CTU Journal of Innovation and Sustainable Development
ISSN 2615-9422 | e-ISSN 2815-5602

DOI:10.22144/ctujoisd.2024.260

The effects of trade on national productivity - A stimulant or its handmaiden: An empirical evidence from ASEAN nations

Duong Hoang Long*

College of Economics, Can Tho University, Viet Nam

**Corresponding author (hoanglong1077@outlook.com)*

Article info.

Received 01 Aug 2023
Revised 27 Sep 2023
Accepted 21 Dec 2023

Keywords

ASEAN, foreign direct investment, handmaiden of growth, international trade, macroeconomics, trade openness

ABSTRACT

The paper investigates the mediating relationship between Trade and National Productivity, proxied by economic growth rate in ASEAN from 2012 – 2021. Using data from the ASEAN Statistical Yearbook, this research, first, reinvigorates the positive effects of trade balance on national productivity to improve the international trade literature given new settings and contemporary contexts, second, examines the translating/mediating effects of trade towards economic performance in the ASEAN by a novel approach through the adoption of generalized least squares and structural equation models. Findings show that there is a positive correlation between FDI and economic growth, a negative between trade openness and economic growth. Interestingly, there is the mediating effects of trade towards the FDI-growth relationship, justified by the tremendous uplift after the presence of trade was conducted into the regression. Albeit found compatible, the paper constrains itself since it did not treat the confounding effects of local market characteristics such as governance structures, institutional quality, intervention of fiscal policies, and the monetary circulation as one of the internal factors; to which the present author humbly suggests for future studies. Moreover, because of data unavailability, hypotheses are tested over the 10-year span, which may impede the inference because of macroeconomic-level policy lags.

1. INTRODUCTION

Since the Adam Smith era, trade has gradually come to be a critical parameter for countries' outcome of domestic development and growth. The Father of Economics introduced the term back in the eighteenths in a countervailing argument of the mercantilism theory, of which the antedated economists had advocated for an export-intensive economy. It was during this period and onwards that Smith (2002) brought the importance and specialization of international trade under the umbrella of economics. The criticality of trade was highlighted as the touchpoint to clarify countries' advantages. Countries have the natural opportunities to produce commodities with absolutely greater quality for lesser expenses and human resources. The naturality of their production advantage is, somewhat, above par that others would find it to be of no value to compete. In such competition stead, they, ones with subpar advantage and/or higher expenses in the production of said commodities, are suggested to import the particular commodities with greater quality for lesser pecuniary amounts in cases of self-production.

As a matter of fact, trade leads to progressive development. Its straightforward effects have been on the scope of scrutiny and thorough analysis since the very first days of globalization. However, this

article's initiative is because previous examination of trade has lacked a holistic approach towards the mediating relationship of trade. The positive role of trade seems to be insufficiently descriptive of how the trade-productivity relationship is, instead, the present author posits trade playing out a translating role of domestic development onto national performance, and numerous variables including (1) FDI Inward Flow, and (2) Trade Openness are proposed to have significant influence on trade and simultaneously on the trade-productivity relationship. Each of the variables has been on the rise of progressive economics studies, showing varying characteristics and applied in different contexts and conditions. In this article, we put forth an assessment of trade-productivity relationship in Southeast Asia, where economic contexts are rapidly changing and constantly rendered obsolete. Hence, this paper is a prudent validation to support the premises of trade performance and its mediating effects in global matters, which will expand the breadth of knowledge regarding social-economics perspectives, simultaneously benefits the paradigm of science as it refreshes the economics literature about the mediating effects of trade.

This paper is built upon five sections; the first states the rationales. The second builds up hypotheses by documenting past literature. The third presents the methodology conducted to quantify the trade-growth relationship. The fourth presents findings from statistical methodology. The fifth concludes the article and suggests implications for future usage.

2. MATERIALS AND METHOD

2.1. Mercantilism vs Liberalism: the precursor of a free-trade world

To begin with, this research acknowledges the absolute advantage theory, which is not a novel school of thoughts, not to say aged, but an active one that constantly arises the refreshing needs in contemporary contexts and different settings.

On one side, mercantilists approach the world economy as a set of competitions where the countries shall maximize their strength and power through a selective scheme of trade. Liberalists, on the other side, approach the world economy as a free market where country shall use its own natural advantages to produce/trade what is socially demanded, and through the invisible hand, to create more wealth.

Heckscher and Shapiro (1935) justified for proponents of mercantilism. The core direction back in the days was not to open their borders to the exogenous; thus, mercantilism practically was not set forth to pursue the development of trade or international interests between countries and/or coalitions but as an administrative toolkit for countries to seek political influence and power, to the expense of one other.

Similarly, Von Schmoller (1895) denoted mercantile practices with a sense of political interests. Amidst the transitional period of European powerhouses, countries must follow certain treaties and coalitions to fortify their political administration and regulative powers. In favour of such an aim, mercantilism, or governmental parsimony, is the central message of the powerful to get ahead in politics and regional hegemony.

A subset of market mercantilism, termed energy mercantilism, is reviewed by Lind and Press (2018) to explain the success of China when it engages in energy mercantilism to secure its total supply of oil and prevent oil coercion. The authors emphasized that oil in the modern days has been ubiquitous and has become a paramount input of the world economy. Countries, specifically China, see the value of the oil industry, so securing it to their own means to exert dominance over this resource, in protection against the others' attempts to seek similar control, to protect their economy influence. The ultimate aim is to gain the upper hand over this crucial resource in global trading matters.

