

The role of exchange rates in Vietnam's export values to G7 countries

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ABSTRACT

The recruitment of highly experienced professionals is a crucial undertaking as it creates the talent pool for the organisation. Although the development and implementation of electronic recruiting applications in MNCs have been highly effective, they not only contribute to reducing candidate screening time but also effectively support employer's productivity. In other words, E-HRM is the practice of integrating HRM strategies, policies, and practices in a company through the use of web-based technology. Yet, the raising concern is how organisations in Vietnam could effectively learn and utilise e-recruitment since most companies continue to employ manually with pricey recruitment methods. The study aims to identify the fundamental concept of e-recruitment and intends to collect information regarding e-recruitment methods such as emails, corporate websites, and commercial job boards, among others, through the story of AkzoNobel, Unilever and Cathay Pacific in installing the e-recruitment system in Vietnam and in ASEAN. It covers the advantages and disadvantages of e-recruitment, as well as how local Vietnamese businesses might efficiently use it.

1. Introduction

The nexus between the G7 comprising the United States, Canada, the United Kingdom, Germany, France, Italy, Japan, and Vietnam has witnessed a persistent evolution over recent years. This progression has been underscored by an escalating synergy across diverse domains, with a particular emphasis on trade relations. It is worth noting that Japan, the United States, and Germany emerged as pivotal trading counterparts for Vietnam, both within the G7 cohort and more

broadly. Of noteworthy significance is the trade equilibrium between Vietnam and G7 member states, which holds substantial promise for robust growth. This optimism stems from Vietnam's formalization of innovative trade accords with G7 nations, such as the European Union-Vietnam Free Trade Agreement (EVFTA) and the Trans-Pacific Partnership (TPP). These accords are poised to usher in a new era of economic collaboration between Vietnam and the G7, further enhancing their economic interdependence and fostering mutually beneficial outcomes (Ministry

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of Industry and Trade of Vietnam, 2022). According to the 2022 data from the General Department of Customs, the total import-export turnover of Vietnamese enterprises to the markets of G7 member countries exceeded \$209 billion, marking an 11.6% increase (equivalent to a \$21.8 billion absolute increase) compared to 2021. Specifically, the total value of goods exported by Vietnamese businesses to G7 member countries reached \$163.16 billion, reflecting a 15.7% growth compared to 2021 and constituting nearly half of the nation's overall export value to all global markets. Over an extended period spanning from 2007 to 2021, Vietnam's exports of goods and services to G7 countries have exhibited remarkable growth, surging nearly twentyfold from \$8.52 billion in 2007 to \$168.69 billion in 2021 (comprehensive data sourced from the Ministry of Industry and Trade of Vietnam and the International Trade Center-ITC). As of the end of 2023, according to the General Department of Vietnam Customs, the total bilateral trade between Vietnam and the United States reached \$110.8 billion, a decrease of 10.5% compared to 2022, with Vietnam's exports reaching \$97.0 billion and imports from the U.S. totaling \$13.8 billion. Trade between Vietnam and the United Kingdom surpassed \$7.1 billion, an increase of 4.5%, with Vietnam's trade surplus exceeding \$5.5 billion. Vietnam's exports to Canada reached approximately \$5.6 billion, a decrease of 11.3%, but showed signs of recovery since September 2023. Trade with Japan totaled \$45 billion, a decrease of 5.6%, with Vietnam's exports at \$23.3 billion and imports from Japan at \$21.6 billion. Trade with Germany saw a 17.5% decrease in exports, while imports increased by 2.1%. Exports to Italy increased by 1.0%, but imports decreased by about 9%. Exports to France decreased by 14.2%, while imports remained relatively unchanged compared to 2022.

Nonetheless, Vietnam's export relations with the G7 group also confront several challenges, including intense competition from advanced economies within the G7, stringent regulations concerning quality and technical standards, as well as trade policies, particularly exchange rate management policies and exchange rate fluctuations, which can impact the scale and scope of exports (Nga, 2021).

