Economic Factors Affecting The Financial Stability of The Family Business in Thailand

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Abstract

Global uncertainty is a time when unexpected events occur that have a negative impact on a company. Unforeseen world situations lead to economic disaster. Therefore, decisions must be made quickly, correctly, and appropriately so as not to affect the entire operation of the organization. This is a clear action to reduce negative impacts. A crisis is an event that can destroy a company, its employees, its products, and its services. and the company's financial health, such as the spread of the coronavirus. Serious financial conditions can result from an economic disaster that is not managed. Events that have wide-ranging social impacts are considered crises. The financial reputation of commercial companies may be permanently damaged by this crisis. For this reason, this study aims to examine whether economic factors affect the financial stability of family businesses. Structural equation modeling techniques were used to analyze the data. There are more than 269 family companies listed on the Thai Stock Exchange. (Stock Exchange of Thailand: SET) Research results show the financial impact of Thai family businesses on business factors.

The global economy is important in the current economic crisis. As a result, preparing to deal with both negative and positive economic situations may be related to and affect the ability of family businesses to maintain financial stability amid global economic instability. This study examines the financial stability of family businesses by selecting key factors including net profit margin (NPF), return on assets (ROA), and return on equity (ROE) in an unstable economy in Thailand. In the Stock Exchange of Thailand by the study of economic factors and financial stability of family businesses in Thailand. The empirical results using the Panel Regression Model and Robustness Tests exhibit that P>[z] and sectoral indices have a relationship and effect in the short term, and the coefficients in the period of t-1 are significantly positive and negative at the statistical

significance at the 0.01, 0.05 and 0.10 level. In the long term have a relationship and effect with Banking, Finance, Economics and Business.

Introduction

The world is changing on many levels, which leads to economic instability. No matter how the pandemic or the financial crisis impacts the company's capacity to maintain its financial stability. Economic expansion slows the economy and has a detrimental impact on the environment. because of damage international difficulty Conflicts, resource scarcity, environmental degradation, and unprecedented levels of fragmentation are a few of these. The COVID-19 epidemic has further intensified intergovernmental fiscal difficulties. Threatening Recent Profits Growing systemic dangers exacerbate these difficulties. as well as trade conflicts that raise debt levels. Make the efficiency of monetary policy a weapon for when there are crises and rising inequality both inside and outside the country.

Integrating sustainable economic growth, the issues facing developing nations are numerous and interconnected. Low productivity and global competition are two examples of this. ineffective government expenditures inadequate use of available domestic resources the fiscal system's price distortions makes sustainability difficult. inflexibility in the economy rising amounts of debt unstable trade conditions and the growing risks posed by climate change. Macroeconomics pay attention to changes in economic production and economic efficiency. inflation Balance of payments, interest rates, and currency exchange rates lowering of poverty societal justice Additionally, sound fiscal and monetary policies are the only way to achieve sustained growth.

Studies from Thai family-owned enterprises, which make up more than 70% of the country's publicly traded corporations (The Stock Exchange of Thailand: SET) academic writing The phrase "family business" can be used to refer to standards that prioritize ownership, control, and management. This explains several dimensions (Rosenblatt et al. 1985, Handler 1989). For instance, a family corporation is one whose ownership is held by a single family (John A. Davis, 1982). When two or more family members significantly affecting the company's direction and policies. through leadership posts, property rights, or familial responsibilities, with the goal of passing on strength to the following generation.

Financial performance is a gauge of how well a company can utilize resources from its main line of business and create income. The phrase is also used as a broad indicator of a company's long-term financial stability. Investors may learn a lot about a company's general health from its financial performance. It gives an overview of the company's financial situation and management's performance while also offering a glimpse into the future by indicating if operations and earnings are on track to increase as well as the prognosis for its shares.

A stable financial system can allocate resources effectively, evaluate and manage financial risks, keep employment rates close to the natural rate of the economy, and stop relative price movements of real or financial assets that could jeopardize monetary stability or employment levels. When financial imbalances that develop endogenously or because of substantial unfavorable events are eliminated, a financial system is said to be in a range of stability. When there is instability, the system will mostly absorb shocks through self-corrective mechanisms, preventing negative events from disrupting the real economy or other financial systems. Since most transactions in the real economy take place within the financial system, financial stability is essential for economic growth.

In times of financial instability, when it is absent, the true value of financial stability is best demonstrated. Banks are hesitant to support profitable projects during these times, asset prices deviate significantly from their intrinsic values, and payments may be delayed. Bank robberies, hyperinflation, or a stock market crash can result from significant instability. The confidence in the financial and economic system may be severely shaken. The following are some of the most popular financial performance indicators: 1. Profitability. / 2. Liquidity. / 3. Adequate Capital. This study tries to reflect the adaptability of family companies. Change and build financial stability for business operations in today's volatile and changing world.

Research gap

- The volatility of economic conditions may affect the financial stability of the family business in Thailand.
- Financial Stability of family businesses during the economic downturn.
- Financial Stability of family businesses during economic growth.
- Economic Factors in Thailand affect the financial stability of family businesses.

Research objectives

1) To study the factors of economic conditions that affect the financial stability of family businesses in Thailand.
2) To study the financial stability of family businesses in Thailand during economic uncertainty.
3) To study related factors that affect the financial stability of family businesses in Thailand.

Research questions

- How does economic growth affect the financial stability of Thai family businesses?
- How does GDP affect the financial stability of Thai family businesses?
- How does Inflation Rate affect the financial stability of Thai family businesses?
- How does Interest Rate affect the financial stability of Thai family businesses?
- How does Set Index affect the financial stability of Thai family businesses?

