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Comparative analysis of the impacts of CPTPP and EVFTA on Vietnam's textile export activities

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Abstract: This paper presents a comprehensive comparative analysis of the impacts of two significant Free Trade Agreements (FTAs) – the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the European Union-Vietnam Free Trade Agreement (EVFTA) – on Vietnam's textile industry. Utilizing a quantitative research methodology, the study systematically examines trade data to assess the relative effects of these agreements. The findings reveal that the CPTPP exerts a more substantial influence on Vietnam's textile exports compared to the EVFTA. This is primarily attributed to the CPTPP's more comprehensive market access and more advantageous tariff reduction schedules, which have significantly enhanced Vietnam's export potential in key markets like Canada, Japan, and Mexico. On the other hand, the EVFTA, while contributing to a steady increase in exports to European markets, demonstrates a less varied impact. The paper's unique contribution lies in its in-depth analysis of the differential impacts of these FTAs, providing critical insights into their role in shaping Vietnam's position in the global textile market. The results of this study are particularly valuable for policymakers and trade strategists in developing and fine-tuning trade policies, highlighting the nuanced effects of different trade agreements on export dynamics in an increasingly interconnected global economy.

Keywords: CPTPP, EVFTA, textile industry, comparative analysis.

1. Introduction

In the ever-evolving landscape of global trade, FTAs play a pivotal role in shaping economic growth and integration. Amidst the complexities of the world economy, FTAs like the CPTPP and the EVFTA emerge as crucial mechanisms for nations to navigate the competitive global market. These agreements facilitate the reduction of trade barriers, enhance market access, and foster economic cooperation, particularly for developing countries like Vietnam. Such agreements enable these

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countries to integrate more effectively into global supply chains and improve their competitiveness.

The primary aim of this research is to undertake a detailed comparative analysis of the impacts of CPTPP and EVFTA on Vietnam's textile exports. The study employs a quantitative research methodology, particularly the Poisson Pseudo-Maximum Likelihood (PPML) method. This approach is selected for its ability to handle zero-value trade data effectively and minimize reliance on assumptions. The research spans a data set that covers Vietnam's exports to over 40 international markets, including all member countries of the EU and CPTPP, from January 2016 to September 2022.

This paper is structured to provide a comprehensive exploration of the subject. It begins with a literature review to establish the theoretical and contextual foundation. Following this, the research methodology and data analysis are detailed. The subsequent sections present the results of the analysis and a discussion of these findings. Finally, the paper concludes by synthesizing these insights and suggesting implications for policymakers and stakeholders in Vietnam's textile industry. This structure is designed to ensure a thorough and nuanced understanding of the impacts of CPTPP and EVFTA on Vietnam's textile exports.

2. Research background

2.1. Literature review

The impacts of the EVFTA, the CPTPP, and other FTAs on Vietnam's textile industry have been extensively studied, yielding varied findings. Jan et al. (2018) focused on the overall positive economic impact of these agreements on Vietnam, such as export network expansion, job creation, and strong export growth. Similarly, the studies by Huong and Phuong (2016), and Vinh and Phuong (2022) also highlighted the significant increase in Vietnam's export turnover, especially in key sectors like textiles, machinery, and electronics. These agreements' positive influence extends to findings of Huong and Manh (2021) on the EVFTA's impact on Vietnamese textile businesses, with an emphasis on financial factors affecting business profitability. Concurrently, Tuan (2020) provided a nuanced understanding of the Vietnamese textile industry's evolution, challenges, and opportunities under these FTAs.

The methodologies employed by these researchers vary, providing a comprehensive view of the FTAs' impacts from different analytical perspectives. Jan et al. (2018) utilized a policy analysis approach, examining economic metrics and export growth data to derive their conclusions. Huong and Phuong (2016) adopted a quantitative analysis, focusing on trade statistics and comparative advantage metrics to assess export trends. Vinh and Phuong (2022) implemented the innovative random frontier gravity model to evaluate the effectiveness of textile exports, offering a unique econometric perspective. Huong and Manh (2s021) merged financial analysis with experimental methods to understand the microeconomic impacts on textile businesses under the EVFTA. In contrast, Tuan (2020) presented a comprehensive industry analysis, considering both qualitative and quantitative data to review the landscape of the textile industry from 2016 to 2020.

