way.

Reference [21] applied RCA to a case study for Turkey towards the EU to measure the extent to which Turkey has a comparative advantage in the tomato, olive oil, and fruit juice industries and how this has changed over the period 1995-2005 in the EU market. His findings indicate that Turkey has a strikingly high comparative advantage in the fruit juice and olive oil markets in the EU but this is not the case in the tomato market. According to reference [21]: "Although pros and cons of the Balassa index are still debated in the literature, it stands as the most widely used revealed comparative advantage index"

Reference [22] applied RCA to identify the pattern of comparative advantage for U.S. regions from actual trade performance as indicated by the industry composition of exports.

Reference [23] applied RCA and concluded that "there is a positive relationship between comparative advantage and trade balance. The higher the comparative advantage of a specific product, the higher the possibility of a country as a net exporter becomes. This strongly supports the theory of comparative advantage".

III. Research Design

In line with the proposed method of RCA discussed in the Literature Review, we collected data of the automotive, pharmaceutical, and agricultural sectors in Mexico and Japan over a period of 11 years (from 2008 to 2018, both years inclusive). The dataset was obtained from the Oxford Economics database, without any missing data. Industry-specific import-export data and employment (labour) data were collected, and corresponding indices for labour intensity for industries and years were calculated. The calculation for the indices of revealed comparative advantage followed the equation proposed by references [13], [24]-[26] as follows:

$$\mathrm{RCA2}_{ij}=\mathrm{RXA2}_{ij}-\mathrm{RMA2}_{ij}=\frac{x_{ij}}{\sum_j x_i}/\frac{x_{wj}}{\sum_j x_w}-\frac{m_{ij}}{\sum_j m_i}/\frac{m_{wj}}{\sum_j m_w}$$

where RCA2 represents revealed comparative advantage. x represents the volume of exports, m the value of imports, i the nation and j the industry, and w represents the pair of countries under comparison (e.g. Mexico-Vietnam). RXA (Relative Export Advantage) and RMA (Relative Import Advantage) refer to relative export advantage and relative import advantage, respectively. If $\mathrm{RCA2}_{ij}>0$, nation i would have an explicit CA in industry j.

Results

Compared to highly industrialised countries, such as Japan, Mexico's strongest sector is the agricultural sector,

showing a high RCA (Fig. 1). The agricultural sector in Mexico has always had a comparative advantage over Japan's agricultural sector, and this has not diminished until present. The chart shows a dip in the red graph (agricultural) around years 4 and 6. The temporary decreases in CA could be attributed to the combined effects of the ratification of the Mexico-Japan EPA in 2011 and the almost simultaneous launch Pacific Alliance in 2011 requiring structural adjustments. The agricultural sector rebounded quickly. Tthe repeated temporary decrease in CA two years later could be attributable to a stark decrease in global commodity prices, especially wheat and maize [27]. As one of Mexico's strongest sectors, the Mexican agriculture had to undergo another round of structural adjustments, but rebounded quickly. Meat, barley, and fruit exports increased to compensate for decreased revenues that resulted from falling commodity prices [28]. There is inconclusive evidence to suggest that the second temporary decline in CA of the agricultural sector between Mexico and Japan was a result of ongoing TPP negotiations at the time [29].

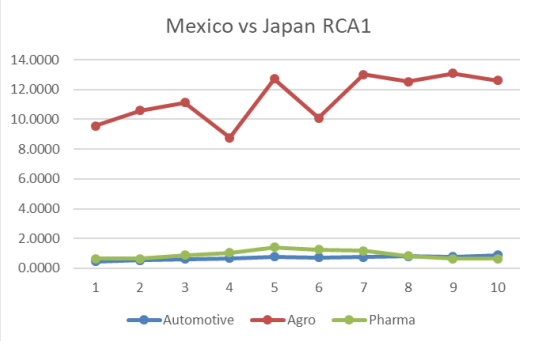

Fig. 1. RCA between Mexico and Vietnam.
Source: *Authors' own data analysis*

The scenario for the automotive and pharmaceutical sectors, both highly capital and research intensive, remained little changed since the launch of closer economic cooperation between Mexico and Japan. Under the Mexico-Japan EPA, the value of Japan's exports in the automotive sector has far exceeded Japan's agricultural imports from Mexico, which confirms Japan's comparative advantage in the sector. Japan's CA extends to related sectors along the automotive value chain, including metal, precision, and electric components [30], [31]. The trade value of chemical and pharmaceutical goods as a share of Japan's total exports has declined in relation to the share of Japan's export in automotive goods to Mexico, which explains the inverse development of the CA curve between automotive and pharmaceutical industries in Japan. Nonetheless, both industries maintain a CA to Mexico.