Literature review

In this chapter, the theoretical framework applied in this study is discussed. and relevant past studies the content is divided into 2 groups: theoretical framework and literary framework. It explains the details used as a conceptual framework in this study. The researcher has studied the document and research on this subject and has established a research framework. The details are as follows.

Economic environment

The "economic institutions" groups or economic units and the "institutions," which are household units, make up the economic system. Institutions of social life Production, marketing, finance, banking, investment, and employment make up the economic institutions. which is recognized as a commercial activity Regarding social institutions, they are made up of the labor force and consumers. which is characterized as a consumption pattern the term "economic system" refers to the union of social and economic institutions.

The units that each economy has are referred to as economic units. helps to address issues that develop within that economic system. There are three main types of economic units: An Economic Unit made up of just one person is referred to as a household living alone or sharing a residence with multiple people on the use of resources or financial considerations, there is consensus. to the greatest extent possible for the good and welfare of their group Members of the household may be workers, businesspeople, or owners of the means of production. Therefore, the household unit has a responsibility to use

the proceeds from the sale of production inputs. providing employment and entrepreneurial activity in the consumption of goods and services while also making money from those endeavors. A household member is paid rent if they take the land factors of production to the producers for use. If that participant works for pay, he will receive wages as payment. If the person is an entrepreneur himself, he will also receive compensation in the form of profit from the use of that money in the form of interest.

Gross domestic product (GDP)

Siam Commercial Bank (2021) GDP (Gross Domestic Product) or gross national product is the market value of final goods and services produced in the country over a period. Regardless of whether the output is a product of internal or external resources of the country. It was invented by Russian economist Simon Kuznets. Gross Domestic Product can also be used as an indicator of the standard of living of a country's population. The formula for calculating GDP is as follows:

$$GDP = C + I + G + (X - M)$$

C or Consumption is the value of private consumption and public (Private Consumption), which includes almost all personal expenses such as food, rent, medicine, including the value of a new car. But does not include the value of used cars. And does not include the purchase of new homes.

I or Investment is the value of private investment in capital goods such as the construction of new mines, software purchase of equipment, machinery for factories, etc. Household spending on buying a new house is also included in the

investment but purchases of financial products such as buying stocks or bonds It is not classified as an investment, but as a saving, so it is not included in GDP because it is only a shuffle of legal documents. That money is not converted into goods or services. Therefore, it is not part of the real economy and is classified as a transfer payment.

G or Government Spending is the total government expenditure used to purchase final goods and services. This includes the salaries of civil servants. purchase of military weapons and state investment expenditures It does not include transfers such as social security or unemployment benefits.

X or Export is the export value

M or Import is the import value

The GDP is crucial to the economy. Meaning that people must have jobs and income to spend on goods and services, the economic system must have a turnover of income and expenditures of households, businesses, and governments both domestically and internationally. Pay your taxes to the government, and if you have any extra money (savings), you can invest it in mutual funds and financial institutions, stocks, and other businesses, including the stock market.

The business sector will earn income from the sale of goods and services. By bringing investment (loans) from financial institutions to produce goods and services, pay interest, pay wages, pay for various factors of production, and pay income taxes, VAT to the government.

As for the government sector, there will be various tax revenues. The state will use tax revenues to spend on building public utilities. Encouraging the business sector to have the ability to conduct business and the household sector to spend and save money appropriately. and the results can be measured as "Gross National Product" or GDP. If GDP is positive, it means that the overall economy has grown from the previous year. People are spending more; the government sector and the private sector have increased investment. and the value of exports is higher than imports. This is a good sign, for example, GDP estimates for 2018 are 4.4%, meaning that the overall economy in 2018 grew from 2017 at 4.4%. or not according to the country's central bank's estimation.

It is possible that employment may be lower than expected. Industrial investment fell, government spending was less than expected. Even public consumption has declined. A negative GDP figure will encourage investors to move more money into markets or economies that are more stable and growing.

The Stock Exchange of Thailand (2020) GDP stands for Gross Domestic Product, which is the Gross Domestic Product calculated from the value of final goods and services produced in the country at that time, or simply speaking, GDP is the total economic value that occurs. In the country, if the GDP of Thailand is higher It can mean that there is more income in Thailand. which may come from the spending of people in the country There is an increase in employment The government has invested in various projects, including more tourists spending money in our country, etc. For GDP calculations, only the income generated in the country is counted. If it is the GDP of Thailand, it will count only the income generated.

In summary, GDP (Gross Domestic Product) is the country's gross domestic product. It is derived from calculating the value of final goods and services produced in the country at that time regardless of whether the owner of the factors of production. If doing business in the territory of Thailand, then it must be aggregated into the GDP of Thailand with the formula for calculating GDP = C + I + G + (X-M) derived from C= Consumption of private sector and general public I = Investment means private investment G = Government Spending means government spending and investment and X= Export means value of exports M or Import means value of imports. If GDP is positive, it means that the overall economy is growing. Up from the previous year, if the GDP is negative, it indicates that the country's economy has slowed down.

