THE SURVIVAL OF SMALL AND MEDIUM BUSINESS

Kristanti F. T., Rahayu S., Isynuwardhana D.*

Abstract: Small and Medium Businesses (SMEs) in developing countries are always associated with economic and social problems (for example: poverty, unemployment, economic inequality). Therefore, the development of this business is expected to contribute positively to these issues. In order to realize this, SMEs must be sustainable, at least they must be able to avoid financial distress. Financial distress occurs when a company is unable to fulfill its obligations. This study aims at analyzing the survival time and determinants of financial distress from SMEs in Indonesia. Purposive sampling used in the data of companies listed on the Indonesia Stock Exchange produced 34 samples of SMEs. The survival analysis used because it is more consistent and accurate. The Cox Hazard Model was used and found the fact that for SMEs in Indonesia, the probability of experiencing financial distress after eight years was small. Age and Net working capital to total assets negatively affected financial distress, while inflation and economic growth had a positive effect on SMEs financial distress in Indonesia. Therefore, it is important for companies to survive for up to eight years by having optimum working capital, since macro factors are difficult to control by the companies. The policy makers are recommended to keep monitoring inflation and economic growth so that Indonesian SMEs can survive.

Key words: Financial Distress, SMEs, Survival analysis

DOI: 10.17512/pjms.2019.20.2.26

Article history:
Received August 27, 2019; *Revised* October 13, 2019*; Accepted* October 28, 2019

Introduction

SMEs have a significant role in the economy of any countries. Indeed, it becomes the backbone of Indonesia's economy (Kristanti, Rahayu, and Isynuwardhana (2019). However, the sustainability of SMEs is difficult to manage (Majid, Hamdani, and Faisal, 2018). If this issue cannot be addressed, a bankruptcy may occur. Thus, it is necessary to understand how many years it takes to survive and what factors influence it.

Many factors may affect the sustainability of SMEs, governance issue, financial and macroeconomic performance. Gender diversity in the Board is also an interesting topic to study in the context of a corporate financial distress. Likewise, the problem of liquidity, profitability and solvency may be the cause of SMEs' financial distress. In addition to company performance, another reasonable factor is macro-economic condition. SMEs are companies that are susceptible to interference when facing troubles in the economy. In addition inflation and

* **Farida Titik Kristanti**, **Sri Rahayu,** Dr. SE., M.Ak, **Deannes Isynuwardhana**, PhD., Telkom University, Indonesia.
✉ Corresponding author: farida_titik@yahoo.com
✉ srirahayunchi@yahoo.co.id; deannesisynu@gmal.com

economic growth are two factors that may trigger financial problems in small and medium scale companies (Muljaningsih, 2019).

Many studies on financial distress in SMEs have been conducted and mostly are qualitative study, which means only few studies applied financial approach (Abdullah, Ahmad, Zainudin, and Rus, 2019; Altman and Sabato, 2007) also applied the approach for their SMEs' study in the US from 1994 to 2002. In Germany, Behr and Gutter (2007) found evidence that SMEs relied more on equity capital, colleagues and business association. Furthermore, Pederzoli and Torricelli (2010) discovered that equity to assets ratio, earnings before interest and tax (EBIT) to assets, long-term liabilities to assets and sales to assets negatively affected the failure of SMEs. In addition, Cox, Kimmel & Wang (2017) conducted the analysis of banks in the US, Purves and Niblock (2017) on companies in the US and Australia. Similarly, Cao (2012) conducted SMEs' survival analysis in China, Ptak-Chmielewska (2013) in Ireland and Kim and Hwang (2019) in Korea.

In Indonesia, the studies on financial distress using survival analysis have also been conducted. Kristanti, Effendi, Herwany and Febrian (2016) and also Kristanti & Effendy (2017) conducted studies in the manufacturing sector, and Kristanti and Isynuwardhana (2018) conducted the analysis for various sectors in the companies listed on IDX. However, among the previous studies, especially in Indonesia, there have not been any studies conducted in SMEs. Thus, this study seeks to address this research gap building a robust framework for SMEs in Indonesia particularly to find out the survival time of SMEs and its determinant factors. By understanding this, any SME may have precautions prior to the occurrence of financial distress. This study is motivated to contribute to the literature in the field of finance, especially on financial distress in emerging markets like Indonesia (Hamzani, 2018). Hence, it is believed that this is the first study on survival analysis in Indonesian SMEs.