Relative to a developing country, however, the situation is different. Fig. 2 shows a comparison of a developing economy, Vietnam, in comparison to Mexico. Both countries are members of the TPP. The situation is different in this case. Mexico being overall more industrialised compared to Vietnam historically had a higher RCA in the higher value-added industries, such as in the automotive and pharmaceutical sectors. Following the implementation of the TPP, however, a clear reversal can be seen, where the agricultural sector in Mexico gains comparative advantage relative to Vietnam. In other words, under conditions of liberalised trade, Vietnam's agricultural sector is not competitive. The relation of the other two sectors of this study have not changed with Mexico continuing to retain RCA in the automotive sector and Vietnam in the pharmaceutical sector. One explanation of the reversal of RCA in agriculture could be the heavy involvement by the Vietnamese state in agriculture as discussed in the relevant section.

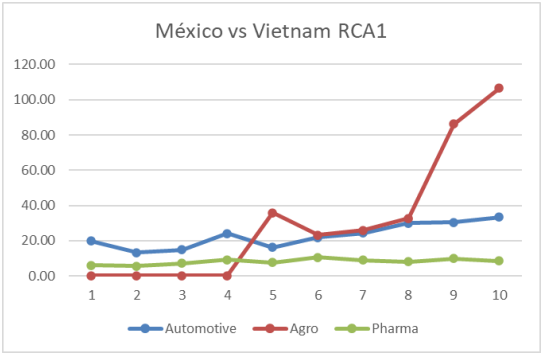

Fig. 2. RCA between Mexico and Vietnam.
Source: *Authors' own data analysis*

The following section discusses the three different sectors in Vietnam in more detail.

IV. Agriculture in Vietnam

Background

In macroeconomic terms, Vietnam enjoyed annual growth in gross domestic product (GDP) of 6 percent and in labour productivity of 3.7 percent between 2006 and 2016 [32]. This growth was accompanied by higher growth in industry and services and a substantial shift of labour out of agriculture. Agricultural output has been growing at more than 4 percent per annum. Most of this growth has arisen from productivity improvements as increases in farm use of intermediate inputs such as fertiliser have been more than offset by a reduction in land, labour and capital. These productivity gains are accompanied by a shift to higher valued crops, notably perennials, expanding average farm plot size, and a slight shift to larger farms.

Although aggregate productivity has been rising, widening dispersion of farm productivity and frictions in input markets have been a source of rising misallocation. In addition, significant differences exist between the north and south of Vietnam. All of the growth in farm output has occurred in the south [33], [32]. Differences also emerge with respect to productivity growth, which is almost two times higher in the south than in the north, partially due to higher resource misallocation in the north [32].

V. Automotive Industry in Vietnam

Challenges

Inconsistent and highly opaque policies. On one hand, the Vietnamese government has declared the automotive industry as a key strategy to develop the national economy and on the other hand, the same government is simultaneously restraining the market for this industry by imposing high taxes and fees on cars [33], [34]. Although

the automobile industry is recognized for raising taxes and creating jobs [34], it is widely regarded as a failure in terms of translating the benefits to the rest of the economy [35].

Low Capacity-low technology. According to reference [36], Vietnam has about 200–300 auto part manufacturing companies, mainly small and medium enterprises (SMEs) with low production capacity and low technology. This is is just a small fraction vs. Indonesia ́s and Thailand ́s. Although some low technology and labor-intensive parts have been localized, original equipment manufacturers still depend on importing the majority of their supplies. Because of that, Vietnamese operations are in a weaker position in an industry where economies of scale are critical. This explains that the production cost per unit is significantly higher in Vietnam than in other ASEAN members according to reference [37]. Local sourcing is the main way to become cost-competitive vs. other ASEAN members.

High dependancy on imports. Although automotive multinational companies entered the market nearly two decades ago, the most important parts are still imported. With an underdeveloped local supply base, localization levels are very low [34]. In comparison, other countries in the region, such as Thailand, uses local parts in the following average proportions: light pickup 80 percent, passenger cars 45 percent, and motorcycles 90 percent. Without a major parts industry, car production costs are higher than elsewhere in the region because of a higher proportion of imported components and correspondent duties. Fig. 3 below illustrates the low rate of localisation for the automotive sector in Vietnam in comparison to its peers in ASEAN.

