Factors Affecting Profitability of Small Medium Enterprises (SMEs) Firm Listed in Indonesia Stock Exchange

Farah Margaretha and Nina Supartika

Abstract—The objective of this research is to examine factors affecting profitability such as firm size, firm age, growth, lagged profitability, productivity, and industry affiliation of SMEs firm listed in Indonesia Stock Exchange. Source of data used in this study is secondary data based on index PEFINDO 25. The results showed that firm size, growth, lagged profitability, productivity and industry affiliation significantly effect on profitability. While the variable firm age does not significantly influence profitability. The results of the regression coefficient indicates that the variable firm size, growth, lagged profitability have a negative effect on profitability, While the variable productivity and industry affiliation have a positive impact on profitability. Therefore, for further improve company’s performance the manager should define a strategy to increasing profitability with focusing on productivity and industry affiliation.

Index Terms—Industry affiliation, PEFINDO25, productivity, profitability, SMEs.

I. INTRODUCTION

In a competitive marketplace, to achieve a satisfactory level of profitability must be learned by the business owners. Profitability is the ratio to measure the performance of the company. It is a main aspect in a company’s financial reporting. The profitability of a company shows a company's ability to generate earnings for a certain period at a rate of sales, assets and certain of capital stock. Understanding the determinant profitability is the key factors that helps managers in developing an effective profitability strategy for their company [1].

According [2], one of the importance precondition for long-term firm survival and success is firm profitability. The achievement and other financial goals of the firm’s are significantly affected by the profitability determinant of the firm. Those factors are important because it give an effect to the economic growth, employment, innovation and technological change. The primary goal of the company is to maximize their profitability. Without profitability a firm could not attract outside capital and the business will not survive in the long run. By knowing and understand firm profitability, it will give the feedback for the firm. The firm can find a policy that should be taken to solve the problem and minimize the negative impact for business continuity.

There are many previous studies of profitability determinants. Most of them were performed in the industrial organization discipline and using the large sample of businesses. Such as [3] found the determinants of firm profitability are lagged profit rate, lagged productivity level, its persistence, firm size and sector effects using data of 961 large Australian firms. [4] investigate the factors affecting profitability of the commercial banks in India after the reforms, it’s found that the profitability and efficiency of private sector banks are comparatively higher to other banks. [5] have examined the influence between bank-specific and macro-economic profitability characteristics using data of top fifteen Pakistan commercial banks over the period 2005-2009. [6] also analyze the factors affecting of commercial banks evidence from Latvia using Return on Asset (ROA) and Return on Equity (ROE) as an indicators for the profitability. Many of them have emphasized medium-sized and large firm profitability determinants, however only several researcher examined the determinants of SME-firm’s profitability. Profitability at micro economic level have studied depending on the indicators. Such as [7] investigate factors influencing the company’s profitability at SMEs economic level. According to [8] have examined factors determine profitability of micro firm based on Swedish data. The study indicates that firm size, growth of sales, lagged profits, productivities, asset turnover and firm’s age are the variable that affecting profitability. The findings are growth and total factor productivity have a significant positive effect on micro-firm profitability, and that size is found to have a significant negative effect on micro-firm profitability.

Small Medium Enterprises’ (SMEs) is an independent business, having a small market share and managed by its owner or part-owners. Actually there are wide diversity of the businesses, so there is no single definition of a small firm because each country have their own definition for SME Firm. According to [9], in the European Union, Small and medium-sized enterprises (SMEs) are non-subsidiary, independent firms which have characteristics such as the employ fewer than a given number of employees. However, the limitation numbers of employee are various across countries. Some countries set the limit at 200 employees. In United States SMEs can be define as a firms with fewer than 500 employees.

The direct result of managing various economic resources and their efficient use within operational, investment and financing activities is in the SMEs level performance [7]. According to [8], SMEs businesses play a key role in the generation of jobs, new ideas and encouragement of entrepreneurial activity, and make a major contribution to the well-being of nations. The profitability or performance
of SMEs firms is important for the evolution of firms and regional development. For Indonesia itself, the role and contribution of SMEs in the national economic structure not only become one of the national priorities but also the hope for accelerated development. National SMEs firm is one of the pads that keep the national economy especially when there is a shocks or external pressure. In the current global economy worsens, SMEs firm act as a pillar of national economic growth and job creation.

