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ẢNH HƯỞNG CỦA TÍNH BẤT ĐỊNH TRONG CHÍNH SÁCH THƯƠNG MẠI ĐẾN ĐẦU TƯ CỦA DOANH NGHIỆP - BẰNG CHỨNG TỪ CÁC QUỐC GIA ĐANG PHÁT TRIỂN TRONG KHU VỰC ĐÔNG NAM Á

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Tóm tắt

Bài viết này nghiên cứu ảnh hưởng của tính bất định trong chính sách thương mại đến đầu tư của doanh nghiệp tại các quốc gia đang phát triển trong khu vực Đông Nam Á với dữ liệu liệu đến từ các doanh nghiệp phi tài chính Việt Nam, Thái Lan, Indonesia, Malaysia và Philippines trong giai đoạn từ 2000-2021. Từ các cơ sở lý thuyết và bằng chứng thực nghiệm, nhóm tác giả thu được kết quả rằng tính bất định trong chính sách thương mại có ảnh hưởng tiêu cực đến đầu tư với đầu tư của các doanh nghiệp. Vì vậy, mỗi công ty cần phải chủ động trong việc đổi mới các hình thức kinh doanh và đầu tư để đảm bảo sự linh hoạt trong kinh doanh; để doanh nghiệp có thể nhanh chóng thích nghi với nền kinh tế. Ngoài ra, kết quả của nghiên cứu này cũng là cơ sở để các chính phủ phát hành và thực hiện các chính sách liên quan đến kinh tế và thương mại.

Từ khóa: Đầu tư, Tính bất định trong chính sách thương mại

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THE IMPACT OF TRADE POLICY UNCERTAINTY ON INVESTMENT: EVIDENCE FROM DEVELOPING COUNTRIES IN SOUTHEAST ASIA

Abstract

This article studies the impact of uncertainty in trade policy on investment of firms in developing countries in Southeast Asia with data from non-financial firms in Vietnam, Thailand, Indonesia, Malaysia and the Philippines from 2000-2021. From theoretical bases and empirical evidence, the authors found that uncertainty in trade policy has a negative impact on investment by firms. In this situation, each firm needs to be proactive in innovating business forms and investment forms to ensure flexibility in business and investment so that they can quickly adapt to the economy. In addition, the results of this study are also the basis for governments to issue and implement policies related to the economy and trade.

Keywords: Investment; Trade Policy Uncertainty.

1. Introduction

In recent years, the world has experienced economic crises, from 1930 to 2008 and most recently the global economic recession due to the significant impact of the COVID-19 pandemic, which has increased public concern about the uncertainty of international trade policies. As of now, the uncertainty of trade policies towards the economies of countries is increasing rapidly (NZM Sidek et al. 2022).

There have been many studies around the world that have concluded that the business operations of companies, especially investment decisions, are constantly changing due to changes in events and uncertain factors in international trade policies. The theoretical basis shows that business investment decisions are influenced by many factors. Among them, policy instability can significantly affect investment and entry decisions at the firm level in the context of international trade. When market entry costs decrease, policy uncertainty can cause investors to postpone foreign market entry and investment until conditions improve or uncertainty is resolved (Handley and Limão, 2012). Currently, there are more and more studies analyzing the impact of policy uncertainty in international trade on business results. Companies reduce short-term, long-term, and total investments when economic policy uncertainty increases. This result is demonstrated by analyzing the impact of economic policy uncertainty on capital investment at the firm level, not only delving into long-term investment relationships and uncertainty but also analyzing short-term investment relationships and uncertainty in the US market (Chen, Lee et al., 2019). In addition, the uncertainty in international trade policy can affect not only current economic efficiency but also investor expectations of performance and risk in the future, directly affecting the financial situation and business operations of enterprises (Pierce and Schott, 2016).