Building on the review of existing literature on the impacts of various FTAs such as EVFTA and CPTPP on Vietnam's textile industry, this paper aims to further refine our understanding by providing a comparative analysis of these impacts. While previous studies have offered valuable insights into the economic, operational, and strategic implications of these agreements for the Vietnamese textile sector, there remains a need for a more nuanced examination that contrasts the specific effects of CPTPP and EVFTA. This comparative approach is essential to discern the distinct influences of each agreement, thereby enabling a more detailed understanding of how these FTAs differently shape the export activities and broader economic contribution of the textile industry in Vietnam.

2.2. Comparative analysis of textile industry provisions in EVFTA and CPTPP

The CPTPP, encompassing 11 member countries, including Australia, Canada, Japan, Mexico, New Zealand, Singapore, Brunei, Chile, Malaysia, Peru, and Vietnam, was officially ratified in March 2018. For Vietnam, the CPTPP became operative on January 14, 2019. Concurrently, the EVFTA, a landmark new-

generation free trade agreement, was formalized on June 30, 2019, between Vietnam and the 27 European Union member states, entering into force on August 1, 2020.

The similarities and differences in the provisions regarding the textile industry between EVFTA and CPTPP can be outlined in Tables 1 and 2.

Table 1: Common provisions in textile industry of EVFTA and CPTPP

Provisions	Explanation
Technical barrier regulations	Both agreements emphasize compliance with World Trade Organization (WTO) principles regarding technical trade barriers (TBT), aiming to eliminate unnecessary barriers to trade.
Market access	Both agreements offer greater market openness for Vietnam, reducing tariffs for Vietnamese export goods and partner countries' tariff rates.
Intellectual property protection	Both agreements uphold robust protection for intellectual property rights, aligning with international agreements such as the TRIPS Agreement and WTO-related aspects of IPR.
Labor and sustainable economic development	Neither agreement introduces new labor standards but affirms commitment to promoting an open trade and investment environment.

Source: Author's compilation.

Table 2: The differences in the provisions regarding the textile industry between EVFTA and CPTPP

Provisions		CPTPP	EVFTA
Import tariff reduction policy of Vietnam		Vietnam committed to eliminating tariffs for 66% of total goods imported from CPTPP member countries when the agreement took effect.	Vietnam committed to eliminating tariffs for 48.5% of tariff lines, equivalent to 64.5% of the country's import turnover.
Tariff reduction policies of partner countries for Vietnamese export goods		Each member country has different policies and timelines for reducing tariffs on goods imported from Vietnam.	European Union countries committed to removing import tariffs on 85.6% of tariff lines, equivalent to 70.3% of Vietnam's export turnover to these markets.
Rules of origin		Specifies a more stringent rule of origin, requiring that yarn and fabric must be produced or imported from CPTPP countries to enjoy preferential tariffs when exported to CPTPP countries.	Requires a "two-step" rule of origin for textiles, starting from the fabric.
Related to trade in services and investment	Form of commitment	Commitments between Vietnam and CPTPP partner countries are approached as a "pick-and-choose" model.	Commitments are specified differently in an approach known as a "pick-for-choose" model.
	Transportation services sector	Specific commitments for international shipping services or empty-container shipping, dredging services, and similar services are not explicitly outlined.	The agreement allows EU international maritime service providers to perform these services in Vietnam.

Source: Author's compilation.

In summary, a thorough understanding of the parallels and divergences in the textile industry provisions of the EVFTA and CPTPP is pivotal for effectively navigating the intricacies of international trade. This understanding is crucial for Vietnam to optimally leverage the advantages provided by these comprehensive trade agreements.

2.3. Dynamics and trends in Vietnam's textile exports

At present, the textile industry is among the sectors with high export turnover and growth rate, making it one of the key export industries that play an essential role in the economic growth of the country, consistently accounting

for 12 - 16% of the total export turnover of the nation (Ministry of Industry and Trade, 2023) and becoming increasingly important in the economic growth.

