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The Impact of Economic Freedom and International Tourism on International Trade: An Empirical Study in Asian Countries

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Abstract. *The objective of this study is to analyze the impact of economic freedom and the development of international tourism on international trade, encompassing exports, imports, and total trade. The research sample includes 22 Asian countries over the period from 1995 to 2020. The study employs the System Generalized Method of Moments (GMM) for estimating the research models. Results indicate that economic freedom, business freedom, and trade freedom play a crucial role in international trade activities (both exports and imports). Furthermore, the development of international tourism also demonstrates a significantly positive impact on trade (both exports and imports). The study suggests that policies towards economic openness, increasing economic freedom, business freedom, and trade freedom should be carefully considered and promoted within the trade development strategies of nations. Additionally, economic policies should also focus on solutions to attract international tourists not only as a source of foreign currency but also as a support to foster the development of trade.*

Keywords: *economic freedom, international tourism, international trade, Asian countries*

1. Introduction

In the context of multilateral and bilateral trade relationships among countries, the development of trade transaction volumes is often explained by the gravity model theory. This theory, developed by Tinbergen (1962), draws from the physical science concept of Newton's law of gravitation. Essentially, the gravity model posits that trade transac-

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tions between countries are facilitated by similarities in economic size and geographical proximity (De Benedictis & Taglioni, 2011). However, focusing solely on economic size and geographical convenience while neglecting factors such as economic freedom, trade barriers, population size, service frequency, infrastructure quality, and historical trade relationships is insufficient. Particularly, we wish to highlight the critical role of economic freedom. In recent years, Asia has emerged as a significant global economic center (Yendamuri, 2019), experiencing remarkable growth in economics, trade, and tourism. This growth presents not only economic opportunities but also new challenges for countries in the region.

Economic freedom, defined through various factors with significant roles played by business freedom and trade freedom, is a primary driver of trade development. Recent years have seen the signing of major trade agreements that occupy a large portion of the global economic landscape, with the majority of Asian countries participating, such as the Regional Comprehensive Economic Partnership (RCEP), encompassing over 29% of the world's population and about 30% of the global GDP; and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), covering approximately 502 million people, 13.5% of the global GDP, and about 14% of global trade transactions. However, a paradox exists as previous empirical studies have not extensively explored the impact of economic freedom on trade, while the effects of economic freedom on other areas such as economic growth (Ahmed & Ahmad, 2020; Ahmed et al., 2023; Brkić et al., 2020; Ciftci & Durusu-Ciftci, 2022; Huynh, 2022; Mahmood et al., 2022; Tariq et al., 2022), FDI flows (Ghazalian & Amponsem, 2019; Singh & Gal, 2020; Tag & Degirmen, 2022), environmental impact (Bétila, 2023; Jain & Kaur, 2022; Rapsikevicius et al., 2021; Shahnazi & Shabani, 2021; Wu et al., 2022), and many other sectors have been widely considered. Notably, no prior research has clearly focused on the impact of economic freedom on trade in Asian countries.

Moreover, the role of the tourism sector, especially international tourism, in trade is noteworthy. WTTC (2020) reported that the Asia-Pacific region is the world's fastest-growing tourism and travel sector with a growth rate of 5.5%, followed by the Middle East at 5.3%, while both the US and the EU regions showed a steady growth rate of 2.3%. WTTC (2022) estimated that tourism's contribution to the global economy is expected to grow at an average annual rate of 5.8% from 2022 to 2032, but in the Asia-Pacific region, tourism's contribution to GDP is expected to increase at an average annual rate of 8.5%, significantly higher than the global average. WTTC (2022) also estimated that by 2033, the tourism industry will become a $15.5 trillion economy, accounting for nearly 12% of the global GDP. The Asia-Pacific region, with a market size of nearly $700 billion, accounts for about 5% of the share. Such tourism development could have significant impact on the trade of countries as there is a close and reciprocal relationship between international tourism and international trade (Kulendran & Wilson, 2000). Successful tourism experiences create foundations for fostering potential trade transactions later (Kumar et al., 2019). However, the current academic literature still lacks

studies assessing the impact of international tourist arrivals on trade growth, which is particularly necessary for Asian countries.

In summary, this research aims to contribute to filling the academic gap regarding the impact of economic freedom and international tourism on international trade. The authors believe that the research findings will be useful for policymakers concerned with issues related to economic openness, trade policies, and tourism. Additionally, given the importance of the economic context, this study will also consider the impact of several macroeconomic factors on trade, including foreign direct investment (FDI), government public investment, economic growth, inflation, and political stability.

2. Literature Review

2.1 The Impact of Economic Freedom on International Trade

Economic freedom is regarded as the fundamental right of individuals to use their labor and property as they see fit. In free economies, individuals are allowed to work, produce, consume, and invest in ways they prefer; conversely, governments permit the free movement of goods, labor, and capital instead of imposing restrictions, bans, or coercions, except for minimal interventions necessary to protect and maintain such freedom (Dang & Phan, 2022; Miller & Kim, 2013). Empirical research on the impact of economic freedom on global trade transactions is limited but largely supports a positive effect.