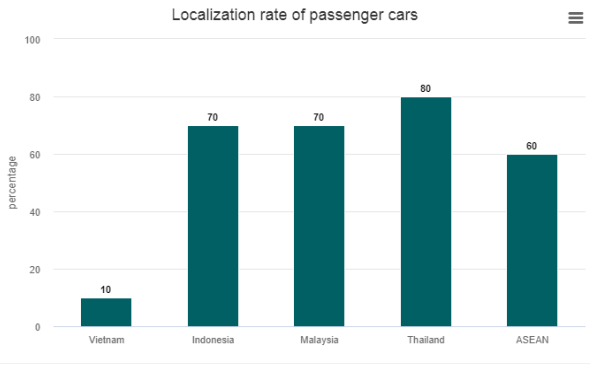

Fig. 3. Localisation rate of passenger cars in Vietnam.
Source: *Taken from reference [38]*

TABLE I: VIETNAM'S TARIFF REDUCTION SCHEDULE FOR VEHICLES

Year(s) after TPP becomes effective	Tariff rate (%)
1	70
2	70
3	70
4	63
5	56
6	49
7	42
8	35
9	28
10	21
11	14
12	7
13	0

Source: *Taken from reference [37]*

The future reduction of tariffs as illustrated in Table I should help the automotive sector become more competitive in the long term; however, the current high rate of imported automotive components notwithstanding the high tariffs shows that Vietnam has a long way to go before its comparative advantage in the automotive sector improves.

VI. PHARMACEUTICAL INDUSTRY IN VIETNAM

A. Challenges

The next section will identify the major problems that are currently obstructing the development of domestic pharmaceutical industry according to reference [36].

1) No long term strategy

Even the Government of Vietnam has promulgated policies for the development of the national pharmaceutical industry, there is not a specific master plan devoted to the development of this sector for the long-term.

2) Low value added production

Pharmaceuticals produced in Vietnam struggle to compete on international markets because they mainly treat common diseases or are sold as generic drugs that have not yet achieved bioequivalence standards, thus not suitable for exports.

3) Dependence of raw materials imports

Vietnam needs to import the majority of raw materials for pharmaceutical production. According to Pharma Report, the biggest import partners are China and India, respectively accounting for 57% and 18% of total import value in 2013. This dependence makes the industry vulnerable to exchange rate fluctuations or supply shortages.

4) Distorted distribution network

The pharmaceutical distribution network is fragmented and inefficient. The uncontrolled involvement of small local distributors and the lack of a clear legislative policies increase the inefficiency of the distribution market and raise the final price of drugs.

5) Price distortion

Vietnam's current pharmaceutical procurement system is highly decentralized and complex. Hospitals in Vietnam mostly purchase pharmaceuticals through bidding, which is subject to an upper price limit per medicament set by the regional health department. Those limits might greatly vary between areas, resulting in wide differentials in prices of medicines across facilities and regions of the country. Since sale of drugs is still the major source of income for the State health care system, some provinces have decided to use the sale of pharmaceuticals as their primary source of income vs. service charges. As a consequence, local people tend to pay a higher price for medication.

6) Intellectual property protection

Counterfeit drugs represent a significant amount of market consumption. The lack of aligning patent law fully with international standards could also impact multinational sector expansion.

B. Summary

Vietnam is a fast growing economy in South East Asia

with a significantly high population (over 97 million in 2018). The Vietnamese population is aging at a very high rate, which along with the rapid expansion of the middle-income urban class, have dramatically increased the demand for healthcare and pharmaceutical products. Even the government has formulated policies aimed at promoting the development of the pharmaceutical industry, their implementation does not seem to be successful given that the country still needs to import up to 90% of its pharmaceutical consumption.

VII. Conclusion

In conclusion, it can be seen that the Trans-Pacific Partnership (TPP) has shifted the comparative advantage of member countries in the respective industries studied in this article (Automotive, Agricultural, and Pharmaceutical).

The results partially confirm what trade theory suggests in that free trade agreements do not have a detrimental impacts on the structure of domestic industries in a given country, and therefore weaken any argument for trade protectionism. However, in examining the trade volumes between Japan and Mexico before and after the launch of the Mexico-Japan EPA, no particular changes in average trade volumes in the three industries occurred over a span of 10 years, either. This weakens the argument that free trade agreements automatically lead to more trade and leaving everyone better off. The third unexpected result has been that the conclusion of the TPP has not necessarily been a catalyst for the development of advanced sectors such as the pharmaceutical sector maintaining Mexico's strong dependence on agricultural exports and automotive industry versus less developed countries such as Vietnam, but not compared to Japan. Vietnam has even lost competiviness in the agricultural sector and not compensated for it by competitive gains in the other two industries (autmotive and pharmaceutical). As mentioned previously, strong government interference by the Vietnamese government in the agricultural sector may play a role.