According to the World Trade Organization (WTO), Southeast Asia is an area with strong growth in the context of the global economy under pressure with weak growth and high inflation. The Asian Development Bank released a forecast of GDP growth in the region from 4.9% to 5.1%. Specifically, Thailand, Indonesia, Philippines, Malaysia and Vietnam have the potential to grow from 3.2% to 7.6% in 2022. This shows the potential for economic development, attracting investors in Southeast Asian countries. However, in the context of the world economy having many fluctuations leading to

trade policies with many changes, Southeast Asia predicts that it cannot avoid major impacts due to the uncertainty of trade policies. This article aims to analyze the relationship between uncertainty in trade policy and investment decisions of listed companies from 5 developing countries in Southeast Asia.

The authors built a regression model based on the research of Lewellen and Lewellen (2016) and Doring et al. (2017) and performed regression estimation using the Generalized Method of Moments (GMM). Uncertainty is measured by data on tariffs collected from the World Bank, which the authors also use in their study. The data used in the study is table data from 2000 to 2021, collected from listed companies in various fields in 5 ASEAN countries: Vietnam, Thailand, Indonesia, Malaysia, and the Philippines, taken from the Refinitiv Eikon database. In addition, the results show that businesses will cut investment when trade policies change. The study includes 4 sections: Section 1 introduces the research. The research team studies the theoretical basis and develops the research hypothesis in section 2. The author uses the research model to study the correlation between policy uncertainty in trade and investment decisions in section 3. Lastly, the author obtains research results from the model and discusses some results.

2. Literature review and hypothesis development

2.1. Trade Policy Uncertainty

Trade policy uncertainty is defined as the risk that a tariff reversal has a strong impact on the economy (Alberto Osnago et al., 2015). In addition, the concept of uncertainty in trade policy also refers to the ability of a country to change its trade policy, mainly including the possibility of not renewing preferential tariff programs, trade bans, etc. provisional trade, economic sanctions, intellectual property disputes, and anti-dumping measures (Ruxu Zhang and Yahui Qu, 2022). There are various methods of measuring trade policy uncertainty, including calculating the gap between binding tariff rates and effectively applied tariffs, using aggregated economy-wide data, using data from listed companies, or use data from corporate calls and view policy uncertainty reminders to analyze and aggregate the data.

The link between uncertainty in trade policy and corporate investment has been proven and explained by many studies. However, no consistent findings were presented on the effects of uncertainty in trade policy, but rather different conclusions were noted for different samples. Up to now, most studies have shown a negative relationship between uncertainty in trade policy and corporate investment, such as trade policy uncertainty delaying new markets entry for exporters and make them less sensitive to tariff reductions (Handley, 2014). However, if the uncertainty of trade policy changes trade flows, it has a positive effect on investment, but if it changes the price of goods, it has a negative effect on investment (Sudsawasd and Moore, 2006).

In recent years, uncertainty in trade policy has emerged due to fluctuations in global politics and economy, especially due to the emergence of the COVID-19 pandemic and the Russian military campaign in Ukraine (Ruxu Zhang and Yahui Qu, 2022). The current unstable economic situation leads to a greater need for economists to study the effects of uncertainty in trade policy on the economy in general and corporate investment in particular.

2.2. Trade Policy Uncertainty and investment of enterprises

Many previous studies have demonstrated the impact of uncertainty, especially uncertainty in trade policy, on investment decisions of enterprises. Specifically, firms tend to reduce investment and focus on R&D activities within firms, retaining more capital when uncertainty in trade policy increases (Li et al. , 2023). Uncertainty in trade policy has also been shown by many previous studies to have a negative relationship with investment, such as the studies of Handley and Limão (2012), Kirchner (2019), Feng and Lou (2021), Steinberg (2019) or Caldara (2020). Accordingly, the volatile business situation or changes in the business environment will lead to increased uncertainty and make businesses more cautious in making investment decisions.