The G7 group comprises nations representing major currencies (the US dollar, the Euro, the Japanese yen, and the British pound) with a significant role in global trade. Research has shown that exchange rates

directly impact the value of imports and exports, foreign capital inflows, and indirectly influence the entire economy (Thao et al., 2022). Given that Vietnam is a developing country, most of its trade transactions with the majority of its partners are conducted using strong currencies from the G7 group. Nevertheless, the values of these currencies from G7 nations have exhibited frequent fluctuations in recent years, exerting notable effects on Vietnam's import and export activities (Tram et al., 2017). Hence, this study aims to contribute to the assessment of the impact of exchange rate fluctuations of the Vietnamese Dong (VND) and the currencies of G7 nations during the period from 2007 to 2021 on the export value of Vietnam to G7 countries. Additionally, by employing the Gravity Model for Trade, this research addresses the effects of various economic factors on Vietnam's export performance to G7 nations. Consequently, it offers recommendations to enhance trade relations, especially Vietnam's export activities with G7 nations.

In summary, using publicly available data, statistical methods, and a quantitative model, this article analyzes and assesses the interrelationship between exchange rate fluctuations and Vietnam's export value to G7 countries during the 2007-2021 period. Moreover, the study utilizes and customizes the "Gravity Model for Trade" to examine the effects of exchange rate volatility on Vietnam's export values to the G7 nations.

2. Literature review

The objective of Vietnam's exchange rate policy is to control inflation, stabilize the macroeconomy, maintain a reasonable and sustainable economic growth rate, encourage exports, improve the international balance of payments, and increase foreign exchange reserves. To achieve these goals, Vietnam has employed various exchange rate management tools, including exchange rate bands, discount rate adjustments, required reserve ratio adjustments, foreign exchange operations, tight management of the foreign exchange market, and efforts to reduce dollarization. Notably, in the context of an increasingly open economy that is sensitive to global fluctuations, Vietnam has made significant changes in determining the official exchange rate, shifting from the interbank exchange rate to the central rate (Huong, 2021).

Anh (2021) examined Vietnam's exchange rate policy from 2008 to 2020, proposing enhancements to improve the country's export and import situation. The study calculated the Real Effective Exchange Rate (REER) with ten major trading partners, rather than relying solely on the VND/USD exchange rate. The findings showed that the real exchange rate negatively impacts the trade balance in the short term, but influences it overall. Similarly, Vinh and Duong (2019) used the ARDL bounds testing approach to analyze exchange rate volatility's impact on Vietnam's exports from 2000 to 2014. Their results indicated that exchange rate volatility negatively affects export volumes in the long term, with currency depreciation having a short-term adverse impact but a positive long-term effect on exports.

However, Nga's study (2021) presented results that indicated an opposite direction of influence (a positive effect) of the exchange rate on Vietnam's export values. In this study, the multilateral real exchange rate (VND) was calculated quarterly from Q1 2000 to Q2 2019, based on a currency basket comprising 16 currencies of Vietnam's 18 major trading partners, accounting for up to 80% of Vietnam's total import-export value. The quantitative findings revealed that exchange rate fluctuations had a positive impact on export values but did not exhibit a clear influence on Vietnam's import values. Cai (2021) analyzed data from 1995 to 2020, finding that import and export activities significantly impacted the exchange rate. Exports and imports moved similarly with the exchange rate individually, but exports moved inversely while imports moved directly with the exchange rate simultaneously. The study's model showed a substantial impact of trade activities on the exchange rate.