Literature Review

Survival analysis is a dynamic statistical instrument used to study the failure time of a population, which is regularly named survival time. This model is based on the survival time or hazard rate of the dependent variable. The aim of this analysis is to quantify the relationship between survival time and the number of explanatory variables. The most popular model is the proportional hazard model (CPHM). The CPHM is a robust model, in which the results may be close (closely approximate) to the accuracy of the results of the parametric model (Kleinbaum and Klein, 2012).

In relation to gender, corporate governance researchers argue that gender diversity has the potential to positively influence company performance. Board members, who vary in gender, may improve board's activeness in which it may improve the company performance to avoid financial distress. The researchers argue that board diversity positively influenced company performance (Smith; Smith and Verner, 2006). The female directors are expected to decently reflect the representation of

the company's customers and employees; thus, it may improve the company's performance. Kristanti (2015) found that gender diversity had a negative effect on the cost of financial distress. But research by Kristanti amd Iswandi (2019) found thar gender diversity had no effect.The studies that support argument were conducted by Adams and Ferreira (2009) and Carter (2003) that found that the presence of women in the board of directors had a positive influence on the corporate value as measured by Tobin's Q.

In addition, financial ratios have a significant role in this research. Financial roles are derived from financial statements: income statements and balance sheets, which are widely used as predictors in discriminant analysis (Beaver et al., 2005; Katchova and Enlow, 2013; Ciampi, 2015; Charitou et al., 2015). It is the main ratio in predicting financial distress in addition to corporate governance (Ciampi, 2015). Moreover, Katchova and Enlow (2013) conducted the performance ratio in the agro-business listed in the US. Meanwhile, Russel et al. (2013) conducted their study using liquidity and solvency ratios to measure cost efficiency. In contrast, this study adapts liquidity ratios, solvency, profitability and market ratios. Once the liquidity is high, companies have enough working capital in order to produce good performance; thus, they could avoid financial distress. Similarly, the presence of profitability may also have a negative impact on financial distress Kristanti et al. (2019) state that when there is a liquidity problem many things are possible to happen, such as the emergence of difficulties in accessing external funding, which will ultimately reduce the company's profitability and increase the risk of failure. Conversely, if the company is in a high debt, the risk of the financial distress may increase and it may disrupt the company's performance and result in financial distress. Thus, it can be said that the high leverage may increase the possibility of the company falling into financial distress.

Macro indicators need to be considered as one of the important aspect. This is with the notion that the danger of company bankruptcy can be predicted by looking at financial indicators and the company's capital structure without ignoring the influence of its macroeconomic environment. Thus, companies may experience a downturn during an economic recession compared to when the economy is prosperous.

Inflation is a tendency to increase prices of goods and services at a certain time. Inflation may cause people's purchasing power to decline. If the purchasing power of the people decreases, the company's performance also may be affected. Declining company performance causes the company has the opportunity to experience financial distress. Liu and Wilson (2002) argue that increasing inflation may increase the cost of loan interest on corporate debt in which it generates difficulties and ultimately leads to bankruptcy. Thus, there was a positive influence between company inflation and distress.

In relation to the aforementioned issue, Gross Domestic Product (GDP) reflects the economic growth of a country. Moreover, GDP had a good impact on sales and

corporate profits and it helped the company to avoid distress. There was a negative influence between GDP on SMEs distress (Jardin & Pereira (2013).

Research Method

This study formalized a financial distress prediction model for small businesses listed on IDX. Failure time was applied for the dependent variable in this model; the failure time is the time length of small businesses experiencing an event. According to Kleinbaum and Klein (2012), events are designed experiences that might occur to individuals. In this study, time to event is the number of years from the beginning of the year, when the company is listed on the stock exchange, to the year the company experiencing an event that is financial distress. Distress companies are companies with negative EPS (Elloumi and Guyie, 2012; Kristanti et al., 2019).