Depken and Sonora (2005) studied the asymmetric impact of economic freedom on international trade flows between the United States and its trading partners. They used gravity models to estimate the impact of economic freedom on U.S. consumer imports and exports during 1999–2000. The study found that increased economic freedom in partner countries contributes to higher total trade volumes for the U.S. and indirectly consolidates its economic role. A broader study by Sonora (2008) applied to 131 countries trading with the U.S. during 2000–2005 showed results entirely consistent with Depken and Sonora (2005). Similarly, Kimura and Lee (2006) utilized the gravity model estimation method to assess the impact of economic freedom on bilateral trade at the industry level (including nine sub-sectors) between the U.S. and 28 trading partner countries during 1992–2003. This research group found that countries with higher economic freedom typically have larger trade transaction volumes with the U.S., and the case study for Japan yielded similar results, strongly affirming that countries with extensive economic freedom contribute more to global trade transactions.

Acharya (2013) applied the gravity model to study factors affecting Nepal's trade, including export, import, and trade balance aspects. The study sample included 21 countries with significant trade relations with Nepal over a six-year period. In this model, economic freedom was used as a significant factor explaining changes in Nepal's trade values alongside distance and GDP size. Acharya (2013) results showed that economic

freedom contributes to increasing Nepal's trade transaction scale with these countries. Similarly, in the same country, Samanta and Yadav (2021) analyzed determinants of trade scale in Nepal. The dependent variables considered included Nepal's exports and imports, while explanatory variables selected included the economic freedom indices of Nepal and its trading partners, GDP of Nepal and trading partners, real exchange rate, regional economic integration, and per capita GDP of Nepal and trading partners. The study scope covered 21 of Nepal's trading partners during 2010 to 2019. Research findings indicated that economic freedom is a factor promoting the increase in Nepal's trade transactions. Moreover, the GDP of Nepal and its partners positively impacts Nepal's exports and imports, while geographical distance negatively affects them.

Exploring within the African bloc, Naanwaab and Diarrassouba (2013) examined the role of economic freedom in bilateral trade among 33 African countries during 2000–2009. They found that improvements in the economic freedom policies of exporters and importers tend to further promote trade. The increase in regional trade agreements positively impacts bilateral trade within the African bloc. Seyoum and Ramirez (2019) analyzed the relationship between economic freedom, foreign direct investment (FDI), and trade flows with a sample scope of 155 countries from various geographical regions. They used a conditional mediation model to estimate the impact of economic freedom on trade flows influenced by foreign direct investment (FDI) and government regulation in maintaining institutional stability. The results indicate that economic freedom can influence FDI flows into countries, which in turn positively affects the scale of trade transactions. Ngoma (2020) studied factors affecting import demand in the case of Zimbabwe, where import demand has become a significant national policy issue and trade deficit concern. A data sample including forty major trading partners of Zimbabwe during 2004–2017 was collected. Using Ordinary Least Squares (OLS) estimation methods, Ngoma (2020) found that the economic size and trade liberalization of Zimbabwe and its trading partners positively impact import demand. Meanwhile, inflation and the population of Zimbabwe and its trading partners, as well as bilateral distance, were found to have a negative relationship with import demand.

In summary, most prior studies support a positive relationship between economic freedom and the scale of trade transactions. However, the number of such studies is quite limited, and there is a lack of research assessing the case for Asian countries, despite the region's recent participation in significant global trade agreements as mentioned above. This represents an academic gap that needs research and also forms the purpose of our study.

2.2 The Impact of International Tourism on International Trade

International tourism significantly affects international trade, as confirmed in numerous studies. The relationship between international tourism and international trade is very close and mutually influential (Kulendran & Wilson, 2000). Successful tourism ventures

lay the groundwork for promoting future trade transactions between the tourist's home country and the destination country (Kumar et al., 2019). In other words, international tourists vacationing in other countries often identify potential business opportunities based on trade advantages in products between the two countries. They may act on these business opportunities at an opportune stage thereafter (Katircioglu, 2009). Most empirical studies on the relationship between the development of international tourism and trade indicate that international tourism positively influences trade, and vice versa, the development of trade can facilitate attracting more international tourists.

From a bilateral trade perspective, Fischer and Gil-Alana (2009) investigated the international trade and tourism relationship between Spain and Germany based on German tourist visits to Spain and Germany's import of Spanish wine. The study sample was collected from 1998–2004. The research findings indicated that tourism not only has a short-term and direct impact on wine imports but also an indirect and prolonged (lagged) effect.