Quantitative results showed that in the short term when exchange rate shocks occurred, exports were consistently adjusted towards equilibrium in the long term. However, in the long term, exchange rate fluctuations and export commodity prices had a negative impact on the growth of Vietnam's exports. Baek (2013) has pointed out that research on the relationship between exchange rates and trade relationships typically adopts three different data methodologies: the first method relies on aggregate trade data, including data on exports and imports for the entire economy; the second method uses bilateral aggregate trade data; and the third method examines trade data at the industry level. Accordingly, studies

on the impact of exchange rates on trade relationships between Vietnam and its trading partners have been conducted using these various approaches. Among these, Bao and Le (2021) examined the effects of the real exchange rate on the trade balance between Vietnam and 16 trading partners from the European Union and the United Kingdom from 1999 to 2012. This study investigated the long-term relationship between the real exchange rate, trade balance, domestic income, and foreign income between Vietnam and its trading partners in the research model. The research results indicated that the real exchange rate and domestic income had a negative impact on Vietnam's trade balance with its trading partners.

Baek and Yoon (2023) concentrated on the trade relationship between South Korea and Vietnam and the impact of the bilateral exchange rate on this relationship. The research demonstrated that the exchange rate significantly influenced South Korea's exports to Vietnam. However, the impact of the exchange rate on Vietnam's imports from South Korea was not significant. The asymmetric impact of the exchange rate on the bilateral trade relationship between Vietnam and South Korea could be explained by various factors such as competitiveness and import dependence.

Ho et al. (2021) examined the asymmetric and symmetric impacts of the real exchange rate on the bilateral trade value between the United States and Vietnam at the industry level. The authors concluded that (i) only the symmetric real exchange rate was statistically significant in explaining the overall trade balance between the United States and Vietnam in the long term, with a 10% statistical significance; (ii) the industry-level impacts were heterogeneous and depended on the type of goods; and (iii) both asymmetric impacts were found in both the short and long term in 29 industries, accounting for 69% of the total industrial types between Vietnam and the United States.

Similarly, Tran (2019) evaluated the impact of exchange rates on the trade flows between Vietnam and Japan using industry-level data. The research findings indicated that the trade value of each industry exhibited different reactions to exchange rate fluctuations, with asymmetric responses found in 9 out of 16 industries affected by changes in the exchange rate. The model using aggregate data showed that the exchange rate had a positive impact on the overall

trade balance between Vietnam and Japan in the case of currency depreciation. Additionally, the results of this study also showed that Japan's economic activity had a positive impact on the trade relationship between Vietnam and Japan.

When examining another significant trade partner for Vietnam, namely China, the research conducted by Anh et al. (2019) quantified the impact of the exchange rate between Vietnam and China (VND/CNY, including both the level and volatility of the exchange rate) on the trade flow value between Vietnam and China. The quantitative results showed that, in the long term, nine imported commodities of Vietnam (constituting about 28.67% of total imports) were sensitive to changes in the level of the real exchange rate, and nine exported commodities to China (accounting for approximately 39.15% of total exports) also responded to changes in the level of the exchange rate.

While there are variations in the findings of the aforementioned studies, they all underscore the impact of exchange rates on bilateral trade and its potential variations by sector or trade partner. These studies serve as just a few examples of the influence of exchange rates on Vietnam's trade values, particularly in terms of export turnover. Additionally, numerous other research endeavors have been conducted in various countries and regions worldwide to delve deeper into the relationship between exchange rates and trade balances, as well as export and import values, across different scales.

3. Research methodology and specific model

3.1. Research methodology

The article employs a combination of various methods, including desk research, statistics, analysis, and data synthesis, using both primary and secondary sources. Secondary data is collected from sources such as the World Bank (WB) database, the International Trade Center (ITC) database, and the General Statistics Office of Vietnam (GSO), among others. The research is built upon qualitative and quantitative studies conducted both domestically and internationally, examining the impact of exchange rates on trade and export values in Vietnam. The study employs the "Gravity Model for Trade" to construct and assess the relationship between export values and exchange rate fluctuations in Vietnam

with each country in the G7 group from 2007 to 2021. The model aims to determine the direction of the exchange rate's impact on Vietnam's export values to G7 countries. Based on the research findings, the author provides policy implications to enhance the effectiveness of Vietnam's exchange rate management, ultimately increasing export values to G7 countries. The estimations in this research model are performed using Stata software.