Conflict of Interest

The authors wish to state that all research was conducted independently using secondary sources. No funding was received for this research. No conflict of interest is present.

Author Contributions

Juan José Cabrera Lazarini contributed research on the autmotive and pharmaceutical sectors in Vietnam and the idea for this research. Alexander Wollenberg contributed with the theoretical development including research framework and research design. He contributed the literature review and research on the agricultural sector in Vietnam and Mexico.

References

[1] Pacific Alliance unites Mexico, Colombia, Peru and Chile economies; 1st step: Dropping visas, *The Washington Post*, Associated Press, July 2011.

[2] A. Mary, D. Culver, and R. Schoney, "Usefulness and limitations of COP estimates for evaluating international competitiveness: A comparison of Canadian and US wheat," *American Journal of Agricultural Economics*, vol. 72, no. 5, pp. 1283-1291, 1990.

[3] J. A. Sharples, "Cost of production and productivity in analyzing trade and competitiveness," *American Journal of Agricultural Economics* 72, no. 5, pp. 1278-1282, 1990.

[4] D. Ricardo, *On the Principles of Political Economy and Taxation*, John Murray: London, 1817.

[5] R. W. Jones, *Globalization and the Theory of Input Trade*, MIT Press: Cambridge, 2000.

[6] A. J. Venables, *Geography and International Inequalities; The Impact of New Technology*, Paper Prepared for World Bank: Washington, DC, 2001.

[7] G. M. Grossman and E. Helpman, *Innovation and Growth in the Global Economy*, MIT Press: Cambridge, 1991.

[8] D. Trefler, "The case missing trade and other mysteries," *American Economic Review*, vol. 85, no. 5, pp. 1029-1046, 1995.

[9] P. R. Krugman, "Increasing returns, monopolistic competition, and international trade," *Journal of International Economics*, vol. 9, pp. 469–479, 1979.

[10] A. B. Bernard, S. J. Redding, and P. K. Schott, "Comparative advantage and heterogeneous firms," *The Review of Economic Studies*, vol. 74, no. 1, pp. 31-66, 2007.

[11] H. H. Liesner, "The European common market and British industry," *The Economic Journal*, vol. 68, no. 270, pp. 302-316, 1958.

[12] K. Kiyoshi, "Structure of comparative advantage in industrial countries: A verification of the factor-proportions theorem," *Hitotsubashi Journal of Economics*, vol. 11, no. 1, pp. 1-29, 1970.

[13] B. Balassa, "Trade liberalization and revealed comparative advantage," *The Manchester School of Economic and Social Studies*, vol. 33, pp. 99-123, 1965.

[14] J. B. Donges and J. Riedel, "The expansion of manufactured exports in developing countries: An empirical assessment of supply and demand issues," *Review of World Economics*, vol. 113, no. 1, pp. 58-87, 1977.

[15] H. P. Bowen, "Changes in the international distribution of resources and their impact on US comparative advantage," *The Review of Economics and Statistics*, pp. 402-414, 1983.

[16] T. L. Vollrath, "A theoretical evaluation of alternative trade intensity measures of revealed comparative advantage," *Weltwirtschaftliches Archiv*, vol. 127, no. 2, pp. 265-280, 1991.

[17] D. Bent, K. Laursen, and G. Villumsen, "Structural change in OECD export specialisation patterns: De-specialisation and 'stickiness'," *International Review of Applied Economics*, vol. 12, no. 3, pp. 423-443, 1998.

[18] K. Laursen, "Revealed comparative advantage and the alternatives as measures of international specialisation (No. 98-30)," *DRUID*, Copenhagen Business School, Department of Industrial Economics and Strategy/Aalborg University, Department of Business Studies, 1998.

[19] B. Robert, H. Forstner, and T. Murray, "On measuring comparative advantage: A note on Bowen's indices," *Weltwirtschaftliches Archiv*, vol. 121, no. 2, pp. 346-350, 1985.

[20] S. Dominick and K. Laursen, *Revealed Comparative Advantage and the Alternatives as Measures of International Specialization*, 2005.

[21] S. Vildan and A. Civan, "Revealed comparative advantage and competitiveness: A case study for Turkey towards the EU," *Journal of Economic and Social Research*, vol. 10, no. 2, pp. 25-41, 2008.

[22] D. P. Clark, W. C. Sawyer, and R. L. Sprinkle, "Revealed comparative advantage indexes for regions of the United States," *Global Economy Journal*, vol. 5, no. 1, 2005.

[23] T. Widodo, "Comparative Advantage: Theory, empirical measures, and case studies," *Review of Economic and Business Studies*, Faculty of Economics, Iasi University, Romania, 2009.

