

## THE IMPACT OF ECONOMIC POLICY UNCERTAINTY ON CORPORATE FINANCIAL PERFORMANCE: AN EMPIRICAL ANALYSIS OF VIETNAMESE LISTED COMPANIES

VAN-THI DAO<sup>1</sup>, MANH-TRUNG PHUNG<sup>1,\*</sup>, KHAC THANH MAI<sup>1</sup> AND SON-TUNG LE<sup>2</sup>

<sup>1</sup>Faculty of Financial Management

<sup>2</sup>Faculty of Maritime Business

Vietnam Maritime University

484 Lach Tray Street, Hai Phong City 182582, Vietnam

{ daovanthi; mkthanh; lesontung }@vimaru.edu.vn

\*Corresponding author: pmtrung@vimaru.edu.vn

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**ABSTRACT.** *Economic policy is a set of guidelines and actions on a specific aspect of Government, including the Government's goals and how to achieve them. To develop the economy stably, the State must regularly issue economic policies. However, the approach is historical; that is, it is only relevant in a certain period, and when it is outdated, the policy needs to be replaced. At the same time, in operating the economy, the State also needs to have short-term policies to regulate groups of objects frequently fluctuating, such as exchange rate policies, and interest rate policies. Policy changes will have an impact on the target group it is targeting. One of the subjects directly affected is businesses. Changes in economic policy will affect the dynamics of enterprises, thereby affecting financial performance. This study aims to quantify Vietnam's economic policy uncertainty indicator for the period 2014-2019, and then, determines its impact on corporate financial performance. The study has provided scientific evidence that economic policy uncertainty has a negative effect on financial performance from the point of view of book-keeping (ROA). However, there is no significant effect on financial performance from a market perspective (TBQ).*

**Keywords:** Economic policy, Economic Policy Uncertainty (EPU), Corporate Financial Performance (CFP), Return on Assets (ROA), Tobin's Q

**1. Introduction.** Governments establish many regulations and policies to guide businesses' operations. Some rules, like minimum wages, are mandatory, while other policies can affect enterprises indirectly. Companies, regardless of the economic scale, need to be flexible enough to react to any sensitive shift in regulations or policies. For instant, a change in taxation policy may directly orient the investment in a particular sector, and therefore, its growth. Apparently, a policy formulated in a politically stable country may be different from one drafted in an unstable country. A stable political system can make business-friendly decisions, promote local businesses, and attract foreign investors. In contrast, an unstable political system presents challenges that jeopardize the power of the Government. This adversely affects the business environment and involves business activities. Thus, in managing and operating the economy, one of the most significant purposes of any State is to stabilize and sustainably develop the economy through promulgating different policies. However, policies are historical, that are only relevant for a certain period. When they are no longer appropriate for practice, discarding or replacement is necessary.

One of the serious problems with Vietnamese enterprises is forecasting and managing systematic risks. According to a report conducted by the Vietnam Chamber of Commerce and Industry (VCCI), there tends to be a continuous decrease in the ability of enterprises to predict policy changes. Specifically, the proportion of enterprises that said they always/frequently predicted a policy change decreased from 16% in 2014 to 5% in 2018. Meanwhile, the proportion of the ones who have rarely or never ever done any policy content is rising from 42% in 2014 to 67% in 2018. This fact raises a big challenge for the sustainable development of Vietnam's economy because EPU has been evidenced as a type of systematic risk that is quite difficult to control.

In order to emphasize the importance of EPU in the context of sustainable development, this paper proposes an approach to identifying and measuring this index in Vietnam. We then empirically analyze whether this index affects the financial performance of selected Vietnamese enterprises. To the extent of our knowledge, there has been no research that could ever quantify the EPU index for an emerging economy like Vietnam. This paper, therefore, will shed light on the theory of measuring EPU and the literature on the nexus between this factor and financial performance. More importantly, this paper encourages firms in the emerging economy to raise awareness of the role of EPU in the business' operation.