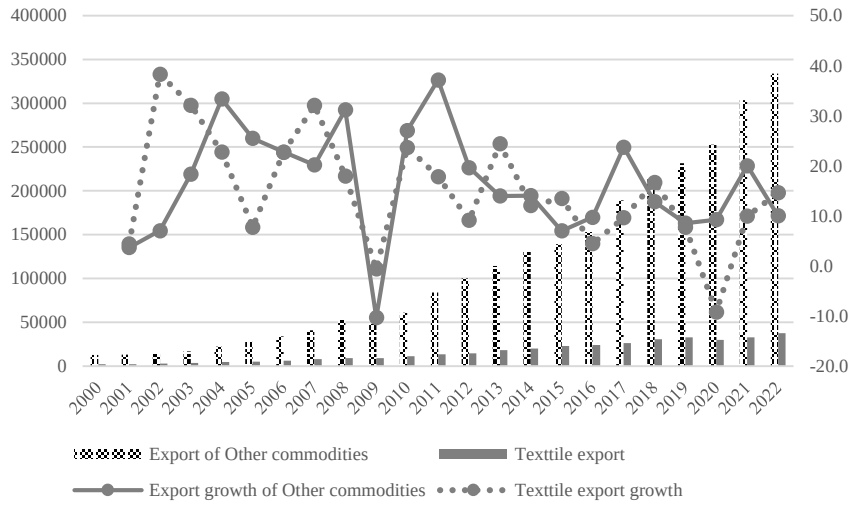

Figure 1: Vietnam's textile exports in 2000-2022
Source: General Statistics Office, 2023.

From 2016 to 2022, Vietnam's textile exports demonstrated remarkable resilience, even amid challenges posed by the COVID-19 pandemic and the US-China trade war. After experiencing a decline to 35.29 billion USD in 2020, exports rebounded to 44 billion USD in 2022. The industry expanded its reach to approximately 66 countries, with key products like jackets, t-shirts, and trousers seeing robust growth, approaching pre-pandemic levels. The United States, the European Union (EU), Japan, South Korea, and Canada emerged as major markets for Vietnam's garment exports. The United States remained the largest market, accounting for 46.21% of Vietnam's garment exports. The implementation of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) in January 2019 was instrumental in bolstering Vietnam's garment industry. Notably, Canada stood out with imports from Vietnam surging by 40.34% to $1.311 billion in 2022. Additionally, Mexico and Australia also witnessed significant growth, highlighting the expansive reach and potential of the CPTPP for Vietnam's garment export markets.

Concurrently, the European Union-Vietnam Free Trade Agreement (EVFTA) played a pivotal role in enhancing Vietnam's garment exports to the EU, which reached $4.382 billion in 2022 - a 34.71% increase from the previous year. This growth is largely attributed to the EVFTA's provision of zero-percent tariff rates on specific product categories, thereby boosting the appeal and competitiveness of Vietnamese garments in the EU market. Major EU markets such as Germany, the Netherlands, France, Belgium, and Spain displayed increased demand for Vietnamese garments. Under the CPTPP framework, Vietnam also witnessed a positive trend in fiber and yarn exports to member countries, registering a growth of 12.43% to $208.08 million in 2022. Although this segment represents a smaller fraction of total exports, it underscores the strategic advantages and opportunities presented by the CPTPP for Vietnam's fiber and yarn industry. Responding to global shifts and challenges, such as China's stringent COVID-19 policies, Vietnam has strategically diversified its textile material sources. Imports from CPTPP countries have increased, and partnerships with quality suppliers like the US and Australia have strengthened, reflecting Vietnam's commitment to enhancing global competitiveness and resilience in the textile sector.

2.4. CPTPP and EVFTA implementation and utilization in Vietnam

Vietnam has made significant strides in implementing the CPTPP, focusing on training,

legal adaptation, and public awareness. The Ministry of Industry and Trade conducted extensive online training sessions covering various aspects of the agreement, including tariff reductions, market access, and rules of origin, extending to critical areas like labor and environmental standards. Legal compliance efforts have been robust, with Vietnam actively revising and enacting legal documents to align with CPTPP standards. Promotional activities, including conferences, seminars, and the development of an electronic information portal, aim to provide comprehensive insights into the CPTPP, facilitating its practical application (Ministry of Industry and Trade, 2023).

The preferential Certificate of Origin (C/O) under the CPTPP has driven noteworthy export growth in key markets. In 2022, exports to Canada reached 863.52 million USD, constituting 13.67% of Vietnam's total exports to Canada. Similarly, exports to Mexico under the CPTPP amounted to 1.39 billion USD, making up 30.7% of total exports to Mexico (Ministry of Industry and Trade, 2023). Textile and garment exports to CPTPP markets witnessed significant increases in 2022 compared to 2021, reflecting strategic utilization by Vietnamese textile exporters to enter and expand within these markets.