Inflation rate

Inflation is defined as the increase in the level of the price of goods or services over a period continuously (Wyplosz & Burda 1997, Blanchard 2000, Barro 1997, Abel & Bernanke 1995).

when the price of goods increases So one unit of currency can buy fewer goods and services. Therefore, inflation may be viewed as a reflection of the decrease in purchasing power per unit of currency. or the amount of loss of the intrinsic value of the medium of exchange in the economy (Central Bank of Iceland, Accessed on September 11, 2008.) (Paul H. Walgenbach, Norman E. Dittrich and Ernest I. Hanson, (1973) The method for measuring inflation of goods prices is done by finding the inflation rate. It is calculated from the annual change in the price index as a percentage. Inflation is the opposite of deflation.

Economists generally believe that hyperinflation and hyperinflation are caused by excessive expansion in the money supply (Robert Barro and Vittorio Grilli (1994). However, an increase in the money supply does not necessarily cause inflation. Not always, for example, in the case of a liquidity trap where the central bank's infusion of money into the system does not lead to interest rate cuts by commercial banks due to concerns of adverse events such as deflation, insufficient gross demand or war. People save their money and don't spend or borrow to invest (John Makin, 2010 & Paul Krugman; Gauti Eggertsson, 2013). Low-to-moderate inflation can be caused by fluctuations in real demand for goods and services or can be caused by changes in the supply of goods such as a scarcity of goods (MZM velocity, 2014). However, the consensus of long-term inflation is due to expansion of the money supply faster than the rate of economic growth (Mankiw, 2002 & Abel & Bernanke, 2005).

At present, most economists are in favor of a low, stable inflation rate (Hummel, Jeffrey Rogers, 2007). A positive (rather than zero or negative) decrease will reduce the severity of a recession by helping the labor market to adjust more quickly. Central banks are responsible for reducing inflation (by decreasing the real value of wages) and reducing the risk of liquidity traps that prevent monetary policy from maintaining economic stability (Lars E.O. Svensson, 2003). stable through monetary policy with the setting of the interest rate. Securities trading in the open market or setting the

minimum reserves that commercial banks should have (Taylor Timothy, 2008).

Interest rate

An interest rate is the amount of interest due per period, as a proportion of the amount lent, deposited, or borrowed (called the principal sum). The total interest on an amount lent or borrowed depends on the principal sum, the interest rate, the compounding frequency, and the length of time over which it is lent, deposited, or borrowed.

The interest rate has been characterized as "an index of the preference for a dollar of present [income] over a dollar of future income **(Fisher Irving, 1907).** The borrower wants, or needs, to have money sooner rather than later, and is willing to pay a fee—the interest rate for that privilege.

The interest rate without taking inflation into account is known as the nominal interest rate. For instance, if someone deposits $100 with a bank for a year and earns interest of $10 (before taxes), their amount at the end of the year is $110. (Before tax). In this instance, the nominal interest rate is 10% per year, independent of the rate of inflation (before tax).

Real interest rates calculate the increase in the loan's real value plus interest while taking inflation into account. Real payback of the principal and interest is calculated in comparison to the amount's purchasing power at the time it was borrowed, lent, deposited, or invested.

Set index

It is a composite index which represents the price movement for all common stocks trading on the SET. (The Stock Exchange of Thailand, 2022)

The SET Index calculation is adjusted in line with modifications in the values of stocks resulting from changes in the number of stocks due to various events, e.g., public offerings, exercised warrants, conversions of preferred to common shares, to eliminate all effects other than price movements from the index. The calculation method can be calculated as follows.

- Being a market capitalization-weighted price index.
- Calculated from the prices of all common stocks (including unit trusts of property funds) on the main board.
- Excluded are stocks that have been suspended from trade for more than three months.

Financial stability

Financial stability is the stability of the financial system to act as an intermediary for effective economic activities. and investors only but also includes payment systems, money markets, capital markets, as well as the insurance business. which is a way to manage risks Therefore, a stable financial system is important. Because if there is a lack of stability, it may turn into a financial crisis that severely affects the economy and people's livelihoods, such as the hamburger crisis in the United States in 2008 in which the financial system was unstable due to low interest rates. Overstaying high-risk (subprime) borrowers during low interest rates Until the default on debt payments is greater than expected. This negatively impacted the US economy and continued to affect other countries' economies widely. (Suwannik Supris, Bank of Thailand, 2018)

Family business

(Apisakkul Ekachai, 2018) Family company is viewed as the beginning form of large, medium, and small businesses. Each family's firm will have a variety of various styles in accordance with the cultures of each nation and a global business strategy (Montgomery and Sinclair, 2000). Family business management is therefore a science and art that has Numerous individuals interested in learning as a result, it is discovered that there are numerous definitions of the word "family business."

Center for Family Business Studies The following criteria have been established by the University of the Thai Chamber of Commerce (Apisakkul, 2016) as what constitutes a "family business."

1. The original family.
2. At least one family member is a member of the Board of Directors in positions 1 through 5.
3. A significant portion of the Strategic Shareholder group's shareholders are family members (everyone together) (the term Strategic Shareholder or "controlling power").

According to the Securities and Exchange Commission (SEC) means (1) holding shares with voting rights in a juristic person more than 50 percent of the total voting rights of that juristic person; Directly or indirectly control most votes in the shareholders' meeting of a juristic person. or for any other reason (3) having direct or indirect control over the appointment or removal of more than half of all directors).

A similar description of family businesses can also be found in studies by Neubauer & Lank (1998) and Shanke & Ast (1996). deciding which company is a family business The amount or percentage of shares held by the family in the company is one of the deciding factors. The executives of the business are related to the management and oversee voting and corporate decisions. Klein (2000) suggested that all private businesses can be divided into family and non-family businesses depending on the number of family members or generations involved in the management of the business. Consider the family's influence on the business when deciding whether to label a business model as a family business or not. The research suggests that a family business involves having control over the business and owning shares of the company in terms of ownership (Ownership), control (Control or Management), and management.