Kelanic (2020) concurred with the energy mercantilist strategies by great powerhouses who link the crude oil industry with political power. The writer focuses on the potential coercive control of the crude oil industry. During days oil price gradually become the global benchmark, countries are better off thanks to their fair share of crude oil, yet getting more contingent on the oil industry renders them more vulnerable to potential coercive actions by others who seek means of influence and control through high access of oil and gas. Thus, in fears of such influence, great powerhouses are mercantilist towards energy resources to avoid oil coercion before they become a prey, which Kelanic (2020) coined anticipatory strategies.

In displacement of the controversial perception of mercantilism, opposing papers with empirical evidence argued that the world is far better off given their inherent free-trade characteristics.

Smith (2002), the presently known as father of modern economics, launched his theory of political economics that promotes the rise of free-market capitalism. The author posited that trade benefits both parties involved, enabling a free flow of international interests where quantity and pricing of commodities are determined by the supply-demand relationship. The work opposed the ideology of trade being a mere zero-sum game and suggested that countries should always export what they are naturally, or technically, abundant and import what are naturally, or technically, scarce.

On an environmental scale, Antweiler et al. (2001) questioned whether there is any link between free trade and the environment. Interestingly, the authors suggested that greater trade intensity has a mediating effect on pollutant concentrations, i.e., while participating in greater trade activities, countries enjoy enormous increases in national output and individual income levels, which in-turn will positively impact the environment. The estimates tell that if countries' exposure to international trade raises their national output level by 1%, pollution will technically decrease by 1%.

Bengoa and Sanchez-Robles (2003) produced similar evidence on the relationship between economic freedom and growth of the Latin Americas. The duo stated convincingly that countries with greater levels of freedom will attract more inbound FDI, which ultimately fosters economic growth. In detail, there are three reasons that Bengoa and Sanchez-Robles (2003) believed greater FDI and levels of freedom enhance economic growth; firstly, FDI is the main engine of advanced technology transfer and spillover, secondly, FDI improves means of transport and communication in host countries, and finally, FDI is non-binding to the government – a firm may go bankrupt but the host's government holds no responsibility in repaying the principal.

Other figures with the same mind on the Smithian tenet was Grossman and Krueger (1991), who studied the causality of free trade and environmental wellbeing, which found that trade raised the home countries' output and technology for their specialized sectors to reduce pollution concentrations; Tybout and Westbrook (1995), who studied the reduced production costs of the exported commodities thanks to absolute advantage of production; Krishna and Mitra (1998), who suggested a positive relationship of price competition and growth rate of productivity, with trade reforms embedded as one of the mediators; Frankel and Romer (1999), who studied the beneficial effects of geographical components of trade to income of the home countries; and finally Melitz and Ottaviano (2008) who studied the advantageous competitive effects of increased imports on productivity gains and product variability.

This concludes the first part of theory review. The next part reviews literature of the Handmaiden of Growth theory.

2.2. Engine or Supplement: trade as the handmaiden of growth

This section tailors the paper's latter theory, the Handmaiden of Growth, which posited the notion of trade being the translator of economic growth rather than the driving determinant per se. Likewise the former, this school of thoughts is not a novel one, yet always produces the needs of refinement. Its conceptual framework adhered to the principles of a positive association between trade and development, yet the theory advocates argued that trade tends to play the handmaiden nature role of a country development.

One of the most provocative settings of trade's handmaiden role must not exclude Kravis' paper (1970). To the author, antedated evidence of export expansion had not told apart the stories of successful from unsuccessful countries; yet the development of internal factors, on one hand, plus the inducements towards progressive development resulting from trade had done thus so. A favourable trade balance did not address the development of a country, however, represents a stimulus from external demand for such a country. Productivity growth where it manifested was primarily contributed by the favourable trade balance of sectors with absolute advantage, which yields appealing inducements for the government to push the sectors to its highest efficacy.

On a meta-analysis paper, Lal and Rajapatirana (1987) reviewed empirical evidence collected from pro-trade papers concerning developing countries during the 1960 – 1970 period. The duo later found that trade, instead of producing direct effects to economic performance, dealt a non-quantifiable effects onto growth. Free trade regime in those countries constructed an economic model to foster the positive development of entrepreneurship, productivity, and thrift – with trade playing the complementary force.

Shining minds following the path of Kravis (1970) was papers of Salvatore (1983) with the author's evidence strongly supporting the handmaiden strand of trade, generally concluding that trade enhances internal factors in the development process; of Riezman et al. (1996) using the Penn World Table dataset of 126 countries to assess the strength of export-led growth. The trio found that the "Tiger" countries of Asia – Hong Kong, Singapore, Taiwan, and South Korea – witnessed a clearer increase in the relationship of export and growth after inputting characteristics of internal factors such as human capital, investment growth, and import growth; finally of Jimenez and Razmi (2013) claiming that Asian technological frontier countries enjoy higher growth from export through knowledge and technology spillovers they gain from international competition.

This paper, which draws an identical thought to the handmaiden theory, tries to quantify, first, the effects of trade unto economic growth, second, the internal development effects unto trade propensity in ASEAN. This part also concludes the theory of handmaiden review. The next part reviews the literature of the proposed explanatory variables.

2.3. Explanatory variables

2.3.1. Foreign direct investment

Foreign Direct Investment (FDI) refers to the process of investment inwards the host countries to achieve ownership stake by a foreign entity to expand their international operations by direct controlling means.