3.2. Research Model

3.2.1. An introduction to the "Gravity Model for Trade"

In recent years, the "Gravity Model for Trade" has become widely used to analyze the trends and outcomes of international trade activities. Tenbergen (1962) can be considered the pioneer in applying the law of universal gravitation to the analysis of international trade flows (similar to Newton's law of universal gravitation). This model has been applied and developed by researchers to quantify bilateral trade flows between economies. The fundamental principle of the model is that bilateral trade relationships depend on the size of two economies and the distance between them. The general model is constructed as follows (Krugman & Maurice, 2005):

$$\ln T_{ij} = \alpha_0 + \alpha_1 \ln Y_i + \alpha_2 \ln Y_j + \alpha_3 \ln D_{ij} + \alpha_4 \ln R_{ij} + \alpha_5 \ln \pi_{ij} + e_{ij}, (1)$$

In which:

T_{ij} : Total trade value (total trade) between country i and country j ; Y_i , Y_j : Total gross domestic product (GDP) of country i ; total GDP of country j ; D_{ij} : The distance between i and j (usually measured as the distance between the capitals of the two countries).

The correlation coefficient β represents the degree of influence of each factor on bilateral trade volume (for example, if the total domestic product of country j increases by 1%, exports will increase by $\beta\%$). Hence, at its core, this model serves as a comprehensive tool for dissecting the intricate web of influences shaping global trade flows. It encompasses an array of factors, both positive and negative in character, that intricately define trade patterns. These affirmative factors include the economic dimensions of a nation, such as GDP, GNP, and per capita income. The underlying expectation is that countries boasting higher income levels and robust growth trajectories exhibit an inclination to enhance their trade activities,

Table 1. Descriptive Statistics of Model Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Exopr vnj	105	10914030	16536543	708727	1.082e+08
GDPvn	105	2.334e+11	6.009e+10	1.496e+11	3.311e+11
GDPj	105	4.900e+12	5.430e+12	1.358e+12	2.034e+13
INCOMEvn	105	2520.26	541.18	1751.708	3373.083
INCOMEj	105	40971.452	7814.22	29358.129	61280.39
DISij	105	9245	2847.103	3865	13789
ExRateij	105	20888.088	9511.917	136.77	34798.369
PoliPowerij	105	.96	.553	.561	2.415
FDIj vn	105	918.75	1977.901	4.53	9945.09

while their counterparts may experience reduced trade participation.

Conversely, the model acknowledges the adverse influences of negative factors, primarily the geographical distance that separates trading economies. This distance factor has direct implications for cost considerations, transportation durations, and various ancillary trade-related expenditures. Economic scholars have further extended the model's utility by encompassing a broader spectrum of influencing variables. This expansion encompasses the incorporation of population size and development assistance, serving as proxies for the economic scale, alongside the consideration of tariffs – encompassing export and import levies – which pose impediments to international trade interactions between nations.

The dataset is structured in the form of panel data, encompassing multiple dimensions. It includes variables such as export values, GDP, per capita income, exchange rates, and direct foreign investments for Vietnam and seven G7 countries, spanning the period from 2007 to 2021. Additionally, the dataset contains information on the geopolitical influence of Vietnam with respect to G7 member nations and the geographical distances between Vietnam and these G7 countries.

The choice of the study's start year in 2007 is due to Vietnam's accession to the World Trade Organization (WTO). Furthermore, due to data unavailability for the year 2022, the study collects data up to 2021. Data on Vietnam's export values to G7 countries are annual figures, denominated in US dollars, sourced from the General Statistics Office and the International Trade Centre database. The Gross Domestic Product (GDP) of Vietnam and G7 countries within the period t serves as an indicator of the economic scale. This variable is expected to have

a significant and positive correlation with Vietnam's export values. The per capita income of G7 countries and Vietnam is obtained from the World Bank database. These values are converted into current US dollars and further adjusted to constant US dollars of the year 2010 using the GDP deflator index provided by the World Bank.