In conclusion, A family business is defined as a business that is wholly or majority owned by family members or has stock ownership. The family still manages and manages the business and is a business that has been passed down from generation to generation.

Related concepts and theories

Fisher theory

A theory that explains the difference between the monetary interest rates of two countries and the difference in inflation rates, based on the idea that the normal interest rate will is equal to the real interest rate plus the expected inflation rate means that the nominal interest rate will change in line with the expected inflation rate (Irving Fisher, 1867-1947).

Interest rate parity theory (IRP)

Is a theory that shows the relationship between interest rate factors that affect the determination of the exchange rate of one currency compared to another currency as a premium or discount. The idea is that if transaction costs are not considered, securities with the same risk and redemption period are the same in both countries. may cause the interest rate to differ as much as the premium or discount This causes the flow of funds from one currency that yields less returns to another that yields more, resulting in a process known as Covered Interest Arbitrage until it reaches equal interest rates. It is a state of inability to seek profit without risk (arbitrage) as a point of equilibrium. where there is no difference between interest rates on bank deposits in the two countries (Feenstra, Robert C.; Taylor, Alan M., 2008).

Keynes' theories and ideas (Keynes, John Maynard)

Keynes' Theory (Keynes, John Maynard, 1936) explains the factors that determine national productivity and employment in the form of "aggregate demand" that will stimulate the economy to increase production to reach Potential output or output at the level of full employment. It proposed a model of aggregate demand in the form of a closed economy. This is equal to Gross Supply (Aggregate Supply), which is the value of the output that a country produces. Or national income or GDP. Aggregate Supply is represented by Y. Aggregate Demand will consist of the following:

• Aggregate Demand for goods and services. of private consumers (C)

• Aggregate Demand towards private investment (I)

• Aggregate Demand for consumption and government investment (G)

• Aggregate Demand in terms of consumption and foreign investment.

According to an article presented in the Harvard Business Review in February 2008, several industry statistics in the United States are presented showing the change in the prices of commodities in various industries between 1940 and 2005. The amount that industry pricing and your costs have decreased each time the industry's cumulative experience (the total number of units produced, or services provided) has doubled is shown by experience curves. They also enable you to forecast the expected future drop in prices and costs after accounting for inflation. The percentage of the initial cost or price still there after each doubling of experience is known as the "slope": A 70% slope, for instance, indicates a 30% decrease in price.

Related research

Picchanan Watcharatin and Tharittapon Ousawat (2016)

Study about factors affecting stock price index in information technology and communications category. A complex regression analysis method was used using the Ordinary Least Squares (OLS) method using Secondary Times Series Data using the monthly closing price index of the security. Information Technology and Communications Division 3-Year Government Bond Yield Business Sentiment Index Interest rates for loans for prime large customers The exchange rate of the baht against the US dollar CPI Starting from January 2012 to December 2016, totaling 60 months, in

order to analyze the relationship of independent variables and variables, the study found that the consumer price index Interest rates for loans for prime large customers The exchange rate of the baht against the US dollar.

Yutthana Krabunkarsaeng (2003)

Study about the factors determining investment in the Stock Exchange of Thailand to consider investing in securities by using monthly time-series secondary data since January 2002. until December 2003 by using the method of estimating the least squares (Ordinary Least Squares: OLS) from the study, it was found that the Dow Jones index and interest rates were significant factors determining investment in the Thai property market. Statistically significant at the confidence level of 99 percent, while the net purchase volume of foreign investors and the rate of return on investment were statistically significant at the time. Confidence level of 95%, each variable can explain the change of investment in the Stock Exchange of Thailand well and assumes except the net buy volume of different investors. The result is in the opposite direction from the total trading value of the Stock Exchange of Thailand, that is, when the net buy volume of foreign investors increases, the total trading value decreases.

Sirirat Utumthong (2018)

To study the factors influencing the exchange rate of the Thai baht to the US dollar using multiple regression analysis showing the relationship between the factors influencing the exchange rate of the Thai baht to the US dollar. US dollar, Thai baht against Japanese yen and Thai baht against Euro between the 1st-4th quarters of 2005-2018, totaling 56 quarters, to analyze the correlation between independent variables and variables. The study found that the inflation rate is an important factor affecting the exchange rate between the Thai baht against the euro, the baht against the yen and the baht against the US dollar in the same direction, which has a significance level of 0.006 Thai-US exports, the value of Thai-EU exports is a factor that does not affect the exchange rate between the baht and the US dollar.

Thanyarat Sangsuriyarot, Poramin Kositkulporn and Sombat Kachayuth (2020)

To study about economic factors that affect securities trading value of domestic retail investors via the Stock Exchange of Thailand by using monthly time series data by using complex multiple linear regression analysis. The study found that the percentage change in the Stock Exchange of Thailand Index and the percentage change in the Dow Jones Industrial Average could explain the factors affecting the net trading value of domestic retail investors on the Stock Exchange of Thailand. Significance at 0.05 Since the Dow Jones Industrial Average is like an index measuring market conditions and the economy of the United States, which is the world's leading country, retail investors will use the Dow Jones Industrial Average as a leading index to use as a reference for analyzing stock prices first. Trading results in the trading value of retail investors in the same direction as the change in the Dow Jones Industrial Average, while the change in the Stock Exchange of Thailand Index will affect the net trading value of retail investors. Subsidiaries in the country decreased.

