Building Models and Hypotheses to Evaluate the Impact of Payment Index Factors on Profit Growth

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ABSTRACT: The article has presented the theory of profit, the meaning, the role of profit, and profit growth in businesses. By the method of overview research, the research team has clarified the content, factors affecting profit growth and research results of domestic and foreign authors. Based on this result, the research team evaluated the use of factors and stated that there is no conflict about the research results because the impact of the factors depends a lot on the environment itself and regulations. Specific to the study area. Therefore, in building the model and research hypotheses, we have applied 4 factors: Current Ratio, Average days of Receivable turnover ratio, Average of days of Inventory turnover ratio and Account Payable Turnover Ratio to be included in the research model as an independent variable. In addition, we also suggest using a new independent variable, Quick Ratio. The role of this observed variable is as a measure of accuracy when conducting research. The independent variable included in the model is Return on Asset. The proposed model is a theoretical study and may not be the best model. But we believe that using this model can help businesses reassess their operations and find ways to increase profits.

KEYWORDS: Payment index, Profit margin, Model, Research hypothesis,

1. INTRODUCTION

Economic development and international integration in Vietnam are deeper and wider with other countries in the world. Along with international economic integration and free trade agreements, the competition for businesses is increasingly fierce. If in the past, our business only needed to compete with domestic enterprises, now we need to face giant manufacturing, service and trading corporations in the world. These enterprises have advantages in capital and science and technology, they have almost all advantages in the Vietnamese market. Therefore, to find a way to break through and avoid risks such as bankruptcy, business leaders need to find ways to make profits grow continuously. Profit growth will help businesses improve financial capacity, reinvest in production expansion, and invest in high-tech production lines. Reinvesting activities from profits will help increase the competitiveness of domestic enterprises with foreign enterprises. The objective of the article is to determine which factors have a positive impact on profit growth and conversely which factors have a negative impact. With the positive factor, we will find ways to influence it to be even more effective. With the negative factor reducing the possibility of profit growth, we will find ways to lower it. To solve this problem, we proceed to build a support model in assessing the impact of payment index factors on profit growth.

2. LITERATURE REVIEW

2.1. Profit

In economics, profit is the additional wealth an investor receives from an investment after deducting the costs, including the opportunity costs associated with the investment. Profit is the difference between the total revenue earned in business, production and investment activities and the total costs incurred from the activities. In accounting, profit is the difference between the selling price and the cost of production. The two definitions we have just presented have different projections of the cost factor. In accounting, we are only interested in monetary costs, or costs that can be expressed in cash, without considering opportunity costs as in economics. According to The Language of Trade, Profit is the net income obtained from the production or sale of goods and services. This is the amount left over for the entrepreneur after all expenses from interest, taxes, labor, administration, raw materials, and depreciation have been paid. In case the business does not do well, when the cost is greater than the revenue, the profit is negative and is also called a Loss. In addition, Profit is also a general indicator, reflecting the economic efficiency of production and business activities of an enterprise. At the same time, it is the difference between the
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Income earned and the costs incurred to achieve that income in a specified period. From the perspective of businesses, profit is the difference between revenue and total production and business costs that the business spends to get that revenue in a certain period.

2.2. Meaning and Role of Profit

Meaning of profit

The purpose of business activities is to achieve profit goals. That's why profit makes a lot of sense. Profit is an aggregate quality indicator showing the results of the business's production and business process. In addition to fully reflecting in terms of quantity and quality of business activities, it also reflects the results of the use of basic factors of the production process such as labor, materials and fixed assets. Profit is an important source for businesses to accumulate, reinvest, grow and develop. Profit is one of the supporting conditions for improving the living conditions and working conditions of employees in enterprises. Profit is the source to fulfill obligations to the budget through taxes and fees. Well-functioning, high-profit enterprises will contribute to the strength of the national financial system through the growth of the state budget. Profit is an important economic lever, which encourages employees and businesses to work hard to develop production and improve production and business efficiency based on reasonable distribution. Finally, Profit also has a very important meaning in business analysis. The financiers, business management and related subjects can analyze the profit situation to take measures to continuously improve profits and promote the development of the business.

The Role of profit

In business, profit plays an important role in production and business activities. This is because, in the condition that enterprises do independent accounting according to the market mechanism, profits for survival and development are still important for enterprises. Therefore, profit is considered one of the most important economic tools, and at the same time is the basic indicator to evaluate the efficiency of production and business of enterprises. Profits affect every activity of a company and directly affect its financial position. The more profitable a company is, the more stable and stronger its financial position. Profit is an aggregate quality indicator that reflects the results of all production and business activities. Profit is an important source of accumulation to reproduce and compensate for losses and risks in business.