The rest of the paper is organized as follows. Section 2 briefly reviews studies related to CFP and EPU and their relation. Section 3 illustrates the conceptual model and how the research hypothesis developed. Empirical results and implications are then discussed in Section 4. Finally, some concluding remarks are conducted in Section 5.

**2. Literature Review.** Researches on corporate finance diversifies into many branches. While some scholars concentrate on the impact of factors on corporate financialization [1], others prefer to invest the corporate financial performance (for example, see [2] for a comprehensive review of women on corporate boards and corporate financial and non-financial performance). Recently, researchers measured firms' performance from three different angles: technical efficiency, profitability, growth scale, and market-based value [3]. In this study, we define financial efficiency from two angles: book value and market price.

From an accounting perspective, financial performance is measured by the difference between input and output results, in which outputs can include net income, revenue, net profit, and interest. Input factors include short-term assets, long-term assets, capital, investment capital, and owner's equity. Yoshikawa and Phan [4] advocated the use of some basic indicators, such as ROA (Return on Assets), ROE (Return on Equity), and ROS (Return on Sales) because these variables are less likely to be manipulated and are the most widely accepted indicators. Nonetheless, the limitation of accounting-based measures derives from the fact that they capture only historical data and may be skewed by different management perceptions or accounting procedures used by different companies [5]. From another perspective, market-based value adopts some market indices, such as market capitalization, stock price growth to represent a company's performance. These indices outperform those of accounting from two aspects. First, they could avoid some accounting limitations due to the fact that they reveal future factors and focus on market efficiencies [5]. Secondly, the use of market-based measures shows investors' assessment of a firm's financial performance, and therefore, is more appropriate [6].

Economic policy refers to the actions that governments take in the economic sphere. It includes government budget, interest rate setting systems, labor markets, national property rights, and many other areas of government intervention in the economy. These policies aim to achieve four primary goals: stabilizing markets, promoting economic prosperity, ensuring business development, and promoting jobs. However, there always exists economic risk in which the future path of government policy is uncertain. This may increase the risk premium and cause businesses and individuals to delay spending and investment.

Exploring economic policy uncertainty and its impact has always been an attractive topic in academia. Most previous studies distinguish them into two dimensions: economic uncertainty and policy uncertainty. While the former mainly focuses on the impact on macroeconomics, the latter pays more attention to the adverse aspects of macroeconomic control and regulation policies and the direct effects of the inherent instability inside these government policies.

Although the concept of economic policy uncertainty has been debated for decades, it is still relatively abstract with no authoritative definition. The degree of uncertainty in economic policy is difficult to observe directly. There are currently two main methods, namely, the fact-finding method and the indicator method, which are employed to determine the uncertainty of an economic policy. While the former can only study the impact of a particular event and cannot guarantee continuity, the latter faces difficulties related to the reliability of indicators.

Fortunately, the Economic Policy Uncertainty Index compiled by Baker et al. [7] can effectively reflect major economic and policy uncertainties and is widely recognized by the academic community. This index includes major world economies such as the United States, Europe, and China. Changes in the economic development of these countries and the uncertainty of economic policies can have global implications. To construct an overall index for policy-related economic uncertainty, the first normalized each component by its standard deviation from January 2012. After that, the mean of the elements is calculated, using a weight of 1/2 on the study's broad news-based policy uncertainty index and 1/6 on each of the three other measures of the study (tax expiration index, CPI forecast disagreement index, and federal/state/local purchasing disagreement measure).

The standard algorithm consists of four parts. The first is the news index, used to search media such as newspapers and magazines in a country or region. The number of news reports regarding quantified policy uncertainty; the second is an index of tax law effectiveness, which based on reference to government reports, reasonably infers the number of laws that will expire in the future, and weights them; The Economic Forecast Disparity Index is divided into two parts, CPI and government spending. It is mainly based on the predicted values of such important economic indicators by several authoritative forecasting organizations, and the difference is calculated as the agent of the uncertainty variable. The way this indicator of economic policy uncertainty is calculated varies slightly from country to country, but overall, it is an authoritative and representative measure.