From a multilateral perspective, Khan et al. (2005) used data from Singapore to explore the causal relationship between tourist numbers and trade with countries in ASEAN, the US, Japan, the UK, and Australia. The authors provided evidence of a tight relationship between tourism and imports, especially linked to business visits since business people intending to export often have to visit the target countries before sending their goods. Conversely, imports encourage exporters to visit their markets to strengthen trade relations. Simply put, potential business opportunities are often embedded in tourist trips. Gunay (2010) studied the relationship between tourism and trade in Turkey. The Granger causality test method was used to regress models with quarterly data collected from 1997–2010. The research results showed a one-way impact from the number of tourists and tourism spending on exports. There was also a reciprocal relationship between exports, total trade, and the number of tourists. Santana-Gallego et al. (2011) investigated the empirical relationship between international tourism and trade with dependent variables being exports, imports, and total trade. The data sample included countries in the OECD region from 1980 to 2006. Using dynamic panel data estimation, the results showed that international tourism can promote international trade. Similarly, increased trade flows also boost the number of visitors. Suresh and Tiwari (2018) also found a positive two-way causal relationship between tourism and trade in India from 1991 to July 2012. Recently, Garidzirai (2022) sought answers to how international tourism contributes to improving trade in BRICS countries (Brazil, Russia, India, China, and South Africa). The author used the Autoregressive Distributed Lag (ARDL) model estimation method for analysis for BRICS members during 1995–2017. The results showed that the number of tourists, tourism export revenues, and economic growth positively influence trade. Specifically, international tourism plays a significant role in developing the scale of global trade.

In summary, among the few empirical studies on the relationship between international tourism and international trade, most show a positive, reciprocal relationship

between the number of international tourists and the scale of international trade. While careful searches were conducted by the authors, studies on the impact of international tourism on international trade for countries in the Asian region are still lacking. This represents an academic gap that needs research, especially given Asia's increasing prominence in tourism and economic development.

3. Methodology

3.1 Research Model

Drawing inspiration from previous research models by Garidzirai (2022) and Depken and Sonora (2005), the authors propose a research model to analyze the impact of economic freedom and international tourism on international trade in Asian countries as follows:

$$lnIMP_{it} = \alpha_0 + \alpha_1 lnECOF_{it} + \alpha_2 lnNOA_{it} + \alpha_3 lnFDI_{it} + \alpha_4 lnGOV_{it} + \alpha_5 lnGDPCG_{it} + \alpha_6 lnINF_{it} + \alpha_7 lnPS_{it} + \varepsilon_{it} \quad (1)$$

$$lnIMP_{it} = \beta_0 + \beta_1 lnBUSF_{it} + \beta_2 lnNOA_{it} + \beta_3 lnFDI_{it} + \beta_4 lnGOV_{it} + \beta_5 lnGDPCG_{it} + \beta_6 lnINF_{it} + \beta_7 lnPS_{it} + \varepsilon_{it} \quad (2)$$

$$lnIMP_{it} = \gamma_0 + \gamma_1 lnTRAF_{it} + \gamma_2 lnNOA_{it} + \gamma_3 lnFDI_{it} + \gamma_4 lnGOV_{it} + \gamma_5 lnGDPCG_{it} + \gamma_6 lnINF_{it} + \gamma_7 lnPS_{it} + \varepsilon_{it} \quad (3)$$

$$lnEXP_{it} = \delta_0 + \delta_1 lnECOF_{it} + \delta_2 lnNOA_{it} + \delta_3 lnFDI_{it} + \delta_4 lnGOV_{it} + \delta_5 lnGDPCG_{it} + \delta_6 lnINF_{it} + \delta_7 lnPS_{it} + \varepsilon_{it} \quad (4)$$

$$lnEXP_{it} = \theta_0 + \theta_1 lnBUSF_{it} + \theta_2 lnNOA_{it} + \theta_3 lnFDI_{it} + \theta_4 lnGOV_{it} + \theta_5 lnGDPCG_{it} + \theta_6 lnINF_{it} + \theta_7 lnPS_{it} + \varepsilon_{it} \quad (5)$$

$$lnEXP_{it} = \vartheta_0 + \vartheta_1 lnTRAF_{it} + \vartheta_2 lnNOA_{it} + \vartheta_3 lnFDI_{it} + \vartheta_4 lnGOV_{it} + \vartheta_5 lnGDPCG_{it} + \vartheta_6 lnINF_{it} + \vartheta_7 lnPS_{it} + \varepsilon_{it} \quad (6)$$

$$lnTT_{it} = \mu_0 + \mu_1 lnECOF_{it} + \mu_2 lnNOA_{it} + \mu_3 lnFDI_{it} + \mu_4 lnGOV_{it} + \mu_5 lnGDPCG_{it} + \mu_6 lnINF_{it} + \mu_7 lnPS_{it} + \varepsilon_{it} \quad (7)$$

$$lnTT_{it} = \varphi_0 + \varphi_1 lnBUSF_{it} + \varphi_2 lnNOA_{it} + \varphi_3 lnFDI_{it} + \varphi_4 lnGOV_{it} + \varphi_5 lnGDPCG_{it} + \varphi_6 lnINF_{it} + \varphi_7 lnPS_{it} + \varepsilon_{it} \quad (8)$$

$$lnTT_{it} = \omega_0 + \omega_1 lnTRAF_{it} + \omega_2 lnNOA_{it} + \omega_3 lnFDI_{it} + \omega_4 lnGOV_{it} + \omega_5 lnGDPCG_{it} + \omega_6 lnINF_{it} + \omega_7 lnPS_{it} + \varepsilon_{it} \quad (9)$$

Table 1 presents more details on the definitions of these variables, their measurement methods, the basis of reference from previous studies, and data collection sources.