2.3. Profit growth

According to Endri et al. (2020), corporate profit growth is important to both internal and external parties. Earnings growth can “provide a signal” that a company's finances are turning positive, which will positively impact and enhance the value of the company. Profit growth also means "the number of dividends that the company pays in the future will increase every year with the increase in the value of the company". From an operating perspective, profit is the difference between the revenue realized and the costs associated with that revenue. Profitability can be seen as a measure of how well a company is performing through its operational and non-operating performance management. The past value of sales and expenses, and the present value of sales and expenses help business managers predict future value. The success of a company can be measured by the increase in the profits of the company. The presence of increased profits can indicate that the management is managing the resources of the company efficiently and effectively. The profit growth rate is the change in a company's profit growth rate. Financial ratios are used in analyzing financial statements and forecasting future revenue growth. Ratio analysis is a financial analysis tool that shows the mathematical relationship between two quantities. Types of financial ratios are classified according to their basic form into liquidity ratios, solvency ratios, operational ratios, profitability ratios and growth rates.

2.4. Study Overview

When we researched the literature, we found that the world's authors were very interested and studied a lot about the factors affecting profit growth. The factors given by the author depend on the research conditions, economic situation and regulations in the research area. For example, in the study of Alarussi & Alhaderi (2018) on factors affecting profitability in Malaysia, the author uses factors such as company size by total revenue, the ratio of asset turnover and profitability word. In Nanda & Panda's (2018) study on corporate profitability determinants through a survey of Indian manufacturing companies. The author believes that the internal factors of the company and macroeconomic indicators have a strong impact on profit growth. Next, the study of Shahnia et al. (2020) also on profitability determinants, research at trading, service and investment companies in Indonesia. The author uses factors such as Current Ratio, Debt to Total Assets, Net Profit Ratio, Return on Equity and Total Asset Turnover to profitability. Here, we present some case studies and the group of factors these authors use to determine the level of impact on revenue growth. Research by Nariswari & Nugraha (2020) on the impact of total asset turnover, net profit margin and gross profit margin on profit growth. The authors believe that the plastic and packaging industry is an industry that plays an important role in promoting the
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production chain. In this study, the authors used descriptive statistics and quantitative methods. A sample size of 11 enterprises was selected through the purposeful sampling method. The data is collected by the author's team using multivariable linear regression analysis and log transform method. The authors' research results show that (1) Total asset turnover, (2) Net profit margin and (3) Gross profit margin have an influence on profit growth. However, factor (2) Net profit margin had the strongest influence and the two factors Gross profit margin and Total asset turnover did not have a strong impact on profit growth. The authors also recommend that businesses should focus on improving their Net Profit Margin if they want to grow profits in the future (p.87).

Research by Endri et al. (2020) on determinants of profit growth in food and beverage companies, research in Indonesia. The purpose of this study is to estimate the impact of: (1) Current ratio, (2) Current debt to inventory, (3) Total asset turnover, (4) Ratio net profit margin, (5) revenue growth and (6) company size to profit growth. With a sample size of 18 Food and Beverage companies listed on the Indonesia Stock Exchange in the period 2014-2018. The study used a quantitative research method with a regression method. The results of data analysis show that two factors (1) Current ratio and (2) Short-term debt to inventory have a negative impact on profit growth in the enterprise. The remaining factors, except (6) The size of the company, have a positive influence on the profit growth rate. The research team also suggests that enterprises can achieve profit growth if liquidity ratio is low and revenue is higher (p.739).

Research by Shahnia et al. (2020) on factors affecting profitability in trading, service and investment enterprises. The research team determined that the independent variables included in the study are (1) Firm size, (2) Capital adequacy ratio, (3) Bad debt, (4) Loan-to-deposit ratio, (5) Operating expenses over operating income, (6) Deposit growth and the dependent variable is Profit of the business. With a sample size of 42 banks listed on the stock exchange and 27 companies in trade and service industries. The study used a quantitative research method with a multiple regression method. The results of the data analysis show that the profit growth of the business is positively and significantly affected by (1) the size of the enterprise. Two factors (2) Capital adequacy ratio, (3) Bad debt and (6) Deposit growth have a negative impact on profitability on total assets. In other words, the three factors above make the possibility of profit growth drag low. The model's regression results show that independent factors explain 25.2% of profit growth. Thus, the research team concludes that the above factors have a positive and negative impact on profit growth, but only 25% are explained and the rest is explained by many other factors that are not mentioned in this study (p.787).