Most notable evidence upon the causality was of Alfaro et al. (2004) who studied the mediating effects of local financial market indicators on the positive relationship of FDI and growth, strongly remarked that these indicators are necessary to bolster the positive effects of FDI; of Azman-Saini et al. (2010), albeit found no direct positive relationship between the two, produced an interesting point that the positive effects of FDI regimes depended upon level of freedom in international matters; finally of Iamsiraroj (2016), who addressed the positive correlation between FDI and economic growth regarding determinants such as trade openness and economic freedom to fuel the former's performance. Ayanwale (2007), on an in-depth investigation of the Nigerian trade-growth relationship, suggested that host market determinants such as market size, infrastructure, and governance policies positively associate with economic growth of the African country; FDI investment contributed a positive impact unto the communication and crude oil extraction sectors, which outperformed ones in manufacturing. Similarly set in the 2000s India, Bajpai and Sachs (2000) advised the Indian government to throw the doors open for FDI to flow inwards, improving the country's performance against then problems such as restrictive FDI regime, high tariff barriers, ample labour laws, and constrained investment. A recent study by Pegkas (2015) found a significantly positive correlation between FDI stock and economic growth in Eurozone countries over a 10-year span dataset from 2002 – 2012. The writer showed that, to become an attractive destination for FDI inflows, the governing entity should opt in for macroeconomic stability, market robustness, and innovative reforms. That also concludes the literature review of FDI, next enters one of Trade Openness.

2.3.2. Trade openness

Trade Openness measured how much freedom one is oriented towards trading matters; hence, the higher the degree, the more influenced trade imposes. There is a plethora of scientific sources about trade characteristics on growth performance, with strong polarization. Upon the broader set of controversy, the favourable agreed that openness motivates the countries to export more commodities to which they have comparative advantages and abundant resources. The subsequent chain of trade led the country through the output- and input-oriented market expansion, the former allows the producers to exploit the economies of scale and economies of scope (Robert, 1988; Borland & Yang, 1992) whereas the latter drives market growth via endogenous factors (Romer, 1990).

The emerging consensus to the positive effects of trade openness also included Sachs et al. (1995) concluding it is the essence of a good economic policy to global integration but simultaneously needs the inclusion of macroeconomic stability and performable institutional structures; was Dowrick and Golley (2004), with focal analysis upon trade barriers as the mediator to address the relationship of economic growth; and Keho (2017) also produced similar results, justified by the mediating effects of capital formation on the positive relationship of trade openness and economic growth.

The other side of the coin (North, 1990; Milgrom et al., 1990; Rodrik et al., 2004) argued against the

construct that despite the benefits openness of trade brought upon, its determinants are preferably outweighed by those of higher authority intervention such as governmental administration, institutional quality, and increasing governance efficacy. Hall and Jones (1999) put forth the premise that developed countries enjoy enormous output, capital accumulation, better performance to ultimately become the powerhouse of the world-scene economy resulting from a more functional workforce. At a breakdown analysis, the authors distinguished a productive from an unproductive workforce by differences in social infrastructure such as institutional quality, governmental policy, human capital, physical capital, and education attainment. Acemoglu et al. (2001) indexed the expropriation risk as a specification for economic growth estimation, concluded that institutional factors, derived from different states and policies, are precisely major drivers for personal income.

Ergo, based on researched literature, the present author proposes the following conceptual framework with two driving hypotheses to capture the trade-growth relationship:

Hypothesis 1a: FDI Inward Flow is positively associated with National Productivity, mediated by Trade Incentive.

Hypothesis 1b: FDI Inward Flow is positively associated with National Productivity.

Hypothesis 2a: Trade Openness is positively associated with National Productivity, mediated by Trade Incentive.

Hypothesis 2b: Trade Openness is positively associated with National Productivity.

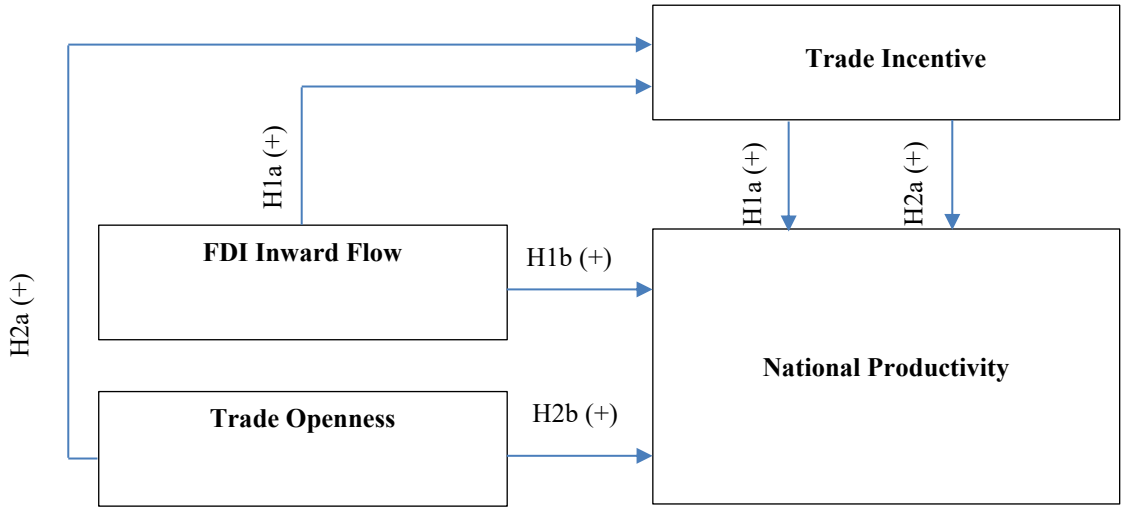

Figure 1. Conceptual framework of the study

3. METHODOLOGY

3.1. Data collection

Data used for the scope of this paper is from the official "ASEAN Statistical Yearbook" published in 2022. The yearbook details information across ASEAN including indicators of economics, investment, public infrastructure, et cetera. The present author tests his hypotheses on a longitudinal formation, spreading over the 2012 – 2021 period (ASEANStats, 2022).