This study obtained the data in the range of ten years (2009-2018). Purposive random sampling was applied in this study in which it is based on the small business criteria, which is in accordance with Law No. 20 of 2008 stating that the companies must have income from 300 million to 50 billion rupiahs and must have complete data during the study period. The research samples comprised 34 selected small businesses from companies listed on Indonesian Stock Exchange (IDX) in range of 2009-2018.

The covariates of this study are gender diversity, debt equity ratio, age, price book value, net working to total assets, operating income to total assets, inflation and the proportion of domestic products. The CPMH is a semi-parametric model for survival analysis, which is very widely applied. The proportional hazard model is presented as follows:

$$hi\ (t) = h0\ (t) \exp\ (X1, \beta)$$

Exponential elements in the hazard model as in formula 3 can be transformed into log form of the regression model. It can be edited as follows:

$$\log hi\ (t) = \alpha\ (t) + \beta_1 Xi + \beta_2 Xi + \beta_3 Xi + \ldots\ldots\ldots\ldots + \beta\iota\ Xi$$

Ultimately, the CPHM, which will be used to assess the relationship of the explanatory variable and the survival time and to evaluate the probability of companies' survival within a certain time frame, uses the model as follows:

$$\log hi\ (t) = \alpha\ (t) + \beta_1 GDIVi + \beta_2 LEVi + \beta_3 NWTAi + \beta_4 OITAi + \beta_3 AGEi + \beta_6 PBVi + \beta_7 INFi + \beta_8 GDPi$$

hi (t) = the hazard of company in entering in its financial distress at time t
α (t) = log h0 (t)
h0 (t) = the function of hazard for individuals who have a value 0 for all variables

Results and Discussion

The descriptive statistics presented in Table 1 show that the average small business in Indonesia was in the state of financial distress during the study period. This can be seen from the mean value of 0.82. It is strengthened by the average SMEs having negative operating income. In addition, it turns out that SMEs in Indonesia did not have significant gender diversity (mean 0.23). Another interesting fact was that the average SMEs in Indonesia, the capital structure was not conservative (118%). Conservative financial management is when the proportion of debt is equal to own capital of 1. Large debt will increase the risk of the company that will lead to company default and eventually bankrupt if productive activities are not conducted. However, the average SMEs in Indonesia still had a relatively small proportion of net working capital compared to total assets (12.68%). The average performance of SMEs was also relatively poor (-8.03%), although the price of Book Value was quite good (746). The average SMEs also had an age of 21.53 years, measured from the time the company was established. While the economic conditions in the study period were relatively good with macro indicators, inflation averaged 5.10% and economic growth 6.98%.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TIME	34	2.0	10.0	4.853	3.1826
FD	34	0	1	0.82	0.3870
GDIV	34	0.0000	1.0000	0.2279	0.3093
LEV	34	-1.5	15.03	1.1880	2.6802
NWTA	34	-1.7852	0.9853	0.1268	0.5544
OITA	34	-0.3840	0.0942	-0.0803	0.1198
AGE	34	4	45	21.5290	8.6873
PBV	34	-0.40	4730.4489	745.7421	4730.438
INFLASI	34	0.035	0.0696	0.0510	0.0197
GDP	34	0.0502	0.0961	0.0698	0.0185

Source: Authors' elaboration

The omnibus test result shows that the model is fit; it is due to the value -2 Log comprises the Likehood 143.722, the Chi-square value of 24.667 and the probability of 0.002. The fit model means that there is at least one regression coefficient in the minimal model whose value is not equal to zero.

The result of the statistical test found that the factors affecting the likelihood of companies experiencing financial distress in SMEs in Indonesia were inflation, economic growth, working capital and company age (Table 2). The resulting model is as follows:

$$\log hi\ (t) = \alpha\ (t) - 1.054\ GDIV - 0.101 LEV - 0.889\ NWTA - 2{,}441\ OITA - 0.075\ AGE + 0{,}000\ PBV + 62.126 INF + 1{,}890\ GDP$$

Table 2. Statistical Results

	B	SE	Wald	Sig.
GDIV	-1.054	0.748	1.984	0.159
LEV	-0.101	0.096	1.109	0.292
NWTA	-0.889**	0.448	3.934	0.047
OITA	-2.441	1.680	2.113	0.146
AGE	-0.075**	0.033	5.063	0.024
PBV	0.000	0.000	1.675	0.196
INFLASI	62.126***	15.656	15.747	0.000
GDP	1.890**	0.883	4.589	0.032

***) sig. at 1% **) sig. at 5% ***) sig. at 10%

Source: estimation results

Figure 1 depicts the survival function: the probability of the company experiencing an event at a certain time. It shows that the probability of SMEs in Indonesia experiencing financial distress after 8 years that was significantly small.