Amanda's study (2019) aims to determine the influence of (1) Cash turnover, (2) Accounts receivable turnover, (3) Inventory turnover, (4) Current ratio and (5) The ratio of debt to equity to the profitability of the business. With a purposeful sampling method, the research sample includes 8 enterprises operating in the Chemical Industry. The author uses quantitative research methods and step-by-step regression analysis to analyze secondary data collected from the financial statements of enterprises. The analysis results show that the factors (1) Cash turnover, (2) Accounts receivable turnover, (3) Inventory turnover and (5) Debt to equity ratio do not affect Profitability. In contrast, Factor (4) Current ratio has a positive and significant effect on Profitability (p.14).

Research by Lim & Rokhim (2021) with the goal of determining the factors affecting profitability in listed companies on the stock market in Indonesia. The set of evaluation criteria includes 5 independent variables: (1) Company size, (2) Asset turnover, (3) Current ratio, (4) Market strength (Lerner index) and (5) Company growth rate (measured by sales growth rate and sustained growth rate). The authors used a purposeful sampling method with a sample size of 10 pharmaceutical companies. The quantitative research method is used by the authors and they analyze the data by Least Squares Regression. The data used in the analysis is secondary data calculated from the financial statements of enterprises. The results of the study show that two factors, (3) the Current ratio and (5) The Growth rate of the company measured by the sustainable growth rate, have a positive impact on the dependent variable, which is the ability of the company to grow profitability or profit growth of the business. The remaining factors have a negative impact such as (2) Asset turnover and (4) Market strength. The authors also identified that factor (1) Company size has no impact on revenue growth (p.981).

Research by Malik (2011) on the determinants of profitability in insurance companies in Pakistan. The author recognizes that Insurance is a service business that is playing an important role in the economy. An important goal of financial management is to increase the return on capital or to find ways to increase profits for the business. The author identifies dependent variables including (1) Company age, (2) Firm size, (3) Capital volume, (4) Leverage and loss ratio and the dependent variable is ability profitability. The research sample size includes 35 listed insurance companies in the period from 2005 to 2009. Data is collected through financial statements of enterprises and relevant industry journals. The author's research results show that factor (1) Age of the company does not affect the profitability of insurance enterprises. Factor (2) Company size and (3) Capital volume have a positive and positive influence on profit growth. The last factor is (4) Leverage ratio and loss ratio are determined to have a negative impact on the profitability of the insurer.
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In a study by Van & Nga (2018) on the influence of working capital management on corporate profitability: Evidence from construction material manufacturing enterprises in Vietnam. In this study, the authors focus on assessing the impact of the independent variables as (1) Average collection period, (2) Inventory turnover period, (3) Average payment period and (4) Cash conversion cycle to dependent factor is the rate of return on total assets of the business. In addition, the moderating variables such as: Firm size, Debt ratio, Current ratio and Fixed asset ratio are included by the author for the purpose of examining the impact of these variables on the dependent variable. The research results show that the factors (1) Average collection period and (3) Average payment period have a positive impact on the profitability of the business. The remaining two independent factors are (2) Inventory turnover period and (4) Cash conversion cycle which has no relationship with the profitability of the business. In addition, the author also identifies the moderating variable as Firm size has a positive impact on the profitability of the enterprise, Debt index has a negative effect on the profitability of the enterprise and Liquidity ratio. Current accounting does not show evidence of an adverse effect on firm profitability.

From the above studies, we see that there are many factors affecting profit growth. However, in each study there were differences in the factors used in the study. At the same time, the results of studies determining the influence of positive factors or negative influences are also different. For example, the factor of company size can be a positive factor affecting profit growth in this study, but it may also be a factor that does not affect profit growth in the study of other authors. This further confirms that environmental factors and political institutions have a large influence on the ability and influence of these factors. Therefore, the study of which factors and the analysis results indicate which factors are influential in our research will not be in conflict with previous studies.

3. METHODS

In this study, we used the review research method. As a first step, we define the problem and research objective. With the research objective of building a model and hypothesis to evaluate the impact of payment index factors on profit growth, we searched for documents related to this issue. From documents such as articles and reports found on the internet, we have re-edited and removed studies with unknown sources and published information that are not really relevant to the research. The remaining relevant documents are reviewed and used as a basis to build the theoretical basis for this study. In addition, from the factors that have been used by previous research authors in assessing its impact on profit growth, we have compiled a table of those factors. Next, we identify factors to include and research the model and propose a new factor.