Research methodology

This chapter will discuss the study of Economic Factors affecting the financial stability of the family business in Thailand. using the study method. Using data and analytics to process the following assumptions.

This research will use Quantitative Methods (EDA: Exploratory Data Analysis) to answer research questions. including secondary data used the financial data of Thailand-listed Family Business Companies from the Stock Exchange of Thailand (SET) between 2011 to 2020 and achieve research objectives and hypothesis testing. Inferential Analysis – Reliability and Validity and Correlation Coefficient Analysis.

The study relied entirely on secondary data. Based on a review of previous literature on related works, a list of variables (both economic sectors and determinant factors has been compiled. An extensive online search was conducted to locate the most up-to-date and complete data on the variables listed previously. Because the economic analysis was intended to be conducted on two levels, namely national and regional (district), data for these two levels were also collected. National-level time-series data has been gathered primarily from The Stock Exchange of Thailand (SET) from 2011 to 2020. Other sources of information include the National Statistical Office of Thailand (NSOT) and the International Monetary Fund (IMF). For selecting data, the researcher selected family business groups listed on the stock exchange in Thailand, which were 406 companies from a total of 573 companies, accounting for 71 percent. After the information was complete, they would inspect and clean the data. Companies with data available for analysis for the 2011 - 2020 period were selected based on the completeness of their financial performance data. For companies that have ready data, there are a total of 269 companies out of 406 companies, accounting for 66 percent. This will be data that will need to be studied and analyzed in the next order.

To create a nice matrix format data frame that can be used in STATA Version 18, the data were cleaned and processed after being collected in the appropriate quantities.

An exhaustive exploratory data analysis (EDA) has been carried out. EDA was used to assess and defend the various assumptions made in both linear and spatial regression. This was also useful for picking the best model and appropriately interpreting the outcome.

The descriptive statistics relating to key variables are reported in the reported financial data from 2000 to 2020.

Time-series data that consists of past and present variables are often interrelated. cause variables to look unstable (non-Stationary), that is, the mean and variance are not constant as time changes. If the variable is not stationary This will cause the estimation in the model to suffer from unreal relationships, that is, the variables appear to be related but, are not related.

Regression modeling is a statistical technique that allows looking at the relationship between two or more variables for a regression model. There is usually one dependent variable to predict. and one or more independent variables This is also called finding the relationship or interaction of the primary and

dependent variables. For every type of regression in this study, GDP, inflation, interest rate and stock market index factors are used. are independent variables and Net Profit Margin, ROA and ROE are used as dependent variables.

When there is no information on variables that correlate with both the regressors of interest and the independent variable, and if these variables are constant in the time dimension or across entities, panel data regression may help to reduce the bias caused by omitted variables. Panel data must be available, and panel regression techniques may outperform multiple regression models.

We looked at how the financial performance of Thai family businesses listed on The Stock Exchange of Thailand (SET) between 2000 and 2020 was affected by the crisis. We used Net Profit Margin, ROA, and ROE as the dependent variable for this purpose.

Panel regression model

Fixed Effect Model and Random Effects Model Fixed Effect model is a fixed-value linear model. Variables arise from time-series and cross-sectional data models that some data cannot be collected or are unique. Such variables are called Time-invariant characteristics and if the identifiable data is related to the independent variable The properties of variables that cannot collect data are stable, causing the estimation by the least squares method (Pooled OLS) to be biased (Bias). The idea of this model is that the model has an intercept equal to the number of units (i). An example of a regression model with fixed effects can be shown as follows.

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 Z_{it} + u_{it}$$

Y_{it} is the dependent variable.

X_{it} is an independent variable.

Z_{it} is an unobservable variable. But does not change over time.

μ_{it} is Error Term

i is the study unit

t is time

The main idea of the Random Effects Model is the difference between the study units which must be random and not related to the independent variable (X) entered in the model. Random effects model has the following characteristics:

$$Y_{it} = \beta X_{it} + \alpha + u_{it} + \varepsilon_{it}$$

The advantage of random effects is that it is possible to estimate the effect of variables that do not change over time but can influence Y, such as gender. Fixed effects models, the influence of these variables on Y, are included in the intercept term and, when estimated, will be equal to 0

From the fixed effect model estimation, it is assumed that time - invariant characteristics are related to independent variables, but if time-invariant characteristics There is no relationship with the free variable. The estimation with the Random Effect model will make the coefficients more efficient than the Fixed Effect model. To test between Fixed Effect and Random Effect simulations, which model gave more effective coefficients by Hausman test method. The assumptions in the test are set as follows.

If the p-value obtained from the Hausman Test calculation is less than 0.05, then the null hypothesis will be rejected. Time-invariant characteristics There is a relationship with the independent variables. Statistically significant with 95% confidence, it shows that the Fixed Effect model is more effective than the Random Effect model. Therefore, the study of the relationship between economic factors and financial stability factors of family business with cross-sectional data and time series data (Panel Data), the analysis method is Panel Regression.

The dependent variables are Net Profit Margin, ROA, and ROE Financial Stability (Performance of Family Business).