The implementation of the EVFTA mirrors the concerted efforts seen in CPTPP implementation. The Ministry of Industry and Trade has organized various activities to promote understanding of the EVFTA, including training programs and media information campaigns, focusing on specific sectors and provisions of the agreement. Legally, Vietnam has made significant progress in updating and issuing new regulations to meet EVFTA commitments, covering areas such as intellectual property, insurance, and trade defense. The establishment of the Domestic Advisory Group (DAG) under the EVFTA framework reflects the integration of diverse interests and stakeholders in the implementation process (Ministry of Industry and Trade, 2023).

The EVFTA's implementation has been pivotal for Vietnam's textile industry, with immediate tariff reductions greatly benefiting textile exports. However, the sector's utilization of the EUR.1 C/O was relatively low at 15.67%, indicating a gap in maximizing the agreement's potential. Other textile-related products achieved almost 100% C/O issuance rate, suggesting the need for further adaptation and optimization within the textile sector to fully exploit the EVFTA's benefits (Ministry of Industry and Trade, 2023).

Vietnam's diligent implementation of the CPTPP and the EVFTA underscores its commitment to international trade obligations. These efforts, manifested through extensive legal reforms and proactive involvement in training and awareness initiatives, have opened new markets and created competitive advantages for the country's textile exports. However, challenges remain, including the need to address stringent labor and environmental standards and navigate external factors such as the COVID-19 pandemic, which affect market dynamics and the realization of agreement benefits. Ongoing legal updates and effective communication with stakeholders are crucial in addressing these challenges and seizing opportunities in the global market.

3. Data and proposed empirical model

The gravity model, initially conceptualized by scholars Tinbergen in 1962 and Poyhonen in 1963, is the foundation for this research. It is applied to analyze and explain the types and scales of international trade flows. Structured around the trade interactions between two countries, denoted as i and j, the gravity model is represented as follows (Yihon & Wei, 2006):

$$Xij = A.\frac{Yi.Yj}{Dij}$$

Where Xij is the trade volume between countries i and j, and A is a constant. Yi and Yj represent the economic scale of these countries, and Dij is the distance between them. The model is pivotal in predicting changes in export activities following the implementation of formal agreements, identifying factors such as the GDP and population of partner countries, tariff barriers, and geographical distance. These elements are critical in understanding the effects of FTAs on trade flows.

Utilizing data of 2494 observations from Vietnam's exports to over 40 international markets, including 27 EU countries and 10 CPTPP countries, from January 2016 to September 2022, the study formulates the following model:

$$\text{Ln (EXPijmt)} = \beta o + \beta 1 * \text{Ln(GDPit\_VN)} + \beta 2 * \text{Ln(GDPjt)} + \beta 3 * \text{Ln(POPit)} + \beta 4 * \text{Ln(POPjt)} + \beta 5 * \text{Ln(ERRijmt)} + \beta 6 * \text{Ln(TARijt)} + \beta 7 * \text{Ln(DISTij)} + \beta 9 * \text{Ln(INFit)} + \text{CPT} + \text{EVF} + \text{eijmt}$$

In this model, 'i' represents Vietnam, and 'j' denotes over 40 countries globally, with 'm' and 't' indicating the month and year. The variable EXPijmt symbolizes the export volume between countries i and j in a specific month and year. GDPit_VN, GDPjt, POPjt, and POPit reflect the economic scale, including the GDP and population. ERRijmt is the exchange rate, TARijt denotes export tariffs, DISTij represents the distance, and INFit is the inflation index in Vietnam. CPT and EVF are dummy variables indicating the effectiveness of the CPTPP and EVFTA, respectively.