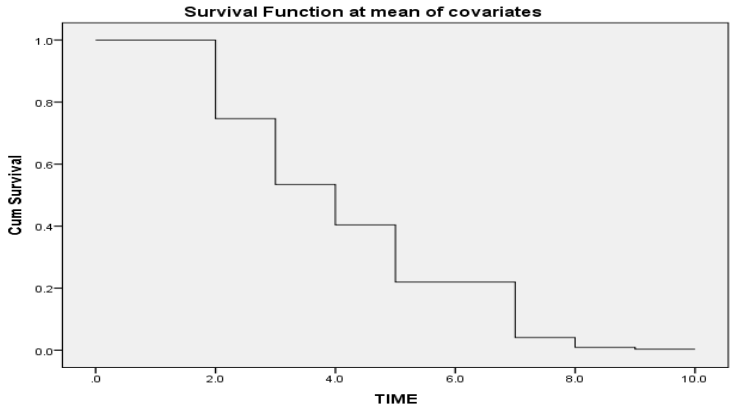

Figure 1. Survival function of Indonesian SMEs from 2009 to 2018

Discussion

Macro variables, inflation and growth domestic product (GDP) had a positive effect on the likelihood of SMEs experiencing financial distress. The higher inflation means the greater possibility of SMEs experiencing distress. Inflation is a situation in which there is a tendency of price increase in a country within a certain time, which decreases the purchasing power of people. As a result, low purchasing power may make the company decline in sales resulting in company suffered losses and experienced financial distress ultimately. In Indonesia, during the study period, inflation occurred was relatively low (mean 5.1%); the average economic growth

was only 6.98%. This result is in line with Jardin and Pereira's study (2013) stating that there was a positive influence between inflation and bankruptcy/financial distress.

High economic growth is favored by any country's government. Due to high economic growth, economic activities could be more stretched and could bring prosperity to the people. However, uncontrolled economic growth may trigger inflation. Thus, as in the result of this study, it revealed the fact that there was a significant positive effect between economic growth and the likelihood of SMEs experiencing financial distress. In other words, the higher the economic growth means he more the company stresses. This result are in line Ptak-Chmielewska (2013) and Jardin & Pereira's studies (2013) who found a negative influence between GDP and the survival time of SMEs experiencing distress.

Net working capital is the working capital used to run the company's daily activities. It can be said in a decent condition, when it has a positive value, there are still enough current assets to pay its current liabilities. The statistical test result shows that there is a significant negative effect between the ratio of working capital to total assets and the likelihood of SMEs experiencing financial distress. Large company working capital may reduce company distress; in meaning that the greater the company's working capital means the easier the company finance's activities. The mean of 0.1268 indicated that the management of SMEs working capital in Indonesia was reasonably decent. This result is in line with Ptak-Chmielewska's study (2013) discovering a negative influence between networking capital and its survival time.

Operating Income is the deviation of the gross profit and the total company operating cost. In meaning that the higher the value of operating income means the more efficient of company in managing its operating costs. SMEs in Indonesia had an average of OITA ratio -0.0803. This means that, in this study period, many SMEs experienced inefficiencies in their business costs. Another fact that makes OITA negative was the possibility of sales that declined; thus, those SMEs were unable to cover operating costs. The test result also shows a significant negative effect. If OITA increases, the likelihood of SMEs experiencing distress could decline. This result is in line with Ptak-Chmielewska's (2013) study that found a negative influence between profitability and survival time. These results are in line with the Pederzoli and Torricelli's study (2010).

Other financial ratios did not have a significant effect on SMEs distress in Indonesia, but gender diversity, DER and AGE had negative effects on Indonesian SMEs distress. It means that the higher the value of these variables, the lower the SMEs experiencing the distress. Gender diversity, which shows the diversity in the board, could invite a decent influence on the company performance in order to avoid distress.