Exchange rate data for Vietnam and G7 countries is extracted from the databases of the Organization for Economic Co-operation and Development (OECD), the World Bank, and the State Bank of Vietnam. The anticipated impact of the real exchange rate variable on Vietnam's export values to G7 countries is negative. Distance is included in the analysis to represent transportation costs between Vietnam and G7, calculated as the distance between Hanoi, Vietnam's capital, and the capital cities of the G7 nations. Distance data is derived from the great circle distance between capital cities, measured along the Earth's surface and sourced online from Chemical-ecology.net. This variable is expected to have a negative impact on trade, as transportation costs tend to rise with increased distance between countries.

The Polipower index, calculated as a weighted index of the Environmental Performance Index (EPI), is used to capture global effects on trade. Economic freedom index data is sourced from The Heritage Foundation (<http://www.heritage.org/index>). The FDI variable represents the foreign direct investment value of G7 countries into Vietnam, collected from the databases of the General Statistics Office of Vietnam and the ITC. Additional dummy variables, such as borders, languages, colonial history, and trade agreements, may be introduced into the gravity equation to investigate qualitative variables influencing bilateral trade. These dummy variables are considered to enhance the robustness of estimation

results and control for potential endogeneity issues. Lastly, e_{ijt} denotes the error term, while τ_{ijt} is the vector of individual-specific time-fixed effects.

3.2.2. Estimation Model

The panel dataset is designed to encompass variations in Vietnam's export values to seven G7 trading partners over a 15-year period (from 2007 to 2021). Panel data provide more variability, greater degrees of freedom, and reduced multicollinearity among explanatory variables, thereby enhancing the efficiency of econometric estimates. As suggested by Gujarati (2003), panel data estimation can be carried out using Pooled Ordinary Least Squares (Pooled OLS), Fixed Effects Model (FEM), and Random Effects Model (REM).

The "Gravity Model for Trade" includes both time-varying explanatory variables such as GDP, and per capita income, and time-invariant variables like distance and language. Therefore, this study will initially estimate the model using the Pooled Ordinary Least Squares (Pooled OLS) method. If the quantitative results of this model do not yield satisfactory results, the Fixed Effects Model (FEM) and Random Effects Model (REM) will be applied subsequently. Using the FEM or REM model aims to control and estimate the effects of variables that are time-invariant or unobservable in the model. The Fixed Effects Model controls these variables by introducing country-specific indicators into the model, while the Random Effects Model assumes that these fixed factors have a random distribution and estimates their effects through the variance between observations.

3.2.3. Applying the Gravity Model for Trade to Analyze the Impact of Exchange Rates on Vietnam's Exports to G7 Member Countries

The research model is constructed to quantitatively assess the correlation of the total export turnover of Vietnam to G7 countries with influencing factors, including (1) the Gross Domestic Product (GDP) of Vietnam and G7 member countries; (2) the Per capita income of Vietnam and per capita income of G7 member countries; (3) The distance between Vietnam (Hanoi) and G7 countries (capital cities of G7 member nations); (4) The exchange rate of VND and the exchange rates of G7 countries; (5) The factor

related to the geo-political power of Vietnam and G7 member countries; (6) The total value of foreign direct investments by G7 countries into Vietnam.

The model is formulated as follows:

$$\ln E_{ijt} = \alpha_0 + \alpha_1 \ln GDP_{it} + \alpha_2 \ln GDP_{jt} + \alpha_3 \ln Income_{it} + \alpha_4 \ln Income_{jt} + \alpha_5 \ln Distance_{ij} + \alpha_6 \ln Exrate_{ijt} + \alpha_7 \ln Polipower_{ijt} + \alpha_8 FDI + \tau_{ijt} + e_{ijt}, \quad (2)$$

Where:

i denotes Vietnam.

j represents the seven member countries of G7 (1, 2, 3, ..., 7).

t denotes the time periods, ranging from 2007 to 2021.

e_{ijt} represents the error term for adjustments.