3.2. Data measurement

The present author documents the following table to tailor the measurement method of the proposed variables derived from the conceptual framework put forth.

Table 1. Proxy and Measurement

Variable	Proxy	Measurement
National Productivity (NP)	Economic growth	Natural logarithm of GDP in US dollars (adjusted PPPs). $GR_{i,t} = \ln(GDP\_USD)_{i,t}$ *where: i denotes the i^{th} country in t^{th} year*
FDI Inward Flow (FDI)	Total investment from source countries	Natural logarithm of total FDI (adjusted PPPs). $FI_{i,t} = \ln(FDI)_{i,t}$ *where: i denotes the i^{th} country in t^{th} year*
Trade Openness (TO)	Trade openness index	Total trade average to GDP (adjusted PPPs). $TOI_{i,t} = \frac{{}^{1}/_{2}\,(Export_{i,t} + Import_{i,t})}{GDP_{i,t}}$ *where: i denotes the i^{th} country in t^{th} year*
Trade Incentive (TI)	Total trade in goods	Natural logarithm of total trade in goods (adjusted PPPs). $TI_{i,t} = \ln(totaltrade)_{i,t}$ *where: i denotes the i^{th} country in t^{th} year*

3.3. Data analysis

Accordingly, the present author used the Feasible Generalized Least Squares (FGLS) model to regress the causal relationship between trade and growth. The FGLS method is employed to invoke a bypass in statistical disturbances with which the linear OLS basically could not deal. Those can be problems of variable autocorrelation and heteroskedasticity. The problem of autocorrelation, which a random variable yield similar results to its lagged values, within the dataset collected might have come from policy lags and different economic scenarios, say, the trade performance of a country i in year t might be overly correlated with its own value in another year $t + n$ and/or $t - n$ but the degree of similarity tells little information of analysis and not provide actual performance of the country in the two years. Heteroskedasticity, a situation when the variance is rendered non-constant over time, is also a problem to invalidate any dataset. Since the sampled countries collected yield varying numerical data that draw different residuals, say, some countries in the Southeast Asian outperform their regional counterparts in terms of performance, FDI, and openness of trade, which result to non-constant residuals that the usual OLS regression would have treated otherwise. Hence, FGLS method is employed for such issues.

Then, the linear-based bootstrapping Structural Equation Modelling (SEM) was consulted to measure the mediating effects of the conceptual framework alongside the main causal relationship (Pearl, 2009). This paper utilizes a multivariate scope of analysis, with causal chains of trade characteristics leading to trade performance, and national productivity in-turn, which should always be done piecewise given the OLS regression. The SEM model, on the other hand, enables the present writer to simultaneously assess the complex multivariate correlations amongst proposed variables to obtain a precise measurement of trade.

With regards to the proposed framework, the detailed specification of this paper is as of follows:

$$CDE_{x,x'}(Y) = \sum_{z} [E(Y|x', z) - E(Y|x, z)]P(z|x) + \vec{C} + \varepsilon$$

Where $CDE_{x,x'}(Y)$ denotes the change in Y when we set the value intake from x to x'while holding the mediating value z dependent from un-scoped confounding variables $\vec{C}$ for all the analyses. The equation is then adjusted by the probability $P(z|x)$ in a structural equation model when dependent variable z is justified by independent variable x. The ε indexes random error.

4. RESULTS AND DISCUSSION

4.1. Descriptive statistics and correlation

Table 2 represents variable information. The variables except the trade openness index are initially measured in natural logarithm units; hence, this description will tailor the number in an anti-log manner.

Table 2. Information scorecard (n = 100)

Variable	VIF	Mean	Std.Dev.	Min	Max
NP		11.75	1.49	9.23	13.98
TI	4.78	11.59	1.64	8.34	13.67
FDI	5.00	8.58	1.48	5.14	11.57
TO	1.41	0.50	0.30	0.14	1.36

Source: estimated results.

*Note: NP is National Productivity, TI is Trade Incentive, FDI is Foreign Direct Investment Inward Flow, TO is Trade Openness. *, **, *** signify the significance level at respectively p<10%, p<5%, and p<1%.*

On average, sampled countries technically produced 126,753.6 million US dollars (11.75 in natural logarithm) of total goods and services per year, with the lowest value recorded at 10,192.50 million (~9.23) by the Lao PDR in 2012, outperformed by that of Indonesia in 2021 at 1,185,776.80 million (~13.98).

Trade Incentive treads an identical pattern. Total traded goods mounted to an average of 108,012.26 million US dollars (11.59) per year, with the Lao PDR trading the least at 4,194.70 million (~8.34) during 2012, dwarfed by Singapore in 2021 as the latter's figure soared to 862,846.20 million (~13.67).