1. International trade in this study encompasses the value of imports (IMP), exports (EXP) and the total international trade (TT) relative to GDP.
2. Economic Freedom (ECOF) used in this model refers to the index provided by the Heritage Foundation, which evaluates twelve factors including property rights, judicial effectiveness, government integrity, tax burden, government spending, fiscal health, business freedom, labor freedom, monetary freedom, trade freedom, investment freedom, and financial freedom. The index ranges from 0 to 100, with higher scores indicating a greater degree of economic freedom. In addition to the overall economic freedom variable (ECOF), this study also examines the impact of two components of economic freedom, namely business freedom (BUSF) and trade freedom (TRAF) on international trade.
3. International Tourism (NOA) considered in this study is the total number of international tourist arrivals in a country.
4. Macro-economic factors considered include foreign direct investment, government public investment, economic growth, inflation, and political stability.

• **Foreign Direct Investment (FDI)**

Foreign direct investment is measured by net foreign investment flows. The impact of foreign investment on trade is often explained through two main theories: the eclectic theory (Dunning, 1977, 2000) and the theory on foreign direct investment (Kojima, 1977; Kojima & Ozawa, 1984). These theories agree that foreign investment contributes to increasing a country's global trade transactions. The eclectic theory emphasizes the reasons why FDI flows to a country, depending on three types of advantages: ownership, location, and internalization, while the theory on foreign direct investment by Kojima (1977) focuses on explaining the benefits of FDI for both the host and investing countries based on complementarity, exploitation of comparative advantages, technology transfer, and enhanced management practices to improve labor productivity. Most empirical studies support the positive impact of FDI on trade volume. Sun (1999) showed that in the context of China, FDI plays a crucial role in leading export growth and creating a strong economic growth momentum. However, a side effect of FDI flows is the transfer pricing phenomenon by large multinational corporations to evade taxes. Seyoum et al. (2014) argue that FDI can have a multiplicative positive impact on trade, suggesting that governments in sub-Saharan African countries should promote policies to attract FDI to expand production capacity for manufacturing and exporting.

In the context of Vietnam, Le (2014) also indicates a one-way positive causal relationship between FDI and trade. Mukhtarov et al. (2019) affirm the positive relationship between FDI and trade through an increase in export volume in Jordan. Mitic and Ivić (2016) research on European countries supports the positive impact of FDI on

trade. Other studies also support this relationship (Amal et al., 2010; Antwi et al., 2013; Asiedu, 2002; Demirhan & Masca, 2016; Liargovas & Skandalis, 2012; Yasmin et al., 2003), while some research shows a negative relationship between FDI flows and trade, such as Rathnayaka Mudiyanselage et al. (2021).

• **Government Spending (GOV)**

Müller (2008), assessing the impact of fiscal policy on the foreign trade of the United States, argued that an increase in government spending reduces the value of the domestic currency and increases net exports. However, Çebi and Çulha (2014) found evidence that government spending shocks increase pressure on the real exchange rate and negatively affect Turkey's foreign trade balance during 2002–2004, meaning government spending worsens the trade balance, negatively affecting imports more than exports. Similarly, with increasing government spending size, there is more pressure on overall tax revenue to balance, resulting in higher tax rates. A similar research finding by Akpa (2021) for Nigeria showed that the relationship between government spending and trade is not clear in the short term but entirely negative in the long term with strong statistical significance. In other words, government policies impacting trade might have a delayed negative effect. Kim and Lee (2018) analyzed the impact of fiscal policy, specifically government public spending, on the trade balance of South Korea. Their results indicate that expansive government spending impacts the exchange rate and stimulates trade growth, especially in the private economic sector. Thus, previous studies are not unanimous on the impact of government spending on trade.

• **GDP per capita growth (GDPCG)**

De Groot et al. (2005) argue that improved per capita income is a driving force in increasing the international trade volume of countries, especially bilateral trade. Zaman (2012) found evidence of a bidirectional causal impact between per capita income and international trade for Bangladesh. In the case of Vietnam, Nguyen (2020) shows a positive relationship between exports and economic growth, while imports and economic growth have a negative relationship. Increased per capita income can be a potential market for FDI flows, subsequently increasing the export value from these FDI enterprises. Ngoma (2020) research on Zimbabwe indicates that economic growth increases import demand, and comparative advantages in production contribute to more export goods. Therefore, economic growth is a factor that increases Zimbabwe's trade scale with the globe. Supporting the positive relationship, Garidzirai (2022) also shows evidence that economic growth strongly promotes an increase in global trade of the BRICS countries.