**3. Conceptual Model and Hypothesis Development.** Enterprises cannot control or change the factors of the macro environment. Elements in the macro-environment bring new opportunities as well as challenges for businesses. Instead, firms must find ways to adapt to their environment to survive and sustainably develop. One of those macro factors is the legal environment. This environment is made up of by-laws, government agencies, and pressure groups that influence and bind all organizations and individuals in society. The system of Laws, Ordinances, and Decrees regulates enterprises' business behavior, exchange, and commercial relations. These laws stipulate the rights and obligations, permitted business areas, etc., of enterprises.

The negative impact of uncertainty on economic activity is well documented. Gulen and Ion [8] concluded that, regardless well-developed or developing countries, uncertainty reduces capital investment and productivity. Regarding the relation between firms' market-based performance and uncertainty, Pástor and Veronesi [9] found a negative impact of high-level policy uncertainty, for instant, lower stock prices or returns, and higher volatility/risk. Liu and Ma [10] stated that the increased uncertainty of China's economic policies will reduce the liquidity of stock market. Based on the above arguments, the authors propose the following research hypothesis, "Unstable economic policy has a negative impact on the financial performance of Vietnamese listed companies". To examine the

hypothesis, we utilize a panel-data regression model as the following:

$$CFP_{jt} = \beta_0 + \beta_1 EPU_t + \beta_2 LEV_{jt} + \beta_3 SIZE_{jt} + \beta_4 INDUS_j \\ + \beta_5 AGE_{jt} + \beta_6 EXC_{jt} + \varepsilon_{jt}$$

in which

$CFP_{jt}$ : Financial performance of enterprise  $j$  in year  $t$

$EPU_t$ : Unstable economic policy year  $t$

$LEV_{jt}$ : Corporate debt ratio  $j$  in year  $t$

$SIZE_{jt}$ : Size of firm  $j$  in year  $t$

$INDUS_j$ : Industry of firm  $j$  (dummy variable)

$AGE_{jt}$ : Listing period of the company  $j$  in year  $t$

$EXC_{jt}$ : Stock Exchange location (dummy variable)

$\varepsilon_{jt}$ : The model errors

In this paper, dependent variable, financial performance, is measured by two indicators, ROA (Return on Assets) and TBQ (Tobin's Q). ROA shows how much profit an average dollar of assets generates. This is a very basic financial indicator to determine the financial performance of the business. On the other hand, Tobin's Q (TBQ), which was first proposed in 1969 by James Tobin [12], explains financial performance from market perspective. For instance, Thoma [11] utilized this indicator to explore the market valuation of a firm's intangible assets in U.S. during the period 1991-2015. This indicator is generally determined by the ratio between a company's market capitalizations to its accounting value. If the TBQ value is greater than 1, then the value generated by the business is greater than the cost of the investment asset and vice versa. Thus, the larger the TBQ is, the better a firm performs. To sum up, while the first indicates derived from financial accounting perspective, the latter illustrates market value performance.

The main explanatory variable in the model is economic policy uncertainty. Currently, in Vietnam, there is no ranking or evaluation of the unstable economic policy index. However, based on the study of Baker et al. [7], we can completely determine this indicator. Due to the cultural and political similarities, we apply the method that was used to calculate EPU in China.

In detail, we use the English version of Vietnam News (VNN), a bilingual newspaper in both English and Vietnamese, as a basis for measuring EPU for Vietnam. Because this is an electronic-newspaper with general content that spreads to all areas of economic and social life, the determination of the frequency of word-occurrences related to economic policy will be more accurate than economic or other specialized newspapers. To measure economic policy uncertainty for Vietnam, the study proceeds through five steps. First, we use software to mark all articles with the following terms: {Vietnam, Vietnamese}; {economy, economic} and {uncertain, uncertainty}. Second, filter out policy-related articles. In detail, the articles should mention contents related to policies, spending, budget, politics, interest rates, reform, Government, authorities, tax, regulation/regulatory, Central bank, State bank of Vietnam, deficit or WTO. Third, divide the number of articles of step 2 related to unstable economic policy by the total number of articles in the corresponding month. Fourth, normalize the resulting series by a factor such that the mean of the value series is equal to 100. Fifth, taking the average value of the EPU of 12 months will calculate the EPU of the corresponding year.