The figure of FDI Inward Flow also favored the island-state Singapore. In 2019, home countries poured total 106,319.80 million US dollars (~11.57) to this country, towering the State of Brunei with only 171.30 million (~5.14). The figure of Singapore is about twenty times higher than the bloc's average inward investment of 5,324.11 million (8.58).

Unsurprisingly, Singapore as well ranked the most open country to trade within the bloc. On an average of 0.5-point trade openness index, the 2012 Singapore scored 1.36 points, about 2.72 times higher than the overall.

Table 3 provide detail description of the proposed variables. Before proceeding the cardinal regression, the present author analyses for the framework's statistical representative by testing the model goodness of fit, proxied by multicollinearity and heteroskedasticity issues (Phan & Duong, 2021). The outcome yields performable results, VIF indicators as in Table 2 were under the five-cutoff point (Hair et al., 2021). Breusch-Pagan test of heteroskedasticity as in Table 4 also gave significant p-value at 67.56%, over the 5-percent threshold, thus failing to reject the null hypothesis of homoskedasticity. In conclusion, both multicollinearity and heteroskedasticity were not problematic for the paper's scope of study.

Table 3. Information of variables (n = 100) (cont.)

Variable	NP	TI	FDI	TO
NP	1.00			
TI	0.79***	1.00		
FDI	0.78***	0.87***	1.00	
TO	-0.03	0.53***	0.35***	1.00

Source: estimated results.

*Note: NP is National Productivity, TI is Trade Incentive, FDI is Foreign Direct Investment Inward Flow, TO is Trade Openness. *, **, *** signify the significance level at respectively p<10%, p<5%, and p<1%.*

Table 4. Breusch-Pagan Goodness of Fit

Hypothesis	H_0: Homoskedasticity is present. H_a: Heteroskedasticity is present	
chi2(1)	0.18	Conclusion: there is no evidence to reject for homoskedasticity in the analysis scope.
P_value	0.6756	

Source: estimated results

4.2. Discussion

Table 5 pertinently tailors estimated results the present author gained from regression analyses. For the record, both models of Structural Equation Regression and FGLS Regression lived up to the present author's expectations to yield in-line effects

The present author has broken down the analysis into a three-step approach.

Firstly, the upper part of the table details regression analysis with the stand-alone effects of trade characteristics such as FDI Inward Flow, Trade Openness, and Trade Incentive to National Productivity. Column 4's figures signify a positive linear effect of FDI Inward Flow (0.12) and Trade Incentive (0.95) to National Productivity, and negative of Trade Openness (-2.10) without mediating involvements.

Second, the lower part of the table details regression analysis with the stand-alone effects of FDI Inward Flow and Trade Openness to Trade Incentive, whereby the present author fixed the latter as a dependent variable. This yield decent result – column 4's figures signify a positive linear effect of FDI Inward Flow (0.96) to Trade Incentive – telling a significant relationship between FDI and Trade; thus, allowing the present author to proceed analyzing the mediating effects of Trade Incentive, proxied through FDI Inward Flow. Data of such effects are documented in column 5.

Finally, in column 5, the present author assesses the mediating effects of Trade Incentive, proxied by the growth of FDI Inward Flow and Trade Openness, towards National Productivity. The former yield significant result, increasing its own performance indicator from 0.12 to 0.91 with the amplification of Trade Incentive. Trade Openness went south from a negative figure to be insignificant.

Table 5. Regression results using the SEM and FGLS methodology

Variable (1)	Index (2)	Total Effects (3 = 4 + 5)	Direct Effects (4)	Indirect Effects (5)	Structural Equation Regression (6)	FGLS Regression (7)
Response variable (Y = National Productivity)						
Intercept					0.83 (0.11)***	0.83 (0.10)***
Explanatory variables X = x						
FDI Inward Flow	X_1	1.03 (0.05)***	0.12 (0.02)***	0.91 (0.05)***	0.12 (0.02)***	0.12 (0.02)***
Trade Openness	X_2	-1.90 (0.23)***	-2.10 (0.07)***	0.20 (0.23)	-2.10 (0.07)***	-2.10 (0.06)***
Trade Incentive	X_3	0.95 (0.02)***	0.95 (0.02)***	n/a	0.95 (0.02)***	0.95 (0.02)***
No. observations		100	100	100	100	100
Log likelihood					-244.34	54.62
P-value					0.000	0.000
Response variable (Z = Trade Incentive)						
Intercept					3.26 (0.40)***	3.26 (0.46)***
Explanatory variables X = x′						
FDI Inward Flow	X_1'	0.96 (0.05)***	0.96 (0.05)***	n/a	0.96 (0.05)***	0.96 (0.06)***
Trade Openness	X_2'	0.21 (0.24)	0.21 (0.24)	n/a	0.21 (0.24)	0.21 (0.29)
No. observations		100	100	100	100	100
Log likelihood					-244.34	-112.57
P-value					0.000	0.000

Source: estimated results.

*Note: NP is National Productivity, TI is Trade Incentive, FDI is Foreign Direct Investment, TO is Trade Openness. *, **, *** signify the significance level at respectively p<10%, p<5%, and p<1%.*

The direct effects of FDI show a significant positive association with National Productivity, as expected. The findings empirically support the FDI-growth relationship in modern theories.