Increased policy uncertainty will affect corporate investment over a long period of time spanning many quarters, and affect both short-term investment, long-term investment, as well as total corporate investment (Chen, Lee et al., 2019). Vice versa, reducing policy uncertainty will promote cross-border trade and investment, as well as domestic economic activities (Kirchner, 2019), and the reduction of TPUs significantly increases investment and input import of enterprises (Liu, 2020). Decisions to invest and enter export markets are reduced due to the effects of trade policy uncertainty, and preferential trade agreements (PTAs) have an effect on exporters even when they are in apply low or zero trade barriers. Not only that, when policy uncertainty increases, it can reduce business investment by causing firms to cautiously delay investment due to irreversible investment (Gulen and Ion, 2015). In addition, the irreversibility of investment also causes firms to reduce investment when uncertainty increases. Because investment is irreversible, uncertainty increases the value of the "call-option" and makes the firms delay investment commitments (Carruth et al., 2002), or (Dixit and Pindyck, 1994).

In addition, the uncertainty in the policy increases the credit risk of banks and negatively affects the loan size, especially for joint stock banks, which makes investors encounter more difficulties in raising capital, thereby affecting investment activities (Chi and Li, 2017). When uncertainty is high, investors are likely to withdraw their investments or demand a higher expected rate of return (Tsai, 2017).

Up to now, most studies have shown a negative relationship between uncertainty in trade policy and corporate investment. However, the uncertainty of trade policy can have different effects depending on the country, region, or industry. Specifically, when it leads to fluctuations in trade flows, it has a positive effect on investment, but if it leads to fluctuations in commodity prices, it has a negative impact on investment. At the same time, the rate of investment will decrease with fluctuations in trade policy indicators such as tariffs, average tax, rate of trade tax collected or Dollar index. On the other hand, if the trade weight is used as a proxy for overall trade policy, the investment share will be positively correlated with trade policy uncertainty (Sudsawasd, 2006). When considering the impact of a reduction in TPU on investment by industries and factories in the United States, industries more exposed to a reduction in TPU will reduce investment but the effect is not uniform across industries (Pierce et al. and Schott, 2018). It can be concluded that the uncertainty in trade policy affects enterprises, and especially investment of enterprises, however, there will be effects at different levels of influence and impact trends depending on the situation and many other factors of the country and the market.

The global economy is being affected by a severe recession after the COVID-19 pandemic crisis plus the war situation between Russia and Ukraine. With the specific geographical location and close economic and trade relations with the countries representing the above event, ASEAN countries have also suffered significant impacts. In addition, Russia's invasion of Ukraine also has significant economic effects on ASEAN-5, such as energy and food prices and supply chain disruptions (The Diplomat, 2022).

ASEAN countries do not respond to major economic crises by strengthening cooperation, but tend to use self-help measures. In addition, in cooperation agreements, ASEAN lacks binding rules, and withdrawal from common positions is not morally discriminatory (Rüland, 2010). Commitment to action and regional solidarity in Southeast Asia is much weaker than cooperation agreements based on international treaties and contractual obligations. As a result, ASEAN is more prone to crisis than more institutionalized regional organizations such as the EU. Furthermore, the more politically diverse a regional organization is, the greater the consequences of a crisis (Rüland, 2010). The impact of trade policy uncertainty will also be higher for countries with lower institutional quality and lower participation in global value chains (Osnago, 2015). In ASEAN, there is a lack of political uniformity, and different political regimes among member countries may contradict different principles of cooperation. From that, it can be seen that businesses in ASEAN countries will be strongly affected by fluctuations, economic crises, as well as changes and uncertainties in general and trade policies. in particular.

The authors predict that uncertainties in the economy and trade policy will have a negative impact, even more profound than in other regions, on corporate investment in ASEAN countries. However, at present, there is no research to elucidate the specific impact of trade policy uncertainty on investment activities in enterprises in this region. Therefore, the authors postulate the following hypothesis to clarify the relationship between uncertainty in trade and investment policies of enterprises.

H1: Uncertainty in trade policy reduces firms' investment.