[24] A. J. Yeats, "On the appropriate interpretation of the revealed comparative advantage index: Implications of a methodology based on industry sector analysis," *Weltwirtschaftliches Archiv*, vol. 121, no. 1, pp. 61-73, 1985.

[25] M. Serafino and F. N. De Simone, "Monotonicity of indices of "Revealed "Comparative advantage: Empirical evidence on Hillman's condition," *Review of World Economics*, vol. 125, no. 1, p. 158, 1989.

[26] S. Bender and K. W. Li, "The changing trade and revealed comparative advantages of Asian and Latin American manufacture exports," Yale Economic Growth Center Discussion Paper, p. 843, 2002.

[27] P. Zavala, G. Macario, and F. F. Vichi, "El sector citrícola de Nuevo León: Caracterización del sistema agroalimentario como plataforma de integración del productor con la agroindustria," *Región y sociedad*, vol. 30, no. 71, 2018.

[28] DE, Artesanal-Especificaciones M. N. Imas, "Proyecto de Norma Oficial Mexicana PROY-NOM-005-SAGARPA-2018, Sal de mar

artesanal-Especificaciones mínimas de calidad agroalimentaria," Al margen un sello con el Escudo Nacional, que dice: Estados Unidos Mexicanos.-Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación.
[29] K. Kenichi, A. Sunami, Y. Ikeda, and M. C. Huang, "Japan: leveraging national regulatory reform and the economic modeling of trade agreements," *Megaregulation Contested*, Oxford University Press, 2019.
[30] G. Julia, *The EU-Japan EPA and its Relevance for the Japanese and Austrian Economies*, 2018.
[31] S. Tomohito, "Two-level game analysis of Japan in the TPP negotiations," *Asian Journal of Comparative Politics*, vol. 5, no. 4, pp. 337-350, 2020.
[32] A. Stephen, L. Brandt, and D. Restuccia, "Market constraints, misallocation, and productivity in Vietnam agriculture," *Food Policy*, p. 101840, 2020.
[33] B. Dan and A. Hansen, "The Frontiers of Poverty Reduction in Emerging Asia," *Forum for Development Studies*, vol. 43, no. 1, pp. 47-68, Routledge, 2016.
[34] P. Q. P. Nguyen and T. T. Cong, "TRIP Steel for Automobile Industry in Vietnam. EJERS," *European Journal of Engineering Research and Science*, vol. 4, no. 3, pp. 152-156, 2019.
[35] S. Shozo, "Has Nguyen Phu Trong's leadership curbed economic reform? Economic reform trends in Vietnam," *Asian Economic Policy Review*, 2020.
[36] A. Antonio, M. Tassinari, E. Barbieri, and M. R. Di Tommaso, "Institutional and economic transition in Vietnam: Analysing the heterogeneity in firms' perceptions of business environment constraints," *Competition & Change*, 1024529420939461, 2020.
[37] M. Schröder. (2017). Vietnam's automotive supplier industry: Development prospects under conditions of free trade and global production networks. Think Asia - ADB Institute. [Online]. Available: https://www.think-asia.org/handle/11540/6997
[38] T. Nhan. (2020). Cars made in Vietnam cost more than import. VN Express. [Online]. Available: https://e.vnexpress.net/news/business/data-speaks/cars-made-in-vietnam-cost-more-than-imports-4137485.html

Juan José Cabrera-Lazarini is the dean of the Faculty and professor of International Business at Tecnológico de Monterrey in Mexico. His line of research is related to value chain strategy. Dr. Cabrera completed his PhD in management at the Universidad Autónoma de Querétaro and he has been a visiting professor in several university programs in Canada, Finland, Germany, Taiwan and Colombia. Previous to that, Dr. Cabrera developed a 25-year career in the industry in manufacturing and logistics operations in World Class Companies in several countries including USA, México and Costa Rica.

Alexander Wollenberg is a professor at Khalifa University, UAE, and obtained his PhD from the National University of Singapore in 2011 specialising in innovation-based productivity growth of high-tech companies in emerging economies and a master of arts in international relations from Waseda University in Tokyo, Japan, focusing on technology transfer of Japanese companies in East Asia. In addition, he is a member of the editorial advisory board of IGI Global Publishing and the technical committee of International Economics Development and Research Center. Alexander has held various appointments in academia and consultancy in Singapore, Indonesia, Colombia, México, and the West Indies. He is also the co-founder of a Singaporean start-up focused on smart-home solutions. His research interests include regional economic integration and effects on value chains, as well as the new economy in emerging countries.