• **Inflation rate (INF)**

Ngoma (2020) and Abidin et al. (2015) argue that high inflation reduces the purchasing power of consumers and importers, supporting the conclusion that inflation

negatively correlates with import value and the total global trade transaction value. Additionally, Mwakanemela (2014) shows evidence of a negative relationship between inflation and export trade value. However, Islam (2013) found a positive correlation between inflation and import trade in Bangladesh, suggesting that inflation is not the only factor influencing import trade activities. This is because imports are affected by a variety of other factors, such as demand for goods for business production, scarce supply, the inflation rate of the exporting country, population size, and many other factors. Galal and Lan (2017) also showed evidence of a positive relationship between inflation and the trade transaction scale in Egypt. Similarly, Sepehrivand and Azizi (2016) research on D8 countries, including Bangladesh, Iran, Pakistan, Turkey, Malaysia, Indonesia, Nigeria, and Egypt, showed that inflation and trade scale have a positive correlation. However, when considering the case of Turkey separately, Sepehrivand and Azizi (2016) indicate that the impact of inflation on trade scale expansion is not significant.

• **Political Stability (PS)**

Hanif and Sidek (2013) examined the impact of political risk on import goods in Malaysia. A range of political risk indices used to test their relative importance to imports like socio-economic conditions, law and order, religion in politics, democratic accountability, and bureaucratic quality seem to have a significant impact on imports in Malaysia. The authors found that political risk impacts the import trade scale but the impact is not large. However, they also advise that policymakers should consider political risk in trade policy formulation. Fosu (2003) research on 30 sub-Saharan African countries from 1967 to 1986 shows that political instability causes damage to exports. Similarly, Seyoum and Ramirez (2019) argue that maintaining political stability is a prerequisite for promoting larger trade flows. However, for South Asian countries, Kapri (2019) confirms that political instability increases the likelihood of a company entering foreign markets more, thus increasing the export scale of that country. Recent research by Asongu et al. (2021) evaluating the relationship between political stability and trade of 44 sub-Saharan African countries from 1996 to 2016 affirms a clear inverse relationship between political stability and trade scale (exports and imports). The authors argue that not all forms of political stability are conducive to development as it largely depends on the extent to which stability is translated into good governance. In the context of Asia, the authors believe that political stability is a factor that helps businesses trust and expand their trade activities more.

The variables used in the research model will be defined, denoted, and their data sources described more clearly in Table 1.

Table 1

Definitions and Data Sources for Variables in the Research Model

Variables	Definition	Symbol	Unit	Source
Dependent variable				
Imports	Imports of goods and services (% of GDP)	IMP	natural logarithm (Ln)	World Bank
Exports	Exports of goods and services (% of GDP)	EXP	natural logarithm (Ln)	World Bank
Total International Trade	Total of Exports and Import of goods and services (% of GDP)	TT	natural logarithm (Ln)	World Bank
Independent variables				
Economic freedom	Economic freedom as the right to control one's labor and property, measured across twelve factors grouped into four categories: Rule of Law, Government Size, Regulatory Efficiency, and Open Markets, with scores from 0 to 100. Among them, Business Freedom is a component of Regulatory Efficiency, and Trade Freedom is a component of Open Markets	ECOF	natural logarithm (Ln)	The Heritage Foundation
Business freedom	The ease of starting, operating, and closing a business, scoring each country, with scores from 0 to 100	BUSF	natural logarithm (Ln)	The Heritage Foundation
Trade freedom	The absence of tariff and non-tariff barriers that affect imports and exports, with scores from 0 to 100	TRAF	natural logarithm (Ln)	The Heritage Foundation
International tourist arrivals	International tourism, number of arrivals	NOA	natural logarithm (Ln)	World Bank
Foreign direct investment	Foreign direct investment, net inflows (BoP, current US$)	FDI	natural logarithm (Ln)	World Bank
Government Spending	Government spending (% GDP)	GOV	natural logarithm (Ln)	The Heritage Foundation
GDP per capita growth	GDP per capita growth (annual %)	GDPCG	natural logarithm (Ln)	World Bank

Variables	Definition	Symbol	Unit	Source
Inflation rate	Inflation, consumer prices (annual %)	INF	natural logarithm (Ln)	World Bank
Political Stability	Political Stability and Absence of Violence or Terrorism, Percentile Rank	PS	natural logarithm (Ln)	World Bank

Note. Compiled by the author based on previous research.