Independent variables are Gross Domestic Product (GDP), Inflation Rate, Interest Rate, and SET Index. (Factors related to the economy) By creating a model according to the following equations:

$$NPF_{iy} = \beta_0 + \beta_1 GDP_y + \beta_2 INF_y + \beta_3 INT_y + \beta_4 SET_y + u^i{}_y + \varepsilon^i{}_y$$

$$ROA_{iy} = \beta_0 + \beta_1 GDP_y + \beta_2 INF_y + \beta_3 INT_y + \beta_4 SET_y + u^i{}_y + \varepsilon^i{}_y|$$

$$ROE_{iy} = \beta_0 + \beta_1 GDP_y + \beta_2 INF_y + \beta_3 INT_y + \beta_4 SET_y + u^i{}_y + \varepsilon^i{}_y$$

The following figure can be used to help visualize how the research hypothesis for the question "Economic Factors affecting the financial stability of the family business in Thailand." will be composed of dimensions corresponding to the research framework's variables such as Financial Performance of Family Business, Macroeconomic Variables, and Financial Stability of Family Business, etc.

H1: The Gross Domestic Product (GDP) affects The Net Profit Margin of Family Businesses in Thailand.
H2: The Gross Domestic Product (GDP) affects The Return on Asset (ROA) of Family Businesses in Thailand.
H3: The Gross Domestic Product (GDP) affects The Return on Equity (ROE) of Family Businesses in Thailand.
H4: The Inflation Rate affects The Net Profit Margin of Family Businesses in Thailand.

H5: The Inflation Rate affects The Return on Asset (ROA) of Family Businesses in Thailand.
H6: The Inflation Rate affects The Return on Equity (ROE) of Family Businesses in Thailand.
H7: The Interest Rate affects The Net Profit Margin of Family Businesses in Thailand.
H8: The Interest Rate affects The Return on Asset (ROA) of Family Businesses in Thailand.
H9: The Interest Rate affects The Return on Equity (ROE) of Family Businesses in Thailand.
H10: The SET Index affects The Net Profit Margin of Family Businesses in Thailand.
H11: The SET Index affects The Return on Asset (ROA) of Family Businesses in Thailand.
H12: The SET Index affects The Return on Equity (ROE) of Family Businesses in Thailand.

Steps of Study

Data Stability Test (Unit Root Test)

The data used is time series data, it contains past and present related data. Non static data. If non-static variables are used for estimation, it may lead to unrealistic relationship issues, namely: The variables seem to be related, but they are not. Therefore, data stability testing will be able to determine whether the model variables used in the study are Stationary or not.

Select The Appropriate Model

Selecting the appropriate model by the Bruce-Pagan Lagrange multiplier (LM test), the appropriate model is selected to determine which model or method is more suitable between OLS regression method estimation and random effect model use. For time series data and cross-section, Hausman test is also carried out to determine which model method should be chosen between fixed effect and random effect to make it more effective and suitable for research work.

Model estimation and analysis of estimation results

Estimate the model using methods appropriate to the data and then use the results from the estimation to explain the relationship of the variables to be studied.

Results

This chapter will present and analyze economic factors that affect the financial stability of family businesses in Thailand. The details are as follows.

From a study of economic factors that affect the financial stability of family businesses in Thailand. Data can be analyzed according to the equations of the Random Effect Model as follows.

$$NPF_{iy} = -4.896405 + 1.26\text{e-}072GDP_y + 2.186308INF_y + 18.0646INT_y + 0.0082786SET_y + u^i_y + \varepsilon^i_y$$

From the results of estimating economic factors that affect the financial stability of family businesses in Thailand using the Panel Regression model in the Random Effect Model method, it was found that the economic factors that are variables are not related and affect the net profit rate that is a financial stability variable.

$$ROA_{iy} = 12.97912 - 1.95\text{e-}07GDP_y + 0.7030862INF_y + 0.4617809INT_y - 0.002516SET_y + u^i_y + \varepsilon^i_y$$

From the results of estimating economic factors that affect the financial stability of the family business, it was found that factors that are related and affect Return on Assets (ROA) include Gross Domestic Product (GDP), Inflation Rate (INF), and SET Index (SET) with the estimation results as follows:

Thailand's Gross Product (GDP) has a coefficient equal to 1.95e-07, which is related and effected in the same direction as the Return on Assets (ROA) of the family business in Thailand with statistical significance at the 0.01 level.

Thailand's inflation rate (INF) has a coefficient of 2.186308, which is related and effected in the same direction as the Return on Assets (ROA) of the family business in Thailand with statistical significance at the 0.01 level.

The SET Index (SET) has a coefficient equal to 0.002516, which is related and effected in the opposite direction as the Return on Assets (ROA) of the family

business in Thailand with statistical significance at the 0.05 level.

As for the factor of the Interest Rate, it does not affect the Return on Assets (ROA) of the family business in Thailand.

$$ROE_{iy} = 18.39907 - 4.37e\text{-}07GDP_y + 2.194921INF_y + 0.5430885INT_y - 0.003521SET_y + u^i_y + \varepsilon^i_y$$

From the results of estimating economic factors that affect the financial stability of the family business, it was found that factors that are related and affect Return on Equity (ROE) include Gross Domestic Product (GDP) and Inflation Rate (INF) with the estimation results as follows:

Thailand's Gross Product (GDP) has a coefficient equal to - 4.37e-07, which is related and effected in the opposite direction as the Return on Equity (ROE) of the family business in Thailand with statistical significance at the 0.05 level.

Thailand's inflation rate (INF) has a coefficient of 2.194921, which is related and effected in the same direction as the Return on Equity (ROE) of the family business in Thailand with statistical significance at the 0.10 level.

As for the factors of the Interest Rate (INT) and The Set Index (SET), these do not affect the Return on Equity (ROE) of the family business in Thailand.