3. Methodology

3.1. Model

To investigate the relationship between TPU and investment of five developing countries in ASEAN, we use the following regression model from Lewellen & Lewellen (2016), Doring et al (2019):

$$INV_{i,t} = \gamma_0 + INV_{i,t-1} + TPU_{i,t} + CF_{i,t} + STDEBT_{i,t} + LTDEBT_{i,t} + YEAR_{it} + INDUSTRY_{it} + COUNTRY_{it} + \varepsilon_{i,t} \quad (3.1)$$

Here, *i* indexes firms and t indexes fiscal years. For each firm *i, the* investment variable (*INV*) is measured as the actual budget of non-current assets in the 12 months of the firm's fiscal year *t* (Lewellen and Lewellen, 2016). According to Eberly, J., Rebelo, S., & Vincent, N. (2012), the lag of investment plays an important role in current firm investment and helps empirical results be more accurate than the combination of cash flow and Tobin's Q. So, the lag of investment variable is added in this study with the scale of one-year lag. Trade Policy Uncertainty (*TPU*) is suggested by Handley, K., & Limão, N. (2015). We use three control variables include Short - Term Debt (*STDEBT*), Long

- Term Debt (*LTDEBT*) and Cash Flow (*CF*) (Doring, S., Drobetz *et al.,* 2018; Lewellen, J., & Lewellen, K., 2016). In all specifications, we control for industry, time and country fixed effects. the inclusion of these fixed effects is to ensure that our results are not driven by differences in industry, time and country characteristics.

To estimate and prove the research hypotheses, the regression model we use is the Generalized Method of Moment (GMM), which is especially suitable for the lag variable in the model.

3.2. Measuring Trade Policy Uncertainty

TPU was estimated by volatility for Tariff rates (Handley, K., & Limão, N., 2015). We use the value of Tariffs of five countries from 2000 to 2021. More specifically, volatility in Tariff is variance calculation, following:

$$\boldsymbol{TPU_i} = \frac{\Sigma(\chi - \mu) * 2\blacksquare}{N} \quad (3.2)$$

where *i* denotes time periods with *i* = 1, ..., N; χ_i is the tariff value; μ is tariff average and; *N* is the number of year observation. For this study, we use a one-year variance tariff for TPU1 and similarly a two-year variance for TPU2.

3.3. Sample and data

Panel data drawn from five countries in ASEAN from the period 2000 - 2021, were collected from Refinitiv Eikon's database. We remove omitted observations with net assets, stock return, financial companies and 50% company has minimum net assets công ty có tài sản ròng nhỏ nhất. Observations with missing values and countries out of the research scale are also excluded due to insufficient data to calculate essential variables or stages in the research even if those comply with primary conditions. According to NZM Sidek et al (2022), this period is suitable for exploring the impacts of TPU on investment because TPU of economic's countries has a larger upward trend than in past years, especially after the impact lingered of COVID - 19 pandemic. These screening criteria yield a final full sample of 61,890 firm-year observations.

4. Results and discussion

4.1. Descriptive statistics results

Table 4.1 shows the descriptive results of 6 variables, which include the value of the number of observations, the mean value, the standard deviation, and the minimum and maximum values from listed companies in many fields of the company. ASEAN-5 in the period 2000 - 2021.

Table 4.1. Statistical results describe the variables

Variable name	Number of observations	Average value	Standard deviation	Minimum value	Maximum value
Investment					
INV	270.04	0.24	0.21	0.00	00.99

Variable name	Number of observations	Average value	Standard deviation	Minimum value	Maximum value
Trade Policy Uncertainty					
TPU1	342.76	0.89	2.25	0.00	10.17
TPU2	413.74	1.12	2.10	0.00	13.00
Control variable					
STDEBT	482.39	0.16	0.19	0.00	0.99
LTDEBT	484.76	0.13	0.18	0.00	0.99
CF	336.80	-0.11	0.53	0.00	8.14

Source: Author's calculation

Table 4.1 shows the results of descriptive statistics of the variables used in the model. In which: INV measures the influence of trade policy uncertainty on investment decisions in year t of each enterprise; TPU1, and TPU2 measure trade policy uncertainty by tariff volatility with a tariff variance of 1 year and 2 years, respectively; cash flow (CF) is calculated as gross profit, total depreciation and cash flows for other activities of the business; short-term debt (STDEBT) is calculated as total short-term debt to total assets of the enterprise; Long-term debt (LTDEBT) is calculated as total long-term debt to total assets of the business.