E_{ijt} : Total export value from Vietnam to country j in year t .

GDP_{it} : Gross Domestic Product (GDP) of Vietnam in year t .

GDP_{jt} : Gross Domestic Product (GDP) of country j in year t .

$Income_{it}$: Per capita income of Vietnam in year t .

$Income_{jt}$: Per capita income of country j in year t .

DIS_{ij} : Distance from Vietnam (Hanoi) to country j (the capital of country j).

The variable EXR_{jt} represents the exchange rate between VND and the respective currency of the G7 countries. Empirical studies have shown that exchange rates in the gravity model of trade are significantly important in explaining the fluctuations in export and import values between countries (Bergstrand, 1985; Dell'Arricia, 1999). Therefore, exchange rates will be incorporated as an explanatory variable in the model. Furthermore, political power can serve as a proxy for multilateral trade impediments (Liu et al., 2018; Dong and Truong, 2019). We introduce the Polipower index to examine the effects of varying levels of political power on trade. Political power is measured based on the Composite Index of National Capability (CINC) (Singer et al., 1972) and the Economic Freedom (EF) index. This variable is computed according to the following formula:

$$Polipower_{ij} = \sqrt{(CINC_i \times CINC_j) \times (EF_{it} \times EF_{jt})} \quad (3)$$

4. Results and Discussion

The quantitative results of the correlation regression model analyzed using STATA software to assess the impact of exchange rates on Vietnam's

Table 2. Quantitative Results using the Pooled-OLS Method

LnExoprtn_vnj	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
LnGDPvn	36.015	9.195	3.92	0	17.764	54.267	***
LnGDPj	2.102	.311	6.77	0	1.485	2.718	***
LnINCOMEvn	-41.248	11.064	-3.73	0	-63.21	-19.285	***
INCOMEj	.601	.274	2.19	.031	.057	1.145	**
LnDISij	-.025	.242	-0.10	.917	-.507	.456	
LnExRateij	-.227	.057	-3.97	0	-.341	-.114	***
LnPoliPowerij	-1.914	.565	-3.39	.001	-3.035	-.792	***
LnFDIj_vn	-.015	.022	-0.68	.497	-.058	.028	
Constant	-668.723	155.959	-4.29	0	-978.299	-359.147	***
Mean dependent var		15.579		SD dependent var		1.063	
R-squared		0.963		Number of obs		105	
F-test		316.212		Prob > F		0.000	
Akaike crit. (AIC)		-19.541		Bayesian crit. (BIC)		4.345	

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 3. Quantitative Results using Fixed-Effect Panel

LnExoprtn_vnj	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
LnGDPvn	25.461	6.448	3.95	0	12.653	38.27	***
LnGDPj	5.299	.8	6.63	0	3.71	6.887	***
LnINCOMEvn	-28.944	7.755	-3.73	0	-44.348	-13.54	***
INCOMEj	-3.686	.97	-3.80	0	-5.612	-1.76	***
LnDISij	0	
LnExRateij	.606	.161	3.75	0	.285	.927	***
LnPoliPowerij	-.72	.464	-1.55	.124	-1.641	.201	
LnFDIj_vn	.013	.015	0.82	.412	-.018	.043	
Constant	-543.693	108.961	-4.99	0	-760.13	-327.256	***
Mean dependent var		15.579		SD dependent var		1.063	
R-squared		0.943		Number of obs		105	
F-test		213.358		Prob > F		0.000	
Akaike crit. (AIC)		-112.588		Bayesian crit. (BIC)		-91.356	

*** $p < .01$, ** $p < .05$, * $p < .1$

export value to G7 countries according to three specific methods are as follows:

The Pooled Ordinary Least Squares (Pooled OLS) model:

The quantitative results using the Pooled OLS method indicate that most of the factors in the research model have a significant impact on the export value of Vietnam to G7 countries, with the exception of the distance factor (transportation cost) and direct foreign investments from G7 countries,

which were excluded from the model. The exchange rate fluctuations exert a “negative” influence on the export value of Vietnam. Additionally, factors related to the geopolitical significance between Vietnam and G7 countries and per capita income in Vietnam have a negative effect on Vietnam’s export value. On the positive side, factors such as fluctuations in the GDP of

Vietnam and G7 countries, as well as the per capita income in G7 countries, have a positive impact

on Vietnam's export value to G7 countries.