SMEs firm in Indonesia have increased considerably in the last two years. It is proven by the addition of approximately three million hits in the last two years. The increase can be seen from the total SMEs ranged 52.8 million units in 2010 and then increased to55.2millionunits.Therefore, the researcher is motivated to identify factors determining the profitability of SMEs Firm in Indonesia by examining the effect of variables such as firm size, firm age, growth, productivity, and industry affiliation that will influence to the firm’s profitability. Based on the previous research the study about factors affecting profitability in SMEs is important for the evolution of the firm and regional development. This study wants to extend from the previous study and examine the key variable that will influence firm profitability. Therefore the research questions in this study are: How do firm size, age, growth, lagged profitability, productivity and industry affiliation affect company profitability.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Finance, its a major areas and opportunities, and the legal form of business organization. Financial management is an art and science of managing money through planning, organizing, leading and controlling the financial activities in order to achieve the goal of the organization. One of the most frequently used tools of financial ratio analysis is profitability ratios which are used to determine the company's bottom line and its return to its investors. Every firm is most concerned with its profit. Profitability ratios show a company's overall efficiency and performance. So it will helps to provide feedback for the management decision for the long term success of the company [1].

A. Firm Size

There are various result of the effect between firm size and profitability. [10] found a positive influences between firm size and profitability. [11] The study found that size has a positive large effect with profitability. [12] also found that size of the firm positively influence the profitability. [12] The study found the positive effect between size and ROA. While [8] found that firm size have a negative effect to the profitability.[13]also found that the firm size negatively related to the firm performance.[14]specifically added, companies that have a smaller size will result in higher profits but no longer competitive than larger companies. The following hypothesis is formulated:

**H1:** A firm’s size influences its profitability ratio.

B. Firm Age

According [10] the finding of this study indicates that firm age positively effects to the profitability. While [2] the empirical study indicates that age of the firm negatively influence the profitability. [8] found that firm age have a negative effect to the profitability. [15] The study also found that the firm age negatively related to the profitability. [16] The finding of this study indicates that there is no influence between ages of the company to the profitability. Based from the previous research, the following hypothesis is formulated:

**H2:** A firm’s age influences its profitability.

C. Growth

According to [10], investigate that growth rate is significantly effects to profitability. According to [2], the study have examined that growth of the firm positively influence the profitability.[8]found that firm growth have a positive effect to the profitability. While [17] have examined the determinant of firm growth. The study found that growth of the firm have a negative effect to the profitability. [18] also found that growth of the firm have a negative influences to the profitability. Based from the previous research, the following hypothesis is formulated:

**H3:** Firm growth influences profitability.

D. Lagged Profitability

According to [11], the study found that lagged profitability have a positive large effect with the profitability. [19] the study also investigate that past profitability is significantly associated with profitability. According to [2], the study have examined that lagged profitability of the firm positively influence the profitability. [8] the findings indicates that lagged profitability influence to the profitability. According to [20] the study also found that lagged profitability are the main profitability determinants. Based from the previous research, the following hypothesis is formulated:

**H4:** A firm’s lagged profitability influences its current profitability.

E. Productivity

According to [11] have examined the determinant of profitability in large Australian firms. The study found that productivity have a positive large effect with the profitability. [2] The study have examined that productivity of the firm positively influence the profitability. [8] The study found that productivity have a positive effect to the profitability. Based from the previous research, the following hypothesis is formulated:

**H5:** A firm’s productivity influences its profitability ratio.

F. Industry Affiliation

According to [10], the study concluded that vertical integration is significantly associated with profitability. The study by [8] the finding indicates that firm industry affiliation have a positive effect to the profitability. [20] the study also found that industry affiliation influence to the profitability of the firm. While, [2] the study have examined that industry affiliation of the firm negatively influence the profitability. Based from the previous research, the following hypothesis is formulated:

**H6:** A firm’s industry affiliation influences its profitability ratio.
III. RESEARCH METHODOLOGY

Research objects of this study are the firm that listed in Indonesian Stock Exchange Market with criterion as a SMEs firm. The information source will be used are: data of the firm based on PEFINDO 25 index on period August 2011-January 2012. The data includes detailed balance sheet, income statement, and other financial data of PEFINDO 25 during the period of 2007-2012. PEFINDO 25 index is the Index that represents the stocks of Small and Medium Enterprises (SMEs) with good fundamental performances and liquidity that are listed in Indonesian Stock Exchange (IDX). The data was collected in this research is 132 observations, the sample included from 22 companies multiplied by 6 years.