ASEAN countries make transactions within the association to benefit from lower tariffs, fewer barriers and better protection tailormade for the economic bloc. The free flow of capital is the cardinal aspect that motivates investors to do transactions with the region. Output in a broader sense originating within the association unsurprisingly enjoy better benefits, less barriers, and more protection than the exogenous. Singapore is always amongst the top invested countries of the world thanks to their trade openness, ease of business-doings, transparency, diminished corruption, and second-to-none security. These

factors explain why Singapore impressively performs in this aspect, Barklie et al. (2022) examined the proportion of countries' FDI projects over their corresponding GDP as in Figure 2. A positive figure implies that the country is receiving a higher proportion of FDI given their GDP, a negative implies otherwise.

Rank	Country	Score
1	Costa Rica	13.92
2	North Macedonia	11.79
3	UAE	8.42
4	Croatia	8.36
5	Serbia	7.32
6	Estonia	5.80
7	Bahrain	5.27
8	Singapore	5.01
9	Bulgaria	4.80
10	Romania	4.43

Figure 2. Proportion of FDI projects over GDP

(Source: Barklie et al., 2022)

As seen, Singapore claimed the 8th position with a 5.01-point record in 2021. It means that, given this small country's GDP, it is performing extremely well, attracting more than 5.01 times its FDI investment compared with what the country should have performed given its GDP level.

Yet interestingly, a big sum of total Singapore's FDI attraction ended up passing to other intra-ASEAN countries since the foreign investors take advantage of the add-in protection by the Singaporean rule of law enacted upon outbound capital leaving the island, rendering confidence in investing decisions (ASEAN, 2016; ASEANStats, 2022). Based on a biannual report by OECD in 2022, the institution's economists claimed that Hong Kong, China, and Singapore have always been acknowledged for their astronomical amount of FDI receiving; however, these economies are not the final destinations of the investment, yet it flows to the countries to take advantage of their protection and continues passing to other countries within the regional bloc. Thus, the OECD's authors postulated that Singapore, as one of the many, should not be treated as a major FDI recipient nor sources (OECD, 2022). Next, the extra-ASEAN flow brings along technology advancement and intellectual property to the host country, improving the workforce and national performance with hi-tech application. Furthermore, during a transitional period do they possess labour force with competitive cost structures than developed countries; the increasing availability of manufacturing and labour-intensive sectors also hugely interests to multinational entities to attain lower production costs, which drives the key investment decisions to the countries.

The coefficient of FDI Inward Investment increases tremendously from 0.12 to 0.91 after inducing for Trade Incentive, thus far concurred modern literature of trade playing out the representative role of added stimulant for the internal factors.

Multinationals expand their international footprints, through the comparative advantages of proficient labour cost, abundant factor endowments, large customer base, and immense development potential. These factors contribute to a more efficient economies of production to achieve competitiveness with utilized cost structures. As part of the globalization process, the capital flow from developed to developing countries indicates that MNEs have started to consider the host countries as a promising source of profitability with their rather low subsistence level and wages (Jayachandran, 2006). On the other hand, FDI is believed to associate with job creation and technology enhancement for the local economy. Karlsson et al. (2007) found that FDI dealt a positive impact to the recipient's employment growth, both coming from the direct effects of foreign companies investing to the country to create more job opportunities and from the indirect spillover effects of domestically owned companies.

However, other findings have already included the down-sided effects of FDI on host countries' trade balance. Recent findings by Majeed and Ahmad (2007) posited that investing firms are selective of their host location, given determinants of export-platform, export-orientation, and production capacity. The authors also explained why foreign entities usually invested to countries to which they possessed higher monopolistic advantages, say, the abilities to produce similar but not perfect substitute of a product, to weaken local competition. In

Vietnam, Nguyen (2022) studied the long-run effects of FDI to the country, claiming a possibility that FDI encourages economic growth in the short-run, yet impedes the long runs, for the capital invested to the country has been found at environmentally adverse sectors such as heavy industry, chemicals, and those without beneficial technology transfer.

In line with the findings, the present author agreed that if any country overlooks and depends largely on the export of FDI sectors, FDI in that case will significantly improve one's performance in the short-run rather than foster the long-term sustainable growth, viz., the investors may take advantage of the host country's producer role and export the finished commodities, making the recipients their offshoring outpost. Upon this issue, FDI may look reciprocal initially, yet avails nothing in the long run. Take Vietnam for an instance, during a talk with local media back in 2021, the country's Deputy Minister of Planning and Investment were worried that: "The proportion of export from FDI sectors is growing, for over 76.3%, as compared to around 60% to 70% in the past. This shows that the exportation scenario of Vietnam has gradually become more dependent on FDI sectors, and it is noteworthy." (Ministry of Finance, 2021). Statistical data also pointed that in key export sectors, FDI companies have the lead in exporting the finished commodities to their markets outside the recipient country, as well. They occupied 99.1% of total exports in smartphone and spare parts, 98% in computer and electronic components, surprisingly 81.9% in footwear and 62.5% in textile products – two of Vietnam's major trading lines (Ministry of Finance, 2021). Another vivid illustration of the two-sided feature of FDI is due the article of Xu et al. (2019). The group of authors found that FDI growth basically takes an inverse-U shape towards pollution in China. The increasing curve tells the fact that most foreign-invested firms in China is from the heavy industry with high energy consumption; thus, the growth of FDI increases demand for fossil fuel exploitation, which eventually push the emissions of air contaminants. Fortunately, the authors suggested that the country and foreign firms can curb the negative situation by promoting efficient energy consumption and material extraction, as well as by restructuring the economy from secondary industry to tertiary industry development.

Trade Openness only yield direct effects, signifying a negative association with National Productivity. The findings negate initial expectations where a positive openness-growth relationship was delivered.