4.1. Fixed Effect Panel Model (FEM)

The results obtained from the Fixed Effect Panel Model show a different perspective. Although it also eliminates two factors: direct foreign investment from G7 countries into Vietnam and the political power factor, this model reveals a positive impact of exchange rate fluctuations on Vietnam's export value to G7 countries. Additionally, the factor related to changes in the total GDP also has a positive influence on export values. This implies that as the economy's scale increases and the national income rises, Vietnam's exports to G7 countries also increase.

These results suggest that, while controlling for country-specific characteristics, the exchange rate fluctuations and the scale of the economy (as represented by GDP) have a more favorable effect on Vietnam's exports to G7 nations. It showcases the dynamic and complex relationship between exchange rates and exports, emphasizing the importance of considering country-specific features in economic analysis. The negative factors affecting the model include variations in per capita income for both Vietnam and G7 countries. This means that an increase in per capita income tends to reduce the upward trend in Vietnam's export value to G7 countries.

5. Conclusion and policy implications

In conclusion, this study utilized the Gravity Model for Trade to examine the impact of exchange rate fluctuations on Vietnam's exports to G7 countries. The findings revealed that exchange rate fluctuations had a negative impact on Vietnam's export value to G7 countries. Several factors had a positive influence on exports, including changes in GDP and per capita income in Vietnam and the G7 countries. However, income per capita in Vietnam and the G7 countries, as well as political power, had a negative impact on Vietnam's export performance. Additionally, the results indicated that the significance of these factors differed when applying different econometric models.

This study has important policy implications for Vietnam. To mitigate the negative effects of exchange rate fluctuations, policymakers should consider implementing flexible exchange rate policies that reflect actual supply and demand dynamics in the

market. These policies should take into account the exchange rates of major trading partners to maintain competitiveness in international markets. Additionally, addressing issues such as inflation and enhancing productivity will be crucial to maintaining a competitive edge for Vietnamese exports. Furthermore, fostering trade relations with G7 countries requires addressing not only exchange rate policies but also income disparities, political power, and other factors affecting export competitiveness. To promote a favorable export environment, it is essential to develop policies that support a more balanced income distribution and enhance political influence in international trade relations. As the global economy continues to evolve, Vietnam must adapt its policies and strategies to navigate the changing trade landscape effectively.

By using gravity model-based testing methods for trade, this research has shown that exchange rate fluctuations have a significant negative impact on Vietnam's export value to G7 countries. Therefore, the Vietnamese government needs to be highly flexible in managing exchange rates. On one hand, if the USD/VND exchange rate does not decrease significantly in the context of other exporting countries devaluing their currencies, it will reduce the competitiveness of Vietnamese goods. On the other hand, a substantial currency devaluation will increase the burden of USD-denominated debt for Vietnam. Vietnam needs to limit currency devaluation to increase export values. Although currency devaluation can enhance export competitiveness, it significantly affects domestic production stability, especially for businesses that import raw materials. Devaluing the currency increases production costs, raising product prices and decreasing Vietnam's international competitiveness, negatively affecting economic growth. Additionally, currency devaluation can lead to increased risks for businesses with foreign currency-denominated debts and a rise in the government's foreign debt. More importantly, increasing the exchange rate can undermine public trust in the local currency, trigger dollarization, and reduce the effectiveness of monetary policies.

The quantitative results of this study are based on adjustments to the gravity model for trade. This means that it only considers the impact of a few factors on Vietnam's export value to G7 countries. Therefore, further research can expand by adding more variables and broadening the research dataset.