3.2 Data

The research sample includes 22 countries from the Asian region, comprising Bangladesh, China, Cyprus, Georgia, India, Indonesia, Israel, Japan, Jordan, Kazakhstan, Kuwait, Lebanon, Malaysia, Oman, Pakistan, Philippines, Qatar, Saudi Arabia, Singapore, Thailand, United Arab Emirates, and Vietnam; the data was collected over the period from 1995 to 2020. The data source for each variable in the model is presented in Table 1. The data exhibit characteristics as in Table 2, being an unbalanced panel with the median and mean values of the variables not significantly different, thus indicating a normal distribution that satisfies the assumptions for regression estimation techniques.

Table 2

Descriptive Statistics of Variables

Variable	Obs	Mean	S.D.	Min	Median	Max
IMP	564	3.70	0.73	2.11	3.80	5.43
EXP	564	3.68	0.63	2.02	3.70	5.34
TT	564	4.40	0.65	2.80	4.49	6.08
ECOF	438	4.15	0.15	3.65	4.17	4.49
BUSF	438	4.19	0.22	3.57	4.24	4.61
TRAF	437	4.27	0.28	2.58	4.35	4.55
NOA	507	15.23	1.44	11.35	15.27	18.91
FDI	540	0.83	1.52	-7.20	1.07	5.63
GOV	438	4.16	0.42	-0.22	4.26	4.56
GDPCG	424	1.19	0.87	-2.42	1.37	2.73
INF	478	1.15	1.09	-4.09	1.27	5.17
PS	484	3.39	0.97	-0.75	3.59	4.60

Note. Calculations by the author based on the dataset and using the Stata software.

Table 3 presents the correlation matrix between the variables in the research model. The variables total trade (TT), imports (IMP), and exports (EXP) have high correlation

coefficients as they are interdependent, and these variables are representative of the dependent variable and therefore do not appear simultaneously in one research model. Additionally, the variables business freedom (BUSF) and trade freedom (TRAF) are two components of economic freedom (ECOF). To avoid severe multicollinearity, the authors will not regress these variables simultaneously in the same research model. All other variables have correlation coefficients less than 0.8, thereby minimizing severe multicollinearity and making them suitable for regression (Gujarati & Porter, 2009).

Table 3

Correlation Matrix of Variables

	IMP	EXP	TT	ECOF	BUSF	TRAF	NOA	FDI	GOV	GDPCG	INF	PS
IMP	1.000											
EXP	0.858	1.000										
TT	0.967	0.959	1.000									
ECOF	0.499	0.406	0.474	1.000								
BUSF	0.392	0.324	0.373	0.838	1.000							
TRAF	0.427	0.349	0.409	0.557	0.415	1.000						
NOA	0.301	0.110	0.207	0.052	-0.010	0.016	1.000					
FDI	0.437	0.571	0.517	0.074	0.023	0.075	0.122	1.000				
GOV	-0.130	-0.067	-0.103	-0.150	-0.255	-0.194	0.210	0.184	1.000			
GDPCG	0.004	0.022	0.015	-0.344	-0.338	-0.173	0.044	0.231	0.385	1.000		
INF	-0.305	-0.202	-0.263	-0.437	-0.415	-0.205	-0.297	0.005	0.288	0.151	1.000	
PS	0.495	0.267	0.402	0.455	0.457	0.218	0.314	0.141	-0.016	-0.062	-0.364	1.000

Note. Calculations by the author based on the dataset and using the Stata software.

3.3 Estimation Method

Unlike some previous estimation methods (Garidzirai, 2022; Ngoma, 2020; Seyoum & Ramirez, 2019; Suresh & Tiwari, 2018), this study employs estimations for panel data. However, the reciprocal impact between tourism and international trade could introduce endogeneity into the model. Therefore, the authors use the System Generalized Method of Moments (GMM system) to address this, akin to the approach by Chaisumpunsakul and Pholphirul (2018) and Santana-Gallego et al. (2016). Furthermore, since the study sample covers a long period from 1995 to 2020, and the number of observations is relatively modest and not entirely comprehensive for all countries, the authors selected the two-step System Generalized Method because it is suitable for datasets with long time spans and small sample sizes (Roodman, 2009).

4. Empirical Results

The impacts of economic freedom and international tourism on international trade are presented in Table 4, Table 5, and Table 6, corresponding to the dependent variables representing international trade: imports, exports, and total trade, respectively. In all regression models, the author has conducted Hansen tests and Arellano-Bond tests (AB tests) to assess the suitability of the two-step system GMM method. The p-values of the Hansen test across all models are quite high (the lowest p-value being 0.336 in model (9)), while the p-values of AR(1) are mostly less than 0.1, and those of AR(2) are all greater than 0.1. Therefore, the estimation results obtained through the two-step system GMM method are appropriate and reliable.