Freedom of business has never been a good construct of governance in ASEAN contexts, for whose countries have recently been in the grand scheme of economic reform with incurred fluctuations. Needless to say, ASEAN comprises younger economies that always arises the stabilizing from an able governing body where the state plays the facilitator role and the collection of economic growth, developed internal factors, and proficient division of labour plays the driving force.

Whilst much have been done, progress remains for the association. Albeit an outstanding association with collective GDP amounting the 5th largest of the world, it consists of countries with varying economic performance and cultural contexts, termed a difference in social infrastructure, in the language of Hall and Jones (1999). Technically put, social infrastructure construes motivation for the labour force, which Dut et al. (2021) deemed an intellectual property of an economy; different economic performance yields different social infrastructure for the labour force that, on a positive term, supplies productive activities such as the development of new products, improved public services, reduced poverty; on the contrary, condones immoral behaviour towards the economy such as rent-seeking, heightened income inequality, growing political corruption, and bribery. Ergo, the countries with fragile governance should opt out from business freedom and total openness, for productive activities are always vulnerable to immoral behaviour if overlooked, affecting output per worker. Hall and Jones (1999) exemplified the predatory adherence of immorality and vulnerable adherence of productivity as a notion of thieves and farmers, as when the farmers and their produce are not protected from thievery at all, they are going to spend more of their time and assets to protect against stealing, subsequently producing lesser vegetables and fruits per working hours whilst using up more inputs. It takes more individual efforts for each farmer to put up protection on their farm than when the country itself is free from thievery through means of regulatory standards and social actions performed with the governing body playing the first chair. Therefore, the determining role of the governing body is of credible importance to the labour force, the basic foundation of the economy (Dut et al., 2021).

5. CONCLUSION

The paper has advanced our understanding of the true role of trade, the handmaiden. Empirical findings suggested that FDI Inward Flow improves countries' performance, amplified by the handmaiden role of trade. Trade Openness, whilst not correlating to trade expansion, yields an amply negative effects on the performance. The findings produce supportive results in world literature of international trade and add novel comprehension to the academic concepts. First, economies likewise the Southeast Asians should opt in for reciprocal and multilateral investment from foreign countries, which is to boost the economy welfare generally. Second, international trade proved a handmaiden role of translating the local market indicators to one's economic growth. Therefore, multinational firms are more than welcome to expand their international footprints to the Asian emerging markets, whilst policy makers of the host countries shall create more opportunities to foster an investor-friendly economy for the inward movements of capital. Finally, a negative sign in Trade Openness signifies the fact that young economies shall be protected by fiscal policies and governmental intervention, in avoidance of immoral behaviour such as rent-seeking, bribery, and corruption. The ultimate aim is to nurture a healthy coming-of-age economy that pays off appealing incentives to the foreign investors.

Albeit found compatible, the paper constrains itself since did not treat the confounding effects of market characteristics such as governance structures, institutional quality, governmental intervention, and the monetary circulation as one of the internal factors. Therefore, future studies are suggested to centre analysis scope upon them to pave a valid path for the policy makers and foreign investors. Moreover, because of data unavailability, hypotheses are tested over the 10-year span, which may impede the inference because of macroeconomic-level policy lags.

REFERENCES

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American economic review*, *91*(5), 1369-1401.

Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: the role of local financial markets. *Journal of international economics*, *64*(1), 89-112.

Antweiler, W., Copeland, B. R., & Taylor, M. S. (2001). Is free trade good for the environment?. *American economic review*, *91*(4), 877-908.

ASEAN (Ed.). (2016). Investing in ASEAN 2015|2016. Retrieved June 27, 2023, from https://asean.org/wp-content/uploads/2021/09/4.-38.-November-2015-Investing-in-ASEAN-2015-2016.pdf

ASEANStats. (2022). ASEAN Statistical Yearbook 2022 (Version 18) [Dataset]. Retrieved June 27, 2023, from https://www.aseanstats.org/wp-content/uploads/2023/04/ASYB_2022_423.pdf

Ayanwale, A. B. (2007). FDI and economic growth: Evidence from Nigeria.

Azman-Saini, W. N. W., Baharumshah, A. Z., & Law, S. H. (2010). Foreign direct investment, economic freedom and economic growth: International evidence. *Economic Modelling*, *27*(5), 1079-1089.

Bajpai, N., & Sachs, J. D. (2000). Foreign direct investment in India: Issues and problems.

Bengoa, M., & Sanchez-Robles, B. (2003). Foreign direct investment, economic freedom and growth: new evidence from Latin America. *European journal of political economy*, *19*(3), 529-545.

Barklie, G., Davies, N., Lyttle, C., & Aggarwal, D. (2022). Global FDI Annual Report 2022. Retrieved September 22, 2023, from https://www.investmentmonitor.ai/wp-content/uploads/sites/7/2022/08/Investment-Monitor_annual-report.pdf

Borland, J., & Yang, X. (1992). Specialization and a new approach to economic organization and growth. *The American Economic Review*, *82*(2), 386-391.

Dowrick, S., & Golley, J. (2004). Trade openness and growth: who benefits?. *Oxford review of economic policy*, *20*(1), 38-56.

Dut, V. V., Long, H. D., Man, M. L. T., & Phu, T. N. (2021). The Effects of Labor Characteristics on Firm Productivity: Empirical Evidence from Vietnam. *VNU Journal of Economics and Business*, *1*(4).