A. Variables and Measurement

This study has 2 variables, dependent and independent variables. Table I shows variables and their measurement.

<table>
<thead>
<tr>
<th>TABLE I: VARIABLES AND MEASUREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable (X)</strong></td>
</tr>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>Profitability</td>
</tr>
<tr>
<td>Firm Age</td>
</tr>
<tr>
<td>Growth (Sales Growth Rate)</td>
</tr>
<tr>
<td>Lagged profitability</td>
</tr>
<tr>
<td>Productivity (Labor productivity)</td>
</tr>
<tr>
<td>Industry Affiliation</td>
</tr>
</tbody>
</table>

According to [3], this method is a statistical method which usually used to examine the determination of the factors which influence the profitability. Multiple regression analysis reveals the relationship between several independent or explanatory variables and a dependent variable[12]also have examined the effect of determinants on companies profitability using Classical linear regression. The regression model for the complete sample:

\[
\text{ROA}_t = \alpha + \beta_1 \text{Size}_i + \beta_2 \text{Age}_i + \beta_3 \text{Growth Rate}_i + \beta_4 \text{Lagged Profitability}_i + \beta_5 \text{Productivity}_i + \beta_6 \text{Industry Affiliation}_i + \epsilon_t
\]

IV. FINDINGS AND DISCUSSION

In this study there were 22 companies that have entered PEFINDO 25 Index. The company consists of several different industry sectors included service industry, manufacturing industry and industrial raw material producers. These 22 companies divided into various sub-sectors of Property and Real estate 31.81%, Trade sector, Service and Investment 22.72%, Financial sector 18.18%, Infrastructure, Utilities and Transportation 4.54%, Manufacture 18.18%, Agriculture 4.54%. And the most sub-sector industry’s that dominated in this study is from sub-sector of property and real estate as much as 31.81%. The descriptive statistics of the variable 13 shown in the Table II.

<table>
<thead>
<tr>
<th>TABLE II: DESCRIPTIVE STATISTIC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variables</strong></td>
</tr>
<tr>
<td>Roa</td>
</tr>
<tr>
<td>Size</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Growth</td>
</tr>
<tr>
<td>Lagproft</td>
</tr>
<tr>
<td>Productivity</td>
</tr>
<tr>
<td>Industryaffiliation</td>
</tr>
</tbody>
</table>

A. Firm Size

The hypothesis testing of variable size to the profitability, the result indicates that there is significance influences between firm size to the profitability. The result of this study is different from the study that have examined by [2], [10]-[12], all of the study found that size of the firm have positively influence the profitability. The larger the firm, the better its access to the resources the more likely it is to increased profitability. Since performance of large size companies are better than small size companies in terms of take advantage economics of scale in transactions and enjoy a higher level of profits.

This result in accordance with the study of [8] and [13], which have examined and found that firm size have a negative effect to the firm profitability. The size in here is based on the companies total assets. There is an influence between size and profitability. However, the negative result indicates an inverse influence, means that the larger the size of the firm it will achieve lower level of profitability. Since the larger firms would be harder to manage their organizational effectiveness from overcoming problem in bureaucratic management structure. In the other hand the smaller the size of the firm it will increase the level of profitability. According to them minister of cooperatives and SMEs, Syarif Hasan, SMEs firm in Indonesia have the limitation of assets, this condition occurs because of the issue of financing for capital. This problem become a classical problem in the SMEs sector in the world, and does not only happen in Indonesia. The limitation of assets makes the management to increase the production levels at the optimum level. This limitation also makes the management think about the right strategy in the selection of markets, the appropriate technology, and the strategy to compete in the same market. i.e with the limitation of asset the firm define the strategy to do an outsourcing by rent the tools or technology from another firm to support the production process. Outsourcing is the activities of the firm in which to free up cash, time, personnel, and facilities to hold the competitive advantage of the firm. So that they will reduce the cost to buy an asset, it makes the production more efficient. Therefore the firm can get higher profit.