Conclusion

A study of economic factors that affect the financial stability of family businesses in Thailand. There are 4 factors: gross domestic product (GDP), and inflation rate. interest rate and the Stock Exchange of Thailand Index (SET Index) are related and affect finances and stability

(performance of family businesses), including net profit margins. Return on assets (ROA) and return on equity (ROE) of family business companies listed on the Stock Exchange of Thailand (SET). Data used are annual time series and cross-sectional data (Panel Data) from The years 2011 to 2020 including a period of 10 years, with data used in the analysis for a total of 269 companies. The relationships and effects of the dependent and independent variables are found in the study using a panel regression model. (Random Effects Model) Data analysis was performed by Robustness Tests. The steps in the study were: Data stability testing (Stationary) using the Unit Root Test method and then testing the data to find an appropriate model using the Unit Root Test method. Breusch-Pagan Lagrange Multiplier (LM) test) and Hausman test. From the test results, it was found that the Random Effect model should be used. Finally, the data was used to estimate the model. and analyze the estimation results by analyzing the relationship between the variables in the study. The analysis and conclusions will be consistent with the objectives set for the study as follows.

From the objectives related to studying the factors of economic conditions and related factors that affect the financial stability of family businesses in Thailand, the results of the Panel Regression Model were concluded. It was found that gross domestic product (GDP), inflation rate interest rate, and the Stock Exchange of Thailand Index (SET Index) have both relationships and impacts as well as There is no relationship and impact on the dependent variable, namely financial stability. (Performance of the family business) includes a net profit margin.

Return on assets (ROA) and return on equity (ROE) of family business companies Makes the researcher aware that economic factors may or may not There may be no impact. With the stability of the family business, This may need to be considered again from the context of the economic factors used in the study. This is because the researcher has brought economic factors related to the business operating environment to be consistent with the context of family businesses to study.

Discussion

From summarizing the above results, the researcher would like to discuss additional results. By analyzing and processing the relationship and results of the primary variable with the dependent variable as follows.

Economic factors include gross domestic product (GDP) and inflation. interest rate and the Stock Exchange of Thailand Index (SET Index) have a relationship with or affect the net profit rate. The study found no relationship or impact on the results based on statistical significance. Next, as for economic factors, there is a relationship or impact on Return on Asset (ROA). The study found that there is a relationship or impact on 3 out of 4 Financial Stability factors according to statistical significance. Economic factors have a relationship or impact on Return on Equity (ROE). The study found that there is a relationship or impact on 2 out of 4 Financial Stability factors according to statistical significance by expanding the explanation of each hypothesis. As follows:

H1: The Gross Domestic Product affects The Net Profit Margin of Family Businesses in Thailand. From H1, the assumption that the Gross Domestic Product (GDP) affects the Net Profit Margin (NPF) of Family Businesses in Thailand. It was found that the results of the study rejected the assumptions. Because the Gross Domestic Product (GDP) variable is not related and affects the Net Profit Margin (NPF) of Family Businesses in Thailand.

H2: The Gross Domestic Product affects The Return on Asset of Family Businesses in Thailand. From H2 The Gross Domestic Product (GDP) affects the Return on Asset (ROA) of Family Businesses in Thailand. It was found that the results of the study accepted the assumptions. Because the Gross Domestic Product (GDP) variable is related and affects in the same direction as the Return on Asset (ROA) of Family Businesses in Thailand.

H3: The Gross Domestic Product affects The Return on Equity of Family Businesses in Thailand. From H3 The Gross Domestic Product (GDP) affects the Return on Equity (ROE) of Family Businesses in Thailand. It was found that the results of the study accepted the assumptions. Because the Gross Domestic Product (GDP) variable is related and affects in the opposite direction as the Return on Equity (ROE) of Family Businesses in Thailand.

H4: The Inflation Rate affects The Net Profit Margin of Family Businesses in Thailand. From H4, the assumption that the Inflation Rate (INF) affects the Net Profit Margin (NPF) of Family Businesses in Thailand. It was found that the results of the study rejected the

assumptions. Because the Inflation Rate (INF) variable is not related and affects the Net Profit Margin (NPF) of Family Businesses in Thailand.

H5: The Inflation Rate affects The Return on Asset of Family Businesses in Thailand. From H5 the Inflation Rate (INF) affects the Return on Asset (ROA) of Family Businesses in Thailand. It was found that the results of the study accepted the assumptions. Because the Inflation Rate (INF) variable is related and affects in the same direction as the Return on Asset (ROA) of Family Businesses in Thailand.

H6: The Inflation Rate affects The Return on Equity of Family Businesses in Thailand. From H6 the Inflation Rate (INF) affects the Return on Equity (ROE) of Family Businesses in Thailand. It was found that the results of the study accepted the assumptions. Because the Inflation Rate (INF) variable is related and affects in the same direction as the Return on Equity (ROE) of Family Businesses in Thailand.

H7: The Interest Rate affects The Net Profit Margin of Family Businesses in Thailand. From H7, the assumption that the Interest Rate (INT) affects the Net Profit Margin (NPF) of Family Businesses in Thailand. It was found that the results of the study rejected the assumptions. Because the Interest Rate (INT) variable is not related and affects the Net Profit Margin (NPF) of Family Businesses in Thailand.

H8: The Interest Rate affects The Return on Asset of Family Businesses in Thailand. From H8, the assumption that the Interest Rate (INT) affects the Return on Asset (ROA) of Family Businesses in Thailand. It was found that the results of

the study rejected the assumptions. Because the Interest Rate (INT) variable is not related and affects the Return on Asset (ROA) of Family Businesses in Thailand.