Frankel, J. A., & Romer, D. (1999). Does trade cause growth?. *American economic review*, *89*(3), 379-399.

Grossman, G. M., & Krueger, A. B. (1991). Environmental impacts of a North American free trade agreement.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). A primer on partial least squares structural equation modeling (PLS-SEM). *Sage publications*.

Hall, R. E., & Jones, C. I. (1999). Why do some countries produce so much more output per worker than others?. *The quarterly journal of economics*, *114*(1), 83-116.

Heckscher, E. F., & Shapiro, M. T. (1935). *Mercantilism, vol. 2*. George Allen and Unwin Limited, London.

Iamsiraroj, S. (2016). The foreign direct investment–economic growth nexus. *International Review of Economics & Finance*, *42*, 116-133.

Jayachandran, S. (2006). Selling labor low: Wage responses to productivity shocks in developing countries. *Journal of political Economy*, *114*(3), 538-575.

Jimenez, G. H., & Razmi, A. (2013). Can Asia sustain an export-led growth strategy in the aftermath of the global crisis? Exploring a neglected aspect. *Journal of asian economics*, *29*, 45-61.

Karlsson, S., Lundin, N., Sjöholm, F., & He, P. (2007). *FDI and job creation in China* (No. 723). IFN Working Paper.

Keho, Y. (2017). The impact of trade openness on economic growth: The case of Cote d'Ivoire. *Cogent Economics and Finance*, *5*(1), 1332820.

Kelanic, R. A. (2020). Black gold and blackmail: Oil and great power politics. *Cornell University Press*.

Kravis, I. B. (1970). Trade as a handmaiden of growth: Similarities between the nineteenth and twentieth centuries. *The Economic Journal*, *80*(320), 850-872.

Krishna, P., & Mitra, D. (1998). Trade liberalization, market discipline and productivity growth: new evidence from India. *Journal of Development Economics*, *56*(2), 447-462.

Lal, D., & Rajapatirana, S. (1987). Foreign trade regimes and economic growth in developing countries. *The World Bank Research Observer*, *2*(2), 189-217.

Lind, J., & Press, D. G. (2018). Markets or Mercantilism? How China Secures Its Energy SuppliesInternational Security, *42*(4), 170-204. https://doi.org/10.1162/isec_a_00310

Majeed, M. T., & Ahmad, E. (2007). FDI and exports in developing countries: theory and evidence. *The Pakistan Development Review*, 735-750.

Melitz, M. J., & Ottaviano, G. I. (2008). Market size, trade, and productivity. *The review of economic studies*, *75*(1), 295-316.

Milgrom, P. R., North, D. C., & Weingast, B. R. (1990). The role of institutions in the revival of trade: The law merchant, private judges, and the champagne fairs. *Economics and Politics*, *2*(1), 1-23.

Ministry of Finance. (2021). Risks when exporting depends on FDI. https://mof.gov.vn/webcenter/portal/vclvcstc/pages_r/l/chi-tiet-tin?dDocName=MOFUCM199215 (Vietnamese).

North, D. C. (1990). A transaction cost theory of politics. *Journal of Theoretical Politics*, *2*(4), 355-367.

Nguyen, L. T. H. (2022). Impacts of Foreign direct investment on economic growth in Vietnam. *Journal of Economic and Banking Studies*, *4*, 01-15.

OECD. (2022). *FDI in Figures*. https://www.oecd.org/investment/investment-policy/FDI-in-Figures-April-2022.pdf

Pearl, J. (2009). Causality. *Cambridge university press*.

Pegkas, P. (2015). The impact of FDI on economic growth in Eurozone countries. *The Journal of Economic Asymmetries*, *12*(2), 124-132.

Phan, T. A., & Duong, L. H. (2021). The effects of corporate governance mechanisms on firm performance: Empirical evidence from Vietnam. *The Journal of Asian Finance, Economics and Business*, *8*(4), 369-379.

Riezman, R. G., Whiteman, C. H., & Summers, P. M. (1996). *The engine of growth or its handmaiden? A time-series assessment of export-led growth* (pp. 77-110). Physica-Verlag HD.

Robert, E. L. (1988). On the mechanics of economic development. *Journal of monetary economics*, *22*(1), 3-42.

Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institutions rule: the primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*, *9*, 131-165.

Romer, P. M. (1990). Endogenous technological change. *Journal of political Economy*, *98*(5, Part 2), S71-S102.

Sachs, J. D., Warner, A., Åslund, A., & Fischer, S. (1995). Economic reform and the process of global integration. *Brookings Papers on Economic activity*, *1995*(1), 1-118.

Salvatore, D. (1983). A simultaneous equations model of trade and development with dynamic policy simulations. *Kyklos*, *36*(1), 66-90.

Smith, A. (2002). An inquiry into the nature and causes of the wealth of nations. *Readings in economic sociology*, 6-17.

Tybout, J. R., & Westbrook, M. D. (1995). Trade liberalization and the dimensions of efficiency change in Mexican manufacturing industries. *Journal of International Economics*, *39*(1-2), 53-78.

Von Schmoller, G. (1895). *The mercantile system and its historical significance, illustrated chiefly from Prussian history*. Macmillan.

Xu, S. C., Li, Y. W., Miao, Y. M., Gao, C., He, Z. X., Shen, W. X., ... & Wang, S. X. (2019). Regional differences in nonlinear impacts of economic growth, export and FDI on air pollutants in China based on provincial panel data. *Journal of Cleaner Production*, *228*, 455-466.