Based on Table 4.1, the dependent variable INV is a representative variable for the investment decision of the enterprise and the investment rate of the enterprise is 24%. With a standard deviation of about 0.22, in general, listed companies in ASEAN countries have quite similar investment levels. Prominent economic events in the world in the period from 2014 to 2017 such as the West's imposition of sanctions on Russia (2014) or Brexit (2017) will affect trade policy, in line with the results. Research results of Handley and Limão (2012). In addition, the magnitude of the difference between the minimum value (0.00) and the maximum value (0.99) is very large. This difference is due to the fact that investment decisions are also influenced by many country-specific factors, the business industry of the enterprise as well as the impact of time.

The dependent variable TPU1 is an inverse measure between trade policy uncertainty and firms' investment decisions (INV). Therefore, the smaller the TPU1, the less volatile the INV and vice versa. The negative relationship between the uncertainty of trade policy and investment decision along with the calculation results of the authors, TPU1 has an average value of 0.89, equivalent to the volatility of tariffs with a 1-year tariff variance on investment reaching approximately 89%. This proves that uncertainty in trade policy is increasing and has a significant impact on the international investment decisions of enterprises. Besides, with a tariff variance of 2 years of tariff volatility, the TPU2 variable also gives negative results for corporate investment. According to descriptive statistics, more than 112% of the above fluctuations are affecting investment in the whole economy. The evidence is that,

according to Handley and Limão (2012), policy instability can significantly influence firm-level investment and entry decisions in the context of international trade. In a closer study, Caldara et al (2020) showed the negative effect of trade policy uncertainty on investment.

Table 4.2. The correlation coefficient matrix

	Investment	**L.**	**TPU1**	**TPU2**	**STDEBT**	**LTDEBT**	**CF**
Investment	1.0000						
L1 .	0.8618	1.0000					
TPU1	-0.0139	-0.0064	1.0000				
TPU2	-0.0194	-0.0104	0.7401	1.0000			
STDEBT	0.0253	0.0124	-0.0039	-0.0045	1.0000		
LTDEBT	0.0073	0.0089	-0.0021	-0.0053	0.0982	1.0000	
CF	-0.0549	-0.0332	0.0046	0.0059	-0.9685	-0.0195	1.0000

Source: Author's calculation

Table 4.2 shows the correlation coefficient matrix between the variables used in the model. In which: INV measures the influence of trade policy uncertainty on investment decisions in year t of each enterprise; TPU1, and TPU2 measure trade policy uncertainty by tariff volatility with a tariff variance of 1 year and 2 years, respectively; cash flow (CF) is the flow of cash or other cash equivalents within a business; short-term debt (STDEBT) is a debt that an enterprise must pay with a term of less than 1 year; Long-term debt (LTDEBT) is the debt that an enterprise must pay with a period of more than 1 year or in the normal operating period, provided that there are many production and business cycles.

Table 4.2 shows the correlation coefficient matrix between the variables used in the model. From the results of the correlation coefficient matrix, it shows that the Pearson correlation coefficient between the pairs of variables is less than 0.7. Therefore, it is possible to define a research model that does not have multicollinearity. Besides, the Pearson correlation results also play a role in predicting the correlation of the regression results. The pair of variables TPU1 and Investment give a negative sign, which means that when uncertainty increases, firms will limit investment.