The Impact of Economic Freedom on International Trade

Results in Table 4, Table 5, and Table 6 provide reliable evidence of a positive impact of economic freedom, business freedom, and trade freedom on exports, imports, and the total trade scale. The regression coefficients of economic freedom (ECOF), business freedom (BUSF), and trade freedom (TRAF) variables are positive and statistically significant. This indicates that economic freedom, business freedom, and trade freedom impact both trade dimensions, increasing the value scale of exports and imports, thereby enhancing the total global trade transaction scale. These findings imply that policies increasing business freedom, such as facilitating easier startup, operation, and closure of businesses and reducing necessary legal procedures, will promote global trade transactions. Moreover, policies encouraging trade freedom through the reduction or elimination of trade barriers like tariffs and non-tariff barriers will have very positive impact on global trade, including exports and imports. These findings are in line with most previous studies (Acharya, 2013; Depken & Sonora, 2005; Kimura & Lee, 2006; Naanwaab & Diarrassouba, 2013; Ngoma, 2020; Samanta & Yadav, 2021; Sonora, 2008). From these results, the authors suggest that participation in increasingly comprehensive multilateral and bilateral trade agreements by countries in the Asian region will significantly expand the trade transaction scale and strongly improve economic growth.

Table 4

The Impact of Economic Freedom and International Tourism on Imports

Variables	Model (1)		Model (2)		Model (3)	
	Coef.	P value	Coef.	P value	Coef.	P value
ECOF	1.958***	0.000				
BUSF			0.717**	0.045		
TRAF					1.728***	0.000
NOA	0.111***	0.000	0.166**	0.047	0.202**	0.040
FDI	0.031**	0.022	0.257***	0.000	0.213***	0.000

Variables	Model (1)		Model (2)		Model (3)	
	Coef.	P value	Coef.	P value	Coef.	P value
GOV	-0.128***	0.000	-0.807***	0.000	-0.353***	0.009
GDPCG	0.026**	0.045	0.098	0.104	0.039	0.236
INF	0.029***	0.000	0.097***	0.005	-0.008	0.810
PS	0.158**	0.035	0.271***	0.006	0.251***	0.008
Sample period:	1995–2020		1995–2020		1995–2020	
Observations:	209		204		208	
Hansen test (2nd step; p-value)	0.706		0.565		0.448	
AB test AR(1) p value	0.083		0.126		0.074	
AB test AR(2) p value	0.575		0.269		0.116	

Note. ECOF denotes economic freedom; BUSF denotes business freedom; TRAF denotes trade freedom; NOA denotes the number of arrivals; FDI denotes foreign direct investment; GOV denotes government spending; GDPCG denotes GDP per capita growth; INF denotes inflation rate; PS denotes political stability. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. *Source: Calculations by the author based on the dataset and using the Stata software.*

Table 5

The Impact of Economic Freedom and International Tourism on Exports

Variables	Model (4)		Model (5)		Model (6)	
	Coef.	P value	Coef.	P value	Coef.	P value
ECOF	1.022**	0.021				
BUSF			0.369***	0.006		
TRAF					0.262***	0.001
NOA	0.114***	0.008	0.125**	0.047	0.074*	0.073
FDI	0.278***	0.000	0.316***	0.000	0.283***	0.000
GOV	-0.460***	0.000	-0.789***	0.000	-0.490***	0.001
GDPCG	0.037**	0.020	0.128***	0.000	0.073***	0.000
INF	0.041***	0.000	0.050***	0.000	0.032	0.243
PS	0.047	0.460	0.223*	0.054	0.524***	0.000
Sample period:	1995–2020		1995–2020		1995–2020	
Observations:	208		209		209	
Hansen test (2nd step; p-value)	0.569		0.570		0.576	
AB test AR(1) p value	0.078		0.096		0.096	
AB test AR(2) p value	0.137		0.170		0.230	

Note. ECOF denotes economic freedom; BUSF denotes business freedom; TRAF denotes trade freedom; NOA denotes the number of arrivals; FDI denotes foreign direct investment; GOV denotes government

spending; GDPCG denotes GDP per capita growth; INF denotes inflation rate; PS denotes political stability. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. *Source: Calculations by the author based on the dataset and using the Stata software.*

Table 6

The Impact of Economic Freedom and International Tourism on Total International Trade

Variables	Model (7)		Model (8)		Model (9)	
	Coef.	P value	Coef.	P value	Coef.	P value
ECOF	1.123***	0.002				
BUSF			1.052**	0.020		
TRAF					0.580***	0.000
NOA	0.103**	0.025	0.304***	0.001	0.189***	0.000
FDI	0.099**	0.017	0.218***	0.000	0.199***	0.000
GOV	-0.075***	0.008	-1.066***	0.000	-0.100*	0.076
GDPCG	0.105***	0.000	0.278***	0.001	0.127***	0.000
INF	0.035**	0.027	0.112***	0.008	0.039**	0.042
PS	0.114**	0.021	0.307**	0.011	0.204***	0.000
Sample period:	1995–2020		1995–2020		1995–2020	
Observations:	209		204		209	
Hansen test (2nd step; p-value)	0.755		0.513		0.336	
AB test AR(1) p value	0.057		0.080		0.053	
AB test AR(2) p value	0.531		0.517		0.294	