Table 3: Variable description and data sources

Variables	Variable description	Data source	Expected sign
EXPijmt	Export turnover from Vietnam to markets around the world; Unit: USD	General Department of Vietnam: Customs: https://www.customs.gov.vn/	
GDPit_VN	Vietnam's gross domestic product in year t; Represents the scale of the economy; Unit: billion USD	General Statistics Office of Vietnam: https://www.gso.gov.vn/ Trading economic: https://tradingeconomics.com/	+
GDPjt	Gross domestic product of other countries in year t; Represents the scale of the economy; Unit: billion USD	Fred Economic data: https://fred.stlouisfed.org/Trading economic https://tradingeconomics.com/	+
POPit	Vietnam's population in year t; Unit: person	Worldmeters: https://www.worldometers.info/population/ Statisticstimes: https://statisticstimes.com/demographics/countries- by-population.php	+
POPjt	Population of other countries in year t; Unit: person	Worldmeters: https://www.worldometers.info/population/ Statisticstimes: https://statisticstimes.com/demographics/countries- by-population.php	+
ERRijmt	The effective exchange rate between Vietnam and its partners	Exchange rate.org: https://www.exchange-rates.org/ Trading economic: https://tradingeconomics.com/	+
TARijt	Tariff rates between countries around the world and Vietnam; Unit: %	World Tariff Profile 2016-2022: Fred Economic data: https://fred.stlouisfed.org/	-
DISTij	Geographic distance between Vietnam and countries around the world; Represents shipping costs; Unit: km	Vietnam distanceworld.com: http://vietnam.distanceworld.com/	-
INFit	Inflation index in Vietnam in year t; Unit: %	The World Bank: https://www.worldbank.org/en/home Trading economic: https://tradingeconomics.com/	-
CPT	Impact of CPTPP	CPTPP: https://trungtamwto.vn/fta/175-cptpp-/1	+
EVF	Impact of EVFTA	EVFTA: https://trungtamwto.vn/fta/199-viet-nam--eu- evfta/1	+

Source: Author's compilation.

The structured summary of key statistics, encompassing the mean, maximum, minimum, and standard deviation for each variable under investigation, is comprehensively delineated in Table 4. This presentation is intended to provide a foundational comprehension of the dataset characteristics, thereby facilitating a nuanced interpretation of the empirical results derived from the table.

In the correlation matrix presented in Table 5, it is evident that the export variable (EXPORT) exhibits positive correlations with variables such as GDPit_VN, GDPjt, POPit, POPjt, and ERRijmt. Conversely, variables including DISTij, TARijt, and INFit demonstrate negative correlations with Vietnam's textile goods export turnover.

To enhance the credibility and robustness of our model's findings, tests for model deficiencies were conducted, using the Ordinary Least Squares (OLS) method. Specifically, in the examination for multicollinearity, it was observed that the Variance Inflation Factor (VIF) for two variables, LN__GDPit_VN and LN_POPit, both yielded results greater than 10. Thus, it can be concluded that multicollinearity is present in the model.

Table 4: Descriptive statistics of variables

	EXPijmt	GDPit_VN	GDPjt	POPit	POPjt	DISTij	TARijt	ERRijmt	INFit	CPT	EVF
Mean	45,410,921	305.0418	1,515.084	95,913,856	1,15E+08	7,765.805	9.44684	9,707.094	2.919916	0.062893	0.097135
Maximum	1,85E+09	361.169	25,035.16	99,578,234	1,45E+09	18,063.05	2.55000	31,963.50	6.430000	1.00000	1.0000
Minimum	2,223	249.533	1.500000	91,452,142	579,264.00	4.785530	0.00000	1,427.500	0.090000	0.00000	0.0000
Std.Dev.	1.69E+08	3.127741	3.467390	2.499877	2.82E+08	4.700635	5.35340	1.432650	1.174893	0.242799	0.296176

Source: Author's calculations.

Table 5: Correlation matrix among variables

	EXPijmt	GDPit_VN	GDPjt	POPit	POPjt	DISTij	TARijt	ERRijmt	INFit	CPT	EVF
EXPijmt	1										
GDPit_VN	0.032226	1									
GDPjt	0.718488	0.032486	1								
POPit	0.141423	0.020844	0.433367	1							
POPjt	0.033138	0.963723	0.033475	0.022643	1						
DISTij	-0.075877	6.63E-06	0.031223	-0.160599	6.79E-06	1					
TARijt	-0.056699	-0.128932	-0.007794	0.183419	-0.133579	0.248236	1				
ERRijmt	0.105350	-0.017543	0.093560	-0.121686	-0.013736	0.183845	-0.057718	1			
INFit	-0.008904	-0.216236	-0.006140	0.006038	-0.185602	-0.000607	0.061866	-0.003616	1		
CPT	0.031723	0.197751	0.002616	-0.055584	0.201440	0.043408	-0.270708	0.030460	-0.057416	1	
EVF	0.050917	0.354555	-0.053581	-0.106313	0.361096	0.051837	-0.076755	0.161870	-0.196782	-0.084973	1

Source: Author's calculations.