B. Firm Age

The hypothesis testing of variable age to the profitability
the result indicates that there is negative and no significance influences between firm age to the profitability. It means that whether old or not the age of the firm does not affect to the level of profitability. The result of this study is different with the study by [10] which found that firm age positively effect to the profitability. However the result of this study is in accordance with the study by [2] which have examined that firm age is negatively related to the firm profitability. [8] also found that firm age have a negative effect to the profitability.[16]the study found that there is no influences between firm age to the profitability. The study argues that the older the firm it cannot be concluded it will be the more profitable. The younger the firm the more it associated with the new innovation, more information, knowledge and opportunities compared with the older firm. [15] also found that statistically there is no significant influences between age of the firm to the profitability. The younger companies or newly establish was success to reach the goal of the company to reach the profit from the opportunities in the market.

C. Growth

The hypothesis testing of variable growth to the profitability, the result indicates that there is negative and significant influences between firm growth to the profitability. It means there is an influence between growth and profitability, and the negative coefficient result indicate that the higher the level of sales growth rate of the firm it will reduce the level of profitability, in contrast the lower level of sales growth rate of the firm it will increase the level of the profitability. The result of this study is different from the study that have examined by [2], [8] and [10] which found that growth of the firm have positively influence the profitability. Since the firm with higher level of growth are more likely to be profitable.

This result in accordance with the study of [17] which have examined and found that growth of the firm have a negative effect to the profitability. There is an influence between growth and profitability. The negative result indicates that the firm that have the lower level of sales growth rate of the company it will increase the level of profitability. The innovation is one of the key factor to increase the high growth of the company [9]. Actually the business growth of SMEs is still not optimal, because most of SMEs have not the courage to make an innovation. So that business activities and production results obtained did not change significantly. This condition makes the competitiveness of SMEs in Indonesia have not been so strong in the global market. According to the World Bank that in line with the modern theory, SMEs is very important because it can increase the economic growth and development of a country. It is supported by the argument that some SMEs can boost employment more than large businesses. Although the growth of SMEs did not change significantly, but SMEs generally it is more productive than large businesses. Since, the SMEs have a smaller scope of the organization so that it is easier to set up the businesses. It will result the more productive the more will improve the level of profitability as well. In contrast the higher level of sales growth rate of the company it will reduce the level of the profitability. Since According to [21], the volume of sales aims to determine the ability of management to control the costs. When the sales volume increases, some costs such as the cost of storage, advertisement, delivery, packing. it will increase as well. So that, when the cost of goods sold and the cost is so high that it is likely the company get lower profitability. It also can be because the firm considering the growth prospect of the firm and try to do the investment. The firm is not trying to make money now, however they ensure that in the future there will be a great profit. They tend to make a high investment that will increase the growth of the firm therefore it will result the lower level of profitability.

D. Lagged Profitability

The hypothesis testing of variable lagged profitability to the profitability, the result indicates that there is negative and significant influences between firm lagged profitability to the profitability. It means that there is an influence between lagged profitability to the profitability. However the negative coefficient result shows that the ability of the company to generate profit in previous years would be on the contrary effect to the level of profitability in current year. The result in this study in accordance with the study of [2], [8], [11] which have examined and found that lagged profitability influences to the profitability. The study found that lagged profitability have a large effect with the profitability. Since, the higher level of profitability in the past year it more likely to be profitable in current year. According to [20] the study found that lagged profitability are the main profitability determinants. [19] the study also investigate that past profitability is significantly associated with profitability. The consistency of the profitability in the past year and current year it can be different and difficult to compare their profit. This condition related to the company itself. Since every company are set up differently and have different level of debt, i.e some companies have a small level of profitability in past year, this condition because they borrow a lot of money to support their business activity. Therefore they have to pay interest on those loans. While in the current year they can generate more profit because they learned from the previous year. The limitation of assets makes the management to increase the production and productivity levels at the optimum level. Therefore, it will resulting the more productive the more will improve the level of profitability as well.

E. Productivity

The hypothesis testing of variable productivity to the profitability the result indicates that there is positive and significant influences between firm productivity to the profitability. It means that the productivity in terms of labour productivity of the company would affect the level of profitability of the firm. The result of this study in accordance with the study that have examined by [2], [8] and [11] which found that productivity of the firm have positively influence the profitability. The firms productivity is the strongest factors affecting profitability. The higher level of productivity the more the firm to be profitable. This result supported by the study by the World Bank researchers, SMEs generally it is more productive than large businesses. Since, the SMEs have a smaller scope of the organization so that it is easier to set up the businesses. The limitation of
assets makes the management to increase the production and productivity levels at the optimum level. Therefore, it will resulting the more productive the more will improve the level of profitability as well.