There are various other research methods available to assess the impact of exchange rates on export values in general and between Vietnam and G7 countries specifically.

In summary, this research highlights the importance of managing exchange rates effectively and its consequences on Vietnam's international trade. It also suggests that a comprehensive approach is needed to balance export competitiveness while maintaining domestic economic stability. By addressing exchange rate fluctuations and other critical factors, Vietnam can strengthen its position in the global market and further enhance its trade relations with G7 nations.

REFERENCES

- Anh, T. P., Tran, H. T., & Hung, N. M. (2019). The impact of exchange rates on Vietnam-China bilateral trade. *JATI- Journal of Southeast Asian Studies*, 24(1), 70-96.
- Baek, J. (2013). Does the exchange rate matter to bilateral trade between Korea and Japan? Evidence from commodity trade data. *Economic Modelling*, 30, 856-862.
- Bao, H. H. G., & Le, H. P. (2021). Asymmetric impact of exchange rate on trade between Vietnam and each of EU-27 countries and the UK: Evidence from nonlinear ARDL and the role of the vehicle currency. *Heliyon*, 7(6), e07344. DOI: <https://doi.org/10.1016/j.heliyon.2021.e07344>.
- Bergstrand, J. H. (1985). The gravity equation in international trade: Some microeconomic foundations and empirical evidence. *The Review of Economics and Statistics*, 67(3), 474-481.
- Binh, N. T. T. (2021). What does Vietnam gain when its currency depreciates? *Economies*, 9, 185. DOI: <https://doi.org/10.3390/economies9040185>
- Dong, C. V., & Truong, H. Q. (2020). The determinants of creative goods exports: Evidence from Vietnam. *Journal of Cultural Economics*, 44, 281-308. DOI: <https://doi.org/10.1007/s10824-019-09363-1>
- Ho, S. H., Nguyen, T. T., & To-The, N. (2021). On the (a) symmetric effects of the real exchange rate on trade flows: New evidence from US - Vietnam trade balance at the industry level. *Journal of the Asia Pacific Economy*, 1-23. DOI: <https://doi.org/10.1080/13547860.2021.1880348>
- Huong, N. T. T. (2021). The impact of exchange rate policy on the export of goods from Vietnam to the United States. *Journal of Finance*, 2.
- Krugman, P. R., & Obstfeld, M. (2005). *International economics: Theory and practice* (7th ed.). Boston, MA: Addison-Wesley.
- Liu, Y., Ge, Y., Hu, Z., & Wang, S. (2018). Culture and capital flows - Exploring the spatial differentiation of China's OFDI. *China Economic Review*, 48, 27-45. <https://doi.org/10.1016/j.chieco.2017.12.007>
- Nga, N. T. V. (2021). *The impact of exchange rate fluctuations on Vietnam's trade balance*. Doctoral dissertation, Central Institute for Economic Management.
- Thao, L. P. D., Dan, V. L. L., & Hoan, D. (2022). The impact of exchange rates on Vietnam's trade balance - An approach using the VECM model. *Journal of Financial and Monetary Market*, 6, 15-25.
- Tinbergen, J. (1962). *Shaping the world economy: Suggestions for an international economic policy*. New York: Twentieth Century Fund.
- Thuy, V. N. T., & Thuy, D. T. T. (2019). The impact of exchange rate volatility on exports in Vietnam: A bounds testing approach. *Journal of Risk and Financial Management*, 12(1), 6. <https://doi.org/10.3390/jrfm12010006>
- Tram, T. T. T., Ngoc, N. T. M., & Linh, P. H. (2017). The impact of exchange rates on the bilateral trade balance between Vietnam and the European Union. *Journal of Commerce*. Accessed at <https://tapchicongthuong.vn/bai-viet/tac-dong-cua-ty-gia-hoi-doai-den-can-can-thuong-mai-song-phuong-giua-viet-nam-va-eu-47014.htm>