Table 6: Results of the multicollinearity test

Variable	Centered VIF
LN__GDPit_VN	18.16855
LN_GDPjt	1.586529
LN_POPit	17.29422
LN__POPjt	1.493541
LN_DISTij	1.368092
LN_ERRijmt	1.389779
LN_TARijt	1.502390
LN_INFit	1.102940
CPT	1.260802
EVF	1.361314
C	NA

Source: Author's calculations.

To test for autocorrelation defects in the model, the Breusch-Godfrey (BG) test was employed. It can be observed from the p-value results of the F-test and the Chi-square test that a conclusion can be drawn regarding the presence of an autocorrelation defect in the model.

Table 7: Results of the Breusch-Godfrey Serial Correlation LM Test

Test Statistic	Value	Probability
F-statistic	325.8815	Prob. F (2,4260) = 0.0000
Obs*R-squared	567.0028	Prob. Chi - Square (2) = 0.0000

Source: Author's calculations.

To ascertain the presence of autocorrelation defects in the model, the BG test was employed. It can be observed from the p-value results of the F-test and the Chi-square test that a conclusion can be drawn regarding the presence of an autocorrelation defect in the model.

Table 8: Results of the Heteroskedasticity Test (Breusch-Pagan-Godfrey)

Test Statistic	Value	Probability
F-statistic	21.41078	Prob. F (10,4262) = 0.0000
Obs*R-squared	204.3924	Prob. Chi-Square (10) = 0.0000
Scaled explained SS	214.5912	Prob. Chi-Square (10) = 0.0000

Source: Author's calculations.

In addressing the identified deficiencies of our empirical model, including challenges related to multicollinearity, autocorrelation, and handling zero-valued data, we adopt the PPML method. This approach leverages the robustness of the Poisson distribution to overcome the constraints imposed by zero values, a common obstacle in traditional econometric analyses. Importantly, the PPML method requires fewer stringent assumptions compared to conventional methodologies like OLS and Generalized Least Squares (GLS), resulting in substantive enhancements.

Moreover, the PPML method demonstrates notable proficiency in managing the complexities of longitudinal datasets and the diverse characteristics of individual countries. By employing a robust estimation strategy that incorporates clustering with weights based on both country-specific and temporal dimensions, our study meticulously addresses potential biases arising from time-series correlation and national variations. This methodological rigor, facilitated by the analytical capabilities of STATA 14 software, significantly enhances the validity of our econometric evaluations, establishing a solid foundation for subsequent interpretative analysis.

4. Empirical results

The gravity model's results, as displayed in Table 9, highlight key factors significantly influencing the export of Vietnamese textile products to markets within the CPTPP and the EVFTA. These factors include the total domestic product in partner markets (LN_GDPjt), the population of partner countries (LN_POPjt), geographical distance (LN_DISTij), customs duties (LN_TARijt), and the exchange rate between the Vietnamese Dong and foreign currencies (LN_ERRijmt). Furthermore, the efficacy of both the CPTPP (CPT) and EVFTA (EVF) agreements, represented as two dummy variables, markedly impacts Vietnam's export activities.

The analysis of the gravity model in this study, which encompasses the impacts of the CPTPP and the EVFTA, reveals a constellation of factors that significantly influence Vietnam's textile exports. The total domestic product of partner countries, denoted by the variable LN_GDPjt, emerges as a primary factor. This variable, reflecting the economic scale of countries importing Vietnam's textile products, positively impacts exports. The model indicates that a 1% increase in the GDP of partner countries corresponds to a 0.011771% increase in Vietnam's textile exports. This observation is

aligned with established hypotheses and echoes the research by Duong (2016), Tinbergen (1962), and Tri (2006), suggesting that an increased GDP in partner countries fosters a higher demand for imports.