4.2. Estimation Results

The results of the study are presented in the table 4.3 below. From the results obtained from the GMM model, it is evident that the variable TPU1 exhibits a negative correlation with Investment, with a coefficient of -0.00581 and a p-value of $0.045 < 0.05$. Additionally, TPU2 also yields results with correlation coefficients and p-values of -0.0271 and 0.000, respectively. This indicates that TPU has a negative correlation with corporate investment in the ASEAN countries. This finding is consistent with the results of numerous previous experimental studies such as those conducted by

Caldara (2020), Sudsawasd (2006), and Handley et al. (2015). Accordingly, an increase in TPU leads to companies tending to retain capital, reducing financial investment activities, and focusing more on internal research and development activities. This has affirmed the hypothesis put forth by our article.

Table 4.3. The Impact of TPU on Corporate Investment

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
L.INV	0.347***	0.717***	0.934***	0.949***	0.350***	0.354***	0.574***	0.571***
	(0.0281)	*(0.0297)*	*(0.00591)*	*(0.00531)*	*(0.007)*	*(0.006)*	*(0.006)*	*(0.005)*
TPU1	-0.00581**		-0.00334***		-0.000		-0.001**	
	(0.00290)		*(0.00112)*		*(0.001)*		*(0.001)*	
TPU2		-0.0271***		-0.00385***		-0.001***		-0.002***
		(0.00420)		*(0.00104)*		*(0.001)*		*(0.001)*
STDEBT	-0.131***	-0.121***	-0.00950***	-0.00913***	-0.004	-0.005*	-0.006**	-0.007**
	(0.0204)	*(0.0248)*	*(0.00160)*	*(0.00153)*	*(0.003)*	*(0.003)*	*(0.003)*	*(0.003)*
LTDEBT	-0.408***	-0.370***	-0.00468	-0.00910	-0.074***	-0.072***	-0.049***	-0.048***
	(0.0497)	*(0.0601)*	*(0.00601)*	*(0.00565)*	*(0.006)*	*(0.005)*	*(0.005)*	*(0.004)*
CF	-0.115***	-0.106***	-0.00895***	-0.00862***	-0.193***	-0.194***	-0.186***	-0.185***
	(0.0177)	*(0.0215)*	*(0.00140)*	*(0.00134)*	*(0.005)*	*(0.004)*	*(0.004)*	*(0.003)*
Intercept	2.938	-7.769*	0.0479***	0.0397***	0.147***	0.147***	0.144***	0.138***
	(3.910)	*(4.237)*	*(0.0137)*	*(0.0126)*	*(0.005)*	*(0.005)*	*(0.009)*	*(0.008)*
Observations	14,755	17,002	14,755	17,002	13,863	15,964	13,863	15,964
R^2			0.676	0.698	0.372	0.377		
Countries							YES	YES
Fields							YES	YES
Year							YES	YES
No. of year	21	21	21	21	21	21	21	21

Source: Authors' calculation

Table 4.3 presents a synthesis of estimation results of Model 3.1. In this table, TPU1 represents TPU with TPU1, and TPU2 represents TPU with TPU2. These values are calculated based on data involving customs duty values for each year across five countries within the period of 2000 - 2021. Additionally, CF denotes Cash Flow, STDEBT refers to short-term debt, and LTDEBT signifies long-term debt. P-values are displayed within parentheses, while symbols (), (), and () indicate statistical significance levels of 10%, 5%, and 1% respectively.

As TPU levels increase, various factors contribute to corporations adopting a more cautious approach or delaying investments. Such reasons include an unstable and risky investment environment, the irreversible nature of investments, significant investment profitability disruptions, elevated value of "call options," abrupt surges in credit risks, and more. Particularly considering the context of Southeast Asian countries, factors like the COVID-19 pandemic, the Russia-Ukraine conflict, and global economic recessions have impacted the policies of ASEAN authorities. This is reflected through changes in anti-dumping laws, sanctions against Russia, and other tariff policies designed to counteract market negatives, such as sharp energy price hikes or supply chain disruptions. Rüland (2010) notes that ASEAN enterprises tend to be more influenced by unsettled trade policies due to their comparatively lower institutional quality, lack of synchronization, weaker integration, and fewer linkages compared to other regions.