To increase the explanatory power of the model, we also adopt some control variables, including (1) Financial leverage –  $LEV$ , (2) Firm size –  $SIZE$ , (3) Firm's operating industry –  $INDUS$ , (4) Number of years of listing –  $AGE$ , and (5) Stock exchange location –  $EXC$ .

4. **Results and Discussions.** Table 1 presents some basic characteristics of the variables using the research model<sup>1</sup>.

TABLE 1. Statistical description of variables in the model

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	1923	0.055	0.100	-0.517	2.512
TBQ	1923	1.330	4.945	0.002	158.620
EPU	1923	103.595	21.519	59.862	126.651
LEV	1923	0.542	2.169	0.000	73.815
SIZE	1923	3.216	1.887	-1.729	11.785
INDUS	1923	0.940	0.237	0.000	1.000
AGE	1923	8.793	3.816	1.000	20.000
EXC	1923	0.361	0.481	0.000	1.000

Our sample is collected from firms that are listed in two Stock Exchange in Vietnam (that are HNX and HOSE). The number of observations is 1923 including more than 400 enterprises during the five-year period from 2014 to 2019. The statistical description of variables is presented as in Table 1. The minimum values of some variables of 0 such as LEV show that the business does not use loans, the industry variable (INDUS) and the exchange (EXC) has a value of 0 due to the way dummy variables are set.

We first run regression, in which ROA is treated as dependent variable. The result is shown in Table 2.

TABLE 2. Ordinary least squares (OLS) regression analysis

	ROA				TBQ			
	Coef.	Std. Err.	t	p > t	Coef.	Std. Err.	t	p > t
CONS	0.1081	0.0149	7.2400	0.0000	0.3343	0.6430	0.5200	0.6030
EPU	-0.0006	0.0001	-5.5800	0.0000	0.0031	0.0046	0.6800	0.4960
LEV	0.0186	0.0010	19.5800	0.0000	1.4058	0.0410	34.3100	0.0000
SIZE	-0.0022	0.0011	-1.9000	0.0570	-0.0606	0.0487	-1.2500	0.2130
INDUS	0.0169	0.0088	1.9200	0.0550	0.1914	0.3778	0.5100	0.6120
AGE	-0.0005	0.0005	-0.9700	0.3320	0.0053	0.0234	0.2200	0.8220
EXC	-0.0138	0.0047	-2.9600	0.0030	-0.3414	0.2006	-1.700	0.0890
	Obs. = 1923				Obs. = 1923			
	F-Statistic = 74.24				F-Statistic = 200.06			
	Adj. R <sup>2</sup> = 0.1861				Adj. R <sup>2</sup> = 0.3832			

Table 2 shows that the unstable economic policy variable has a negative relation with ROA at 0.1% significant level. This indicates that when the unstable economic policy changes, it will negatively affect financial performance from the perspective of accounting books. Regarding control variables, while LEV and INDUS have significantly positive relations with ROA, the two variables – SIZE and EXC have negative impacts on financial performance. Only AGE has small and insignificant impact on ROA. Regarding market-based performance, in the studied period, only LEV has a significantly positive relationship with TBQ, while other variables have either negative (EXC) or insignificant (EPU, SIZE, INDUS, AGE) impacts on TBQ. The results suggest that unstable economic policy will negatively drive down the accounting financial performance (ROA) of listed firms in Vietnam. That is, the possibility of economic policies change is a bad signal

<sup>1</sup>Before processing the regression, we conducted series of data diagnostics, such as test of multicollinearity, autocorrelation. The results of these tests are not presented to save space but can provide upon request.

for the performance of Vietnamese companies from the perspective of accounting books. However, this phenomenon does not exist when TBQ is considered as dependent variable. The financial performance based on the market price of the joint-stock company is not affected by the change in policy. These results are similar to the correlation coefficients between the variables estimated.

In addition to OLS, two prominent techniques for processing panel data are the fixed-effects model (FEM) and the random-effects model (REM).