Table 9: Gravity model results

Variables	Coefficients	P-value
LN__GDPit_VN	-0.122223	0.0681
LN_GDPjt	0.011771	0.0000
LN_POPit	0.110292	0.6698
LN__POPjt	0.037493	0.0000
LN_DISTij	-0.036144	0.0000
LN_ERRijmt	0.011397	0.0000
LN_TARijt	-0.005675	0.0000
LN_INFit	0.001653	0.5503
CPT	0.065874	0.0000
EVF	0.005555	0.0330
C (Constant)	0.887324	
R-squared value	0.448249	
Adjusted R-squared value	0.446720	

Source: Author's calculations.

Moreover, the population size of partner countries, represented by the variable LN_POPjt, also significantly affects export activities. The positive correlation of this variable, with a coefficient of 0.037493, indicates that an increase in the population of partner countries leads to an increased demand for Vietnamese textiles. This finding is consistent with previous studies by Hatab (2010), Yanikkaya (2003), and Teboho (2016), highlighting the role of population size in boosting demand for goods.

Another crucial factor is the geographical distance between Vietnam and partner countries, represented by LN_DISTij. The model reveals a negative correlation, with a regression coefficient of -0.036144, suggesting that increased distance leads to a decrease in the export volume of textile products. This aligns with hypotheses and corroborates numerous studies, including those by Helga (2005), Nguyen Binh Duong (2016), Grant & Lambert (2008), Lin & Reed (2010), Koo, Kennedy, & Skrippnitchenko (2006).

The tariff factor, represented by LN_TARijt, also influences Vietnam's textile exports. The model shows an inverse relationship between tariffs and export volume, with a coefficient of -0.005675. This suggests that lower tariff barriers are conducive to higher export opportunities, a finding consistent with studies by Duong (2016), Korinek and Melatos (2009), and Assarson (2005).

Furthermore, the exchange rate, represented by LN_ERRijmt, positively impacts export volumes. The model indicates a favorable exchange rate enhances Vietnam's export competitiveness, as evidenced by a regression coefficient of 0.011397. This aligns with the hypothesis and is supported by previous research from Butt (2008) and Krugman (2012).

Significantly, the study examines the effectiveness of the CPTPP and EVFTA agreements, represented by the variables CPT and EVF, respectively. Both show significant positive impacts on Vietnam's textile exports. The positive coefficient for CPTPP, 0.065874, and for EVFTA, 0.005555, underscore the importance of these trade agreements in enhancing Vietnam's export capacity. These results resonate with findings from Hoan (2021), Ha and Hoi (2019), and Tuyet (2022), highlighting the role of these agreements in removing tariff barriers and opening new markets for Vietnamese textiles.

The CPTPP's substantial impact on Vietnam's textile exports, as evidenced by its higher coefficient in the gravity model, underscores its pivotal role in shaping the country's trade dynamics compared to the EVFTA. This distinction is primarily attributed to the broader market access and more favorable

tariff reduction schedules provided by the CPTPP, particularly in lucrative markets such as Canada, Japan, and Mexico. With the CPTPP offering enhanced opportunities for Vietnamese textile exports, including favorable tariff reductions, it has emerged as a key driver of growth for the industry, amplifying Vietnam's trade presence on the global stage.

Moreover, the diverse economies within the CPTPP present a wider spectrum of consumer preferences and demands, providing Vietnamese textile exporters with a broader array of opportunities compared to the relatively homogenous European market of the EVFTA. Factors such as geographical proximity, established trade relationships, and alignment with consumer preferences in CPTPP countries further contribute to Vietnam's comparative advantage in these markets. Additionally, the CPTPP's provisions for supply chain integration and flexible rules of origin serve to streamline export processes and reduce costs, bolstering the competitiveness of Vietnamese textiles in CPTPP member countries.

Besides, Vietnam's GDP, population, and inflation rate are not statistically significant influencers of the country's textile export turnover, with their P-values exceeding the 0.05 threshold. The P-value for Vietnam's GDP (LN__GDPVN_) stands at 0.0681, accompanied by a negative regression coefficient of -0.122223, hinting at a potential adverse effect on export turnover if it were statistically significant. This indicates that a rise in Vietnam's GDP may not necessarily boost demand in partner countries' markets, a finding echoed in studies by Anh (2018) and Cong (2011). Vietnam's population factor (LN_POPIT), with a P-value of 0.6698, suggests that demographic growth does not lead to increased textile exports, likely because domestic consumption increases concomitantly, neutralizing any potential for export growth. This is in line with expectations and findings from research by Diep, Thao and Thu (2018), and Nha (2018). The inflation rate, represented by LN_INFIT_ and with a P-value of 0.5503, shows that the recent low to moderate inflation rates of 4-6% in Vietnam have minimal impact on export activities. An increase in inflation, leading to higher prices for Vietnamese goods, does not affect demand in partner countries for the textile sector, as shown in research by Hang and Thanh (2010) and supported by Minh (2022) and Thang (2022). The analysis of these non-significant factors from January 2016 to September 2022 offers essential insights into Vietnam's textile export dynamics, highlighting the need for a wider research perspective.