Note. ECOF denotes economic freedom; BUSF denotes business freedom; TRAF denotes trade freedom; NOA denotes the number of arrivals; FDI denotes foreign direct investment; GOV denotes government spending; GDPCG denotes GDP per capita growth; INF denotes inflation rate; PS denotes political stability. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. *Source: Calculations by the author based on the dataset and using the Stata software.*

The Impact of International Tourism on International Trade

The number of international tourist arrivals (NOA) shows a positive impact on the increase in international trade, including both exports and imports. The regression coefficient of the NOA variable is positive and statistically significant across all models in Tables 4, 5 and 6. These results indicate that international tourists play a crucial role in boosting a country's trade. This supports the argument by Kumar et al. (2019) and Katircioglu (2009) that international tourists often bring many subsequent trade cooperation opportunities. In other words, one of the hidden agendas behind tourists' travels is that they are seeking markets and trade opportunities based on comparative advantages. This study's findings also align with results from some previous research (Garidzirai, 2022; Gunay, 2010; Santana-Gallego et al., 2011).

The Impact of Macro-economic Factors on International Trade

Foreign direct investment (FDI) shows a crucial role in promoting trade transactions, including increasing the scale of imports, exports, and total trade. The regression coefficient of the FDI variable is positive and statistically significant across all models and in Tables 4–6. This supports the foreign direct investment theory by which foreign capital investment helps exploit and utilize comparative advantages, thereby promoting strong trade flow development. Increased foreign direct investment leads to the formation of more multinational corporations, followed by the import of technology and production lines, resulting in an increase in goods supplied to foreign markets by these multinational companies. The positive relationship between foreign direct investment and trade (including exports and imports) in this study is also consistent with most previous research findings (Amal et al., 2010; Antwi et al., 2013; Asiedu, 2002; Demirhan & Masca, 2016; Le, 2014; Liargovas & Skandalis, 2012; Mukhtarov et al., 2019; Seyoum et al., 2014; Yasmin et al., 2003).

Government spending (GOV) does not contribute to trade development. The regression coefficient of the GOV variable is negative and statistically significant across all models in all result tables. Our study's findings also align with those of Akpa (2021). This suggests that increased government spending puts pressure on tax revenue and hinders trade activities (Çebi & Çulha, 2014). Furthermore, using a portion of government resources to protect domestic industries creates unfair competition, limiting international trade. Additionally, increased borrowing by the government to fund investment activities indirectly increases the demand for capital, resulting in higher interest rates, increasing the financial cost for businesses, which could negatively affect export and import activities.

GDP per capita growth (GDPCG) has a positive impact on the international trade scale. The regression coefficient of the GDPCG variable is positive and statistically significant in most research models except for model (2) and model (3), where it lacks statistical significance. This research finding also aligns with that of Garidzirai (2022). Thus, it can be seen that improved income among citizens will help boost the demand for imported goods (Ngoma, 2020). Simultaneously, increased income among citizens presents a vast potential market opportunity, stimulating more foreign direct investment and thereby increasing export value (Nguyen, 2020).

Inflation (INF) has a positive impact on the international trade scale. The regression coefficient of the INF variable is positive and statistically significant in models (1), (2), (4), (5), (7), (8) and (9); the remaining models do not show statistical significance. This result indicates that, to some extent, inflation may have a positive stimulating effect on economic growth (Mallik & Chowdhury, 2001), thereby increasing the scale of international trade transactions. Moreover, inflation is not the only determinant of trade activities, as trade also depends on many other factors (Islam, 2013). The positive cor-

relation between inflation and trade in this study also aligns with the findings of some previous research (Galal & Lan, 2017; Sepehrivand & Azizi, 2016).

Political stability (PS) has a positive impact on international trade, including both exports and imports. The regression coefficient of the PS variable is positive and statistically significant in research models and across all result tables (except model (4)). This result shows that a stable political environment is the foundation for vibrant trade activities. This finding of our study also aligns with the research results of Fosu (2003) and Seyoum and Ramirez (2019).

5. Conclusion and Policy Implications

This study aims to clarify the role of economic freedom and the development of international tourism on international trade, including exports, imports, and total trade in Asian countries. The research sample includes the data from 24 Asian countries over the period from 1995 to 2020. The study uses the System Generalized Method of Moments (GMM system) for regression analysis. The results show that economic freedom, business freedom, and trade freedom play a crucial role in international trade activities (both exports and imports). Additionally, the development of international tourism also demonstrates a significantly positive impact on trade (both exports and imports). Other important macro-economic factors such as foreign direct investment, per capita income growth, inflation, and political stability also positively impact international trade; meanwhile, government spending size reduces the scale of trade activities. Based on the findings of this study, we suggest that policies towards economic openness, increasing economic freedom, business freedom, and trade freedom should be carefully considered and promoted within the trade development strategies of countries. Moreover, economic policies should also focus on solutions to attract international tourists, not only as a source of foreign exchange but also as support to foster the development of trade.

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