4. RESULTS

4.1. Payment Indicators

Financial ratios have an important role for financial analysts, businesses and business partners, but it also helps investors succeed if they know how to calculate and use them. Financial ratios help interested parties to compare the figures in financial statements to consider the possibility of profit growth, dividend payment and debt serviceability. According to Endri et al. (2020), in order to predict future profit growth, it is necessary to analyze financial statements through financial ratios. Liquidity index is one of the four important financial indicators in this activity. In this study, we present 5 payment indicators applied and identified as factors in the research hypothesis.

Current Ratio

The current ratio shows a company's ability to use current assets such as cash, inventory, and accounts receivable to pay its current liabilities. The higher the Current Ratio, the more likely it is that the company will be able to pay off its debt. A current ratio of less than 1 indicates that the company is in financial distress and may not be able to pay its debt. However, this does not mean that the company will go bankrupt, there are ways to raise more money. On the other hand, if this ratio is too high, it is also not a good sign because it shows that the company is using its assets inefficiently. This financial indicator is a special one that needs to be studied. In studies using the Current Ratio factor, Sari et al. (2017) and Siregar & Batubara (2017) suggest that Current Ratio has no effect on earnings growth. However, in the study of Amanda (2019), Lim & Rokhim (2021) determined that Current Ratio has a positive impact on the dependent variable, which is the profitability or profit growth of the business. In contrast, the study by Endri et al. (2020) believes that Current Ratio has a negative impact on earnings growth. Current Ratio is calculated as follows: Current Ratio = Current Assets/Current Liabilities

Which: Current assets include current assets and assets that are constantly circulating in the course of business activities such as cash, liquid securities, supplies, goods and debts, Short-term receivables.

Quick Ratio

Quick ratio gives us an assessment of the solvency of the business. This ratio shows that the company has enough short-term assets to pay short-term liabilities and does not need to sell inventory. Experts say that this index more accurately reflects the current payment index. A company with a quick ratio of less than 1 is unlikely to be able to repay its short-term liabilities and must
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be considered carefully. In addition, if this ratio is much smaller than the current ratio, it means that the short-term assets of the business depend too much on inventory. Retail businesses often fall into this situation. Quick Ratio is the index chosen by our research team to use as a measure to test the results of analyzing the influence of payment index factors on profit growth. Quick Ratio is calculated as follows:

Quick ratio = (Cash and cash equivalents+accounts receivable+short-term investments)/(Current liabilities)

Average days of Receivable turnover ratio

Average days of Receivable turnover ratio tells us about the average number of days a business collects money from customers. Average days of Receivable turnover ratio is calculated using the Receivable turnover ratio. Receivable turnover ratio shows the effectiveness of corporate credit policies applied to partners. The higher the turnover ratio, the faster the business is paid off by customers. When compared with other businesses in the same industry, if this index is too high, the business may lose customers because customers will switch to partners with longer credit policies. When comparing this index year-over-year, if there is a decline, it is most likely that the business is having trouble collecting debt from customers and this can also be a sign that sales have exceeded their limits. The Average days of Receivable turnover ratio factor was developed by Mumtaz et al. (2011), Gul et al. (2013), and Van & Nga (2018) used when studying the factors affecting the profitability of enterprises, the results showed that this factor was determined to have different effects in the two studies both in the same direction and in the opposite direction. Meanwhile, author Amanda (2019) stated that it does not affect profitability.

Average days of Receivable turnover ratio = 365/ Receivable turnover ratio

In there:

Receivable turnover ratio = Annual net sales/Average receivables

Average accounts receivable = (Remaining receivables in the previous year's report and this year's receivables)/2

Average number of days of inventory turnover

The average number of days of inventory turnover shows how effectively a business is managing its inventory. The average number of days inventory turnover ratio is concerned with the number of days. This metric is calculated through the Inventory turnover ratio. The higher the inventory turnover ratio, the better it shows that the business sells quickly and does not have a lot of inventory in the business. This means that the business is less at risk if the inventory turnover ratio in the financial statements decreases over the years. However, too high inventory turnover ratio is also not good because it means that the amount of inventory in stock is not much, if the market demand increases suddenly, the possibility of businesses losing customers is very large. At that time, businesses still face the risk of losing market share. In addition, the inventory of input materials for production stages is not enough, which can cause the production line to stall. Therefore, the inventory turnover ratio needs to be large enough to ensure the level of production to meet customer demand. The factor of the average number of days of inventory turnover is included in the study by Sharma & Kumar (2011), Makori & Jagomo (2013), Van & Nga (2018). This factor shows both positive and negative effects on profit growth in enterprises. However, also with the factor of Average Days of Inventory Turnover, author Amanda (2019) believes that it does not affect Profitability or in other words does not affect profit growth.