In summary, the gravity model's findings, highlighting the CPTPP's more significant influence compared to the EVFTA, can be understood through a multifaceted lens involving market access, tariff advantages, the economic diversity of member countries, Vietnam's comparative advantage, supply chain dynamics, and the cumulative effects of multiple trade agreements. This comprehensive analysis not only elucidates the current situation but also prepares for future strategic considerations in Vietnam's textile industry.

5. Conclusion and implications

This study meticulously examines the impacts of the CPTPP and the EVFTA on Vietnam's textile industry, revealing insightful findings. A significant observation is the differential impact of these agreements, with the CPTPP exerting a more pronounced influence compared to the EVFTA. This variance can be attributed to the CPTPP's extensive market reach and comprehensive market access provisions, offering Vietnamese textiles greater opportunities in less-explored markets such as the Americas and Oceania. Conversely, the EVFTA, while beneficial, presents challenges due to the high standards and stringent regulations of the EU market.

Additionally, the study highlights how the stringent rules of origin under the CPTPP have stimulated domestic sourcing and value chain development, enhancing the quality and global competitiveness of Vietnamese textile products. External factors, including global economic trends and Vietnam's adaptability to international market demands, significantly influence the effectiveness of these trade agreements.

Based on the gravity model analysis, several policy implications and strategic directions become evident. Firstly, there is a crucial need for robust government policies aimed at mobilizing capital and utilizing resources efficiently to stimulate textile production for international markets, given the opportunities

and challenges presented by the CPTPP and EVFTA. These policies should concentrate on attracting and leveraging both domestic and foreign investments, facilitating joint ventures, licensing, and full foreign capital ownership. Collaborations with NGOs and environmental organizations are essential for developing environmentally sustainable products. Emphasizing technological advancements and compliance with international standards such as ISO 9000 and ISO 14000 is crucial for strengthening the industry's global competitiveness.

Secondly, addressing production constraints within the frameworks of the CPTPP and EVFTA is imperative. The government should foster conditions conducive to investments in supporting industries, particularly in establishing raw material supply hubs. This approach will aid in meeting the origin requirements of these trade agreements. The establishment of integrated industrial zones, coupled with advanced waste treatment systems, will ensure environmental compliance and facilitate smoother market access under these agreements.

Thirdly, optimizing export operations is vital. The government's efforts should focus on reducing the costs and time associated with market entry by improving logistics services, transportation infrastructure, and e-commerce facilities. Streamlining the issuance of Certificates of Origin will enable businesses to better exploit the opportunities provided by these trade agreements.

Fourthly, proactive information dissemination regarding the EU and CPTPP markets is crucial. Businesses require support in adapting to emerging regulations and market conditions. Encouraging direct engagement with foreign distribution networks and leveraging the Vietnamese diaspora for the promotion of Vietnamese goods abroad will further strengthen market development efforts.

Fifthly, enhancing human resource quality through collaboration between businesses and the government is essential. Investments in education systems to cultivate skilled and competent labor will align with the demands of integration into global markets and international commitments. This will enable the industry to respond effectively to market transformations.

Lastly, businesses are encouraged to focus on enhancing production capacity, engaging in deep processing, and strategically sourcing raw materials to meet the standards of these trade agreements and enhance the overall competitiveness of Vietnamese textiles in the global market.

In summary, the findings from the gravity model analysis underline the importance of a comprehensive approach encompassing policy formulation, infrastructure development, human resource enhancement, and quality improvement. Such a strategy is vital to fully leverage the benefits presented by the CPTPP and EVFTA, positioning Vietnam’s textile industry for sustainable growth and enhanced competitiveness in the international arena.

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