The results of Table 3 are basically similar to those in the OLS model. To determine which of the FEM and REM models is more appropriate, it is suggested to perform the Hausman test. The results show that, at 0.1% significant level, we can reject the hypothesis that the difference in the coefficients is not systematic. This advocates the use of the FEM model in our case.

TABLE 3. Fixed-effects and random-effects model (ROA as dependent variable)

	FEM				REM			
	Coef.	Std. Err.	t	p > t	Coef.	Std. Err.	z	p > z
CONS	0.1094	0.0165	6.6300	0.0000	0.0933	0.0139	6.7300	0.0000
EPU	-0.0003	0.0001	-2.3100	0.0210	-0.0004	0.0001	-5.0900	0.0000
LEV	0.0071	0.0011	6.4000	0.0000	0.0163	0.0009	18.6600	0.0000
SIZE	0.0038	0.0011	3.3700	0.0010	0.0017	0.0010	1.6400	0.1010
INDUS	-0.0057	0.0135	-0.4300	0.6700	0.0064	0.0103	0.6200	0.5370
AGE	-0.0034	0.0020	-1.7500	0.0810	-0.0012	0.0007	-1.6200	0.1060
EXC	-0.0120	0.0033	-3.7000	0.0000	-0.0126	0.0033	-3.8200	0.0000

We continue by analyzing the effect of factors toward TBQ. Table 4 shows the result of two panel-data regressions. In this case, the p-value of the Hausman test (0.906) indicates that there may exist a systematical difference in the coefficients of independent variables. That means, REM model is more suitable than the FEM model when TBQ is the dependent variable. Meanwhile, the F test shows that FEM is more suitable than OLS. Therefore, the study also uses Breusch and Pagan Lagrangian multiplier test (also known as LM test) to select a suitable model between OLS and REM. Interestingly, the p-value of this test (1.000) advocates the use of OLS. Therefore, we conclude that when TBQ is the dependent variable, OLS model is the best choice.

TABLE 4. Fixed-effects and random-effects model (TBQ as dependent variable)

	FEM				REM			
	Coef.	Std. Err.	t	p > t	Coef.	Std. Err.	z	p > z
CONS	0.9010	0.9382	0.9600	0.3370	0.5321	0.6697	0.7900	0.4270
EPU	0.0022	0.0071	0.3000	0.7610	0.0033	0.0043	0.7600	0.4450
LEV	1.3708	0.0629	21.7800	0.0000	1.4069	0.0417	33.7200	0.0000
SIZE	-0.1293	0.0640	-2.0200	0.0440	-0.0890	0.0512	-1.7400	0.0820
INDUS	-0.0615	0.7654	-0.0800	0.9360	0.0908	0.4711	0.1900	0.8470
AGE	0.0091	0.1120	0.0800	0.9350	0.0029	0.0303	0.1000	0.9230
EXC	-0.3998	0.1849	-2.1600	0.0310	-0.3803	0.1735	-2.1900	0.0280

**5. Conclusion Remark.** This study analyzes the relationship between unstable economic policy and the financial performance of Vietnamese listed companies from 2014 to 2019. Our research contributes to the literature in both theoretical and practical aspects. Firstly, the paper synthesizes basic theories of unstable economic policies and financial performance. Based on that, this is one of the very first studies that successfully quantified

Vietnam's unstable economic policy. Secondly, our regression results provide empirical evidence that unstable economic policy impacts firms' performance indicators differently. That is, while more unstable economic policies drive down the return on assets (ROA), the market-perspective performance (Tobin's Q) seems to be unaffected.

Besides the contributions, some limitations still exist that may suggest future research directions. First, the use of two criteria, ROA and TBQ, to represent the financial performance variable is not necessarily abundant and representative. Second, the determination of unstable economic policy indicators is only measured within the scope of Vietnamnews, so the evaluation results of unstable economic policy indicators are not comprehensive and diverse. Third, the research period is quite short. While the impact of economic policies has a years-lag effect on the economy, our data sample does not allow us to explore this phenomenon deeply.

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