Moreover, regression results of the other control variables reveal that, when employing TPU1, the regression coefficient of the variable STDEBT is -0.131 with a corresponding P-value of 0.000. Furthermore, the regression coefficients of the variables LTDEBT (long-term debt) and CF (Cash Flow) are -0.408 and -0.115 respectively, both with P-values of 0.000. Similarly, when considering TPU2, the correlation coefficients of the control variables STDEBT, LTDEBT, and CF are -0.121, -0.370, and -0.106 respectively, all with a P-value of 0.000. Therefore, all control variables are statistically significant and exhibit a negative correlation with investment. This model suggests that, fundamentally, as short-term debt, long-term debt, or cash flow increase, enterprises are inclined to decrease investment, becoming more cautious to prevent losses.

Additionally, the authors employed the Ordinary Least Squares (OLS), Fixed Effects Model (FEM), and Random Effects Model (REM) to reevaluate the relationship between TPU and corporate investment. Specifically, using the OLS regression method, for TPU1, the correlation coefficient is -0.00334 with statistical significance at $p<0.01$, and for TPU2, the correlation coefficient is -0.00385, also statistically significant at $p<0.01$. Furthermore, variables STDEBT and CF exhibit statistical significance with coefficients of -0.00950 and -0.00895 for TPU1, and -0.00913 and -0.00862 for TPU2, respectively, reinforcing the GMM results that short-term debt and cash flow have negative correlations with corporate investment. However, the OLS model differs from the GMM model regarding the statistical insignificance of the LTDEBT variable, highlighting some limitations related to endogeneity. Therefore, the OLS model is employed to verify the results for hypotheses.

Furthermore, in the Fixed Effects Model (FEM) results, the TPU1 variable displays a correlation coefficient of -0.000 and lacks statistical significance, hence temporarily disregarded. However, the TPU2 variable shows a correlation coefficient of -0.001, statistically significant at $p<0.01$. Control variables STDEBT and CF are also statistically significant with coefficients of -0.004 and -0.193 for TPU1, and -0.005 and -0.194 for TPU2, reinforcing the negative correlation between short-term debt, cash flow, and corporate investment, consistent with GMM findings. Nevertheless, a distinction

between FEM and GMM lies in the insignificance of the STDEBT variable in FEM, indicating that short-term debt might not necessarily impact corporate investment in Southeast Asian countries. Overall, the FEM results align reasonably well with the authors' hypotheses and do not substantially deviate from GMM results. However, FEM still carries limitations, such as its inability to accurately measure time-invariant unobserved factors and an increased potential for multicollinearity.

Finally, considering the Random Effects Model (REM) regression results, the TPU1 variable exhibits a correlation coefficient of -0.001 with statistical significance at $p<0.05$. Similarly, the TPU2 variable has a correlation coefficient of -0.002 and is statistically significant at $p<0.01$. Moreover, control variables STDEBT and CF have significant coefficients of -0.006 and -0.186 for TPU1, and -0.007 and -0.185 for TPU2. This reaffirms the inverse relationship. However, the key difference between the REM and GMM models lies in the REM's lower significance level for the STDEBT coefficient. Overall, the REM method yields improved results compared to OLS and FEM methods, but still grapples with the challenge of addressing changing error variance, leading the authors to apply REM to corroborate the hypotheses.

5. Conclusion

By using the GMM method to analyze the relationship between policy uncertainty in international trade and investment decisions of ASEAN-5 listed companies, the authors found important evidence that uncertainty in trade policy is negatively correlated with business investment in countries. This uncertainty can significantly affect the investment and entry decisions of businesses in the context of international trade, both in the short and long term.

This research result implies that governments of countries should issue more supportive policies for small and medium-sized enterprises to continue to survive in the market when changes are beyond their control. At the same time, it is also a basis for the government to make decisions related to preferential tariff programs, temporary trade bans, and economic sanctions. In addition, the results suggest that businesses should adopt new technologies, new trends prevalent in the economy, and prioritize the use of internal financial resources, optimizing loans to minimize the profound impacts of uncertainty in trade policy.

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