F. Industry Affiliation

The hypothesis testing of variable industry affiliation to the profitability the result indicates that there is positive and significant influences between firm industry affiliation to the profitability. It means that the affiliation or integration of the company with another company would affect the level of profitability. The result of this study is different from the study that have examined by [2], which found that firm industry affiliation of the firm have negatively influence the profitability.

However, this result in accordance with the study of [8], which have examined and found that firm industry affiliation have a positive effect to the profitability. [19] the study have investigate that vertical integration is significantly associated with profitability. Since the avoidance of cost incurred in using the market of organize production and government policy are some consideration of firm specific vertical integration. [20] the study also found that industry affiliation influence to the profitability of the firm. There are some benefits that can be reach by the company when they implementing the vertical integration. Although it is often hard to revere but difficult, it give the benefits to control the input access i.e. control the cost and quality and also delivery times of those inputs. Those things makes the company more effective and efficient when operate the businesses, so it will increase the profitability of the firm.

Table III shows summary results of multiple regression.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Sig.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>-0.065</td>
<td>0.001</td>
<td>rejected</td>
</tr>
<tr>
<td>Age</td>
<td>-0.030</td>
<td>0.608</td>
<td>fail to reject</td>
</tr>
<tr>
<td>Growth</td>
<td>-0.034</td>
<td>0.039</td>
<td>rejected</td>
</tr>
<tr>
<td>Lagged Profitability</td>
<td>-0.052</td>
<td>0.066</td>
<td>rejected</td>
</tr>
<tr>
<td>Productivity</td>
<td>0.069</td>
<td>0.000</td>
<td>rejected</td>
</tr>
<tr>
<td>Industry Affiliation</td>
<td>2.568E-8</td>
<td>0.015</td>
<td>rejected</td>
</tr>
</tbody>
</table>

V. CONCLUSION

The result from investigating sample of SMEs firm listed in Indonesia Stock Exchange shows (Table III) that firm size, growth, lagged profitability, productivity and industry affiliation are significant influence to the profitability, while firm age negatively and no significant influence it. This study has found that productivity and firm size are the strongest determinant of profitability.

For Firm/Managers

The result of this study is expected to be useful for the management of the firm which can be used as an input or base to improve their performance. The primary goal of the company is to maximize their profitability. For management to further improve its performance is to focus on improving some factors that positively affect firms profitability such as:

- Productivity, through give the reward or bonus for the employee and make a good environmental condition in the workplace, in order to make the employee more feels comfortable and loyal to the firm, therefore makes them more productive and will resulting the more profitable the firm.
- Industry affiliation, do more industry affiliation trough increasing the relationship with another parties such supplier and distributor in order to helps the management to control the input access. It also can increase the standard of high quality product to attract consumers. So that is possible to raise capital for the business development of the firm.

For investors who will invest in Indonesia stock exchange, investing in stocks that categorized as SMEs firm can be one of the good investment alternative, because the stock of SMEs firm performance is quite good. It can be seen from the analysis and discussion of this study which indicate that SMEs firms probably have the high value of the profitability. With the limited of assets owned, makes management to found the strategy to increase the level of production up to the optimum level, so it can produce a high level of profitability. SMEs also more productive rather than larger businesses, it will be resulting the higher level of profitability. So it can be used as a consideration in the decision making and can be used as one tools to determine in which areas the company have to invest, as well as it will reduce the risk of loss and produce a good stock return.

To spur the government to further improve its performance in the protection and empowerment of small and medium enterprises. One of the ways to boost SMEs sector in the future the government should extend with the new regulations in the form of government policies such as laws and regulations related to SMEs from the production side and the banking side. i.e. a special credit scheme with terms that are not burdensome for SMEs, to help improve its capital base, either through the formal financial services sector, the informal financial services sector, guarantee schemes, leasing and venture capital funds. The Government also needs to pursue the creation of a conducive environment such as by trying to seek security as well as the simplification of licensing procedures, tax breaks and so on [22].

For further researcher, the result of this study can be used as a material practice of writing scientific research as well as increase knowledge about profitability determinant in SMEs firm. They can use this research result as one of the source about profitability determinant in SMEs firm and its relationship.

REFERENCES