Average days of inventory turnover ratio = 365/ Inventory turnover ratio

In there:

Inventory turnover ratio = COGS/Average Inventory

Average inventory = (Inventory in previous year's report + this year's inventory)/2

Account Payable Turnover Ratio

Average payment period is the average time from the time a business buys goods and materials to the time it pays the seller. This metric shows how well a business has used a supplier's credit policy. Too low a receivables turnover ratio can negatively affect a business's credit rating. This factor was authored by Mumtaz et al. (2011), Makori & Jagomo (2013), Van & Nga (2018) included in the study. The results show that it has a negative and positive impact on the profitability of the business.

Average number of days payables turnover ratio = 365/ Accounts payable turnover

In there:

Accounts Payable Turnover = Annual Sales/Average Payables

Annual sales = Cost of goods sold + ending inventory - Beginning inventory

Average payable = (Previous year's report payable + this year's payable)/2

4.2. Return on assets

Profitability ratio is a ratio that shows a company's ability to "make profit", including gross profit margin, basic income, gross profit margin, net profit margin, return on equity, return on assets, net income growth rate and net sales growth rate (Bachimeg, 2017). According to Brigham & Ehrhardt (2017), profitability is the result obtained based on correct policies and decisions in business
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Operations. Profit margins and the provision of information on a company's performance are also affected by the combined effects of liquidity, asset and debt management on performance (p.114). According to Salsabilla & Isbanah (2020), profitability provides an overview of a company's ability to generate profits and is the basis for consideration when making dividend policy decisions. In this study, we choose the dependent variable as Return on Assets. This variable has been used by many research authors when evaluating profit growth and the factors affecting it, such as the study of Alarussi & Alhaderi (2018), Nanda & Panda (2018), Shahnia et al. al. (2020), Amanda (2019).

4.3. Research model and hypothesis

Research models

Before making the research model, we summarize and review the financial factors used as independent variables and the factor of Profit Rate as a dependent variable in previous studies. Based on the information gathered from previous studies, we will make a table to show the variables used in the research model.

Table 1: Variables used in the research model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Symbol</th>
<th>Previous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick Ratio</td>
<td>QR</td>
<td>Nhóm nghiên cứu đề xuất sử dụng</td>
</tr>
<tr>
<td>Average days of Receivable turnover ratio</td>
<td>ART</td>
<td>Mumtaz et al. (2011), Gul et al. (2013), Van &amp; Nga (2018), Amanda (2019)</td>
</tr>
</tbody>
</table>

Source: Author’s compilation and construction

The intended analysis was a multivariable regression analysis with observations that were not normally distributed. The proposed research model is as follows

\[
ROA_{it} = \alpha + b1CR_{it} + b2QR_{it} + b3ART_{it} + b4AIT_{it} + b5ATR_{it} + e_{it}
\]

Which: CR, QR, ART, AIT, ATR are independent variables; ROA is the dependent variable

\( \alpha \): is a constant

Formulate research hypothesis

From the research model built above, we hypothesized the following research:

Hypothesis H1: Current Ratio has an impact on the return on total assets. As the Current Ratio increases, the return on total assets increases.

Hypothesis H2: Quick Ratio has an impact on return on total assets. As the Current Ratio increases, the return on total assets increases.

Hypothesis H3: Average days of Receivable turnover ratio has an impact on the return on total assets. When the Average days of Receivable turnover ratio increase, the return on total assets decreases.

Hypothesis H4: Average of days of Inventory turnover ratio has an impact on return on total assets. When the Average of days of Inventory turnover ratio increases, the return on total assets decreases.

Hypothesis H5: Account Payable Turnover Ratio has an impact on the return on total assets. When the Account Payable Turnover Ratio increases, the return on total assets decreases.

5. CONCLUSION

Through the above presentations, we have built a model to evaluate the impact of liquidity ratios on the profitability of enterprises. Five research hypotheses are developed and will be effective when we conduct empirical research in Vietnamese enterprises. The application of this research model to the assessment of the impact of the payment index factors will help businesses review the shortcomings in business operations and assess the current status of the efficiency of using the payment index. This study is a theoretical study and it inevitably omits some relevant research. In addition, we also need to consider more regulatory variables.
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when assessing the profitability of the business such as firm size, current ratio and fixed asset ratio in order to strengthen and clarify more factors affecting profit growth.

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