H9: The Interest Rate affects The Return on Equity of Family Businesses in Thailand. From H9, the assumption that the Interest Rate (INT) affects the Return on Equity (ROE) of Family Businesses in Thailand. It was found that the results of the study rejected the assumptions. Because the Interest Rate (INT) variable is not related and affects the Return on Equity (ROE) of Family Businesses in Thailand.

H10: The SET Index affects The Net Profit Margin of Family Businesses in Thailand. From H10, the assumption that the SET Index (SET) affects the Net Profit Margin (NPF) of Family Businesses in Thailand. It was found that the results of the study rejected the assumptions. Because the SET Index (SET) variable is not related and affects the Net Profit Margin (NPF) of Family Businesses in Thailand.

H11: The SET Index affects The Return on Asset (ROA) of Family Businesses in Thailand. From H11 the SET Index (SET) affects the Return on Asset (ROA) of Family Businesses in Thailand. It was found that the results of the study accepted the assumptions. Because the SET Index (SET) variable is related and affects in the opposite direction as the Return on Asset (ROA) of Family Businesses in Thailand.

H12: The SET Index affects The Return on Equity (ROE) of Family Businesses in Thailand. From H12, the assumption that the SET Index (SET) affects the Return on Equity (ROE) of Family Businesses in Thailand. It was found that the results of

the study rejected the assumptions. Because the SET Index (SET) variable is not related and affects the Return on Equity (ROE) of Family Businesses in Thailand.

Empirical Results: From the work of Vincent Molly, Eddy Laveren, and Marc Deloof. (2010) Topic: Family Business Succession and Its Impact on Financial Structure and Performance. The results of the study of family business profit rates were not affected by succession. This means that such factors do not affect the operations of the family business. This result is consistent with the researcher's study which found that the profit rate is not related or affected by economic factors as well. And in a study by Manohar Singh, Ali Nejadmalayeri, and Ike Mathur (2007) titled Performance impact of business group affiliation: An analysis of the diversification-performance link in a developing, the study found that diversified companies had poor performance. than focal firms significantly and there is a significant negative relationship between the level of diversification and firm performance. This is consistent with the researcher's research that reflects the relationship and interaction of economic factors with the performance of family businesses in the dimensions of Return on Asset (ROA) and Return on Equity (ROE). However, the relationship of Manohar Singh, Ali Nejadmalayeri, and Ike Mathur (2007) has a different direction from the study of the researcher.

In a study by Bruno Amann and Jacques Jaussaud (2012) titled Family and non-family Business Resilience in an economic downturn, the results showed that family businesses were more resilient both during and after the economic downturn. When compared to businesses that are not family businesses The factors of the study include determining the economic factor Gross Domestic Product (GDP), its relationship, and its impact on family and non-family business groups during an uncertain economic period. The study of Bruno Amann and Jacques Jaussaud (2012) has results in the same direction as the researcher's research in terms of factors that are related and affect the performance factors family businesses of Return on Asset (ROA) and Return on Equity (ROE).

Implications and recommendations

This study found that the Gross product of Thailand Thailand's inflation rate Thailand's interest rates and the Stock Exchange of Thailand Index (SET Index) are all factors that have a relationship with or affect the family business group, whether directly or indirectly, such as

1. The impact of economic factors on family businesses that may affect organizational management due to a lack of good financial planning.

2. Impact of the lack of a management system on the role of family business supervision and management guidelines to reduce risks related to economic factors. This is due to economic factors that can affect the management of the family business causing obstacles or disruptions.

3. The impact of the pandemic and economic changes according to the world situation, such as the COVID-19 epidemic crisis, war crisis, or financial crisis that affects the financial stability of family

businesses, causing a lack of liquidity or business operations. that is not in accordance with the goals of the business.

Therefore, the study of factors that affect or are related to economic factors and financial stability of family businesses to be useful and serve as a guideline for preparing future business operations to reduce risks that will occur. To reduce risk, a family business must have a structure in place for both the family and business dimensions. Creating a systematic family constitution will help reduce family management risks along with risk planning and backup plans in the event of uncontrollable economic situations. You must be careful or observe changes that occur and study information all the time. If you have done the above, it will be a part of helping provide useful information to entrepreneurs and businessmen in family business groups.

Limitations and future research

Limitations of the study that must be acknowledged and expected to be the results of further research. The first is that this research is a study of economic factors the researcher has conducted a literature review to determine that they are relevant contextual factors. This does not mean that every economic factor will affect family businesses in Thailand. Second, determining the independent and dependent variables to test their relationship or effect, including the feasibility of the study. The researcher must construct it in different contexts. To be able to check the impact of the test that has taken place. This research cannot be taken as an indicator that the results of the study will always have an effect and be related. Third, the information is collected from the Stock Exchange of Thailand. The data that can be collected is limited to a period of 10 years from 2011 - 2020. After this, if the data changes, it may cause the study results to change according to the context in which they are analyzed again.

Therefore, future research Researchers who wish to study in the future must obtain information or consider information from relevant agencies, including information that must be up-to-date accurate, and reliable. The researcher views that in the future, further research can be conducted to bring additional benefits to the stakeholders in this research, such as studying related factors that have more impact, and the number of companies used for analysis may be greater. more or a study that combines both quantitative and qualitative methods, etc. Finally, the model used by the researcher in this study is simple. For future research, researchers will need to build complex models to conduct more detailed research on the perceived legitimacy of family business groups and economic factors.

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