High LEV indicates the amount of foreign capital used by companies. High leverage, however, used to increase company activity, may improve the company's decent performance and prevent financial distress. The statistical test result shows

that there was a negative influence between leverage and survival time of the company experiencing financial distress even though it is not significant. This result is in line with Ptak-Chmielewska (2013) and Pederzoli and Torricelli's studies (2010) who found a negative influence between leverage and the survival time of SMEs experiencing financial distress. However, it is in contrast to Abdullah, Ahmad, Zainudin and Rus' study (2019) in Malaysia.

Similarly, a mature company could prevent the company from experiencing distress; the longer the company operates, the better the company's learning curve. This positive fact should make the company perform better from day to day; thus, it may avoid financial distress. The result of this study indicates that there was a negative effect even though it was not significant. This result is in line with Abdullah, Ahmad, Zainudin and Rus' study (2019) in Malaysia.

The result of survival analysis shows that SMEs in Indonesia had a very low probability of experiencing financial distress after eight year period. This is emphasized by the result of the statistical test showing that AGE negatively influences the financial distress of SMEs in Indonesia even though it is not significant. The companies that could avoid financial distress are companies that had a longer operating period.

Managerial Implications

Based on the aforementioned findings, the implication of this study is that SMEs in Indonesia must continue to strive to survive up to eight years in order to have a smaller chance of distress. SMEs in Indonesia can do many things to be able to survive until that time. The primary thing to do is constantly strive to increase sales. This could be done by making various efforts; thus, the company's products are in demand by consumers. Manufacturing a better product should be in a concern for SMEs in Indonesia. In order to win the competition in the market, SMEs in Indonesia, indeed, could provide better service than its competitors. In addition, another important thing is to strive for cost efficiency especially in operational costs; for example, the costs included in the cost of goods sold group, which consisted of the cost of raw materials, labor costs and overhead costs. Other business costs, such as general administrative costs and sales costs, are the costs that must also be sought in order to be efficient.

Indeed, the companies, in this case SMEs in Indonesia, cannot prevent financial distress alone; it is due to that macro variables are shown to have a significant effect on SMEs distress in Indonesia. This is the government's duties to control the economy conditions. Even though the economic growth is a positive influence for the welfare of the people, high economic growth may actually increase the probability of companies experiencing distress; thus, the government must maintain that economic growth in a balance state. The high economic growth may actually trigger inflation in which it may reduce people's purchasing power. Thus, economic growth and inflation are two interrelated events and have a negative impact on SMEs in Indonesia. Inflation control could be done with many instruments owned by the government both using fiscal and monetary policies.

Using the right policies, the economic growth and inflation are maintained at optimum levels as targeted by the government; thus, it could make the national economy run as desired

Conclusion

After eight years, the probability of Indonesian SMEs' survival in order to avoid distress was higher. From 2009 to 2018 period, the estimation result shows that many SMEs in Indonesia experienced financial distress. It is due to that many SMEs had negative operating income. Even though it is not included in the conservative criteria in its capital structure, there were only few SMEs who had high leverage value. SMEs in Indonesia are vulnerable to macroeconomic conditions; the higher inflation and economic growth means the more the company experiencing distress.

Therefore, this study proposes two recommendations. First, the government must always maintain the level of inflation and company growth in order to ensure the survival of SMEs in Indonesia, at least up to eight years. Second, the companies should maintain their working capital. Hence, the SMEs in Indonesia must also continue to strive to increase their operating information in order to avoid distress.

This study has a limitation as it took short time to finish. Therefore, for further studies, the researcher could take longer time to produce a better estimation. In addition, further studies can also be conducted by comparing this study with other ASEAN SMEs. Other research variables that can be included are corporate governance and/or other macro indicators.

References

Abdullah, N.A.H., Ahmad, A.H., Zainudin N. & Rus, R.M. (2019). Predicting Financially Distressed Small- and Medium-sized Enterprises in Malaysia, *Global Business Review*, 20(3), 627-639.

Adams, R.B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance, *Journal of Financial Economics*, 94(2). 291-309.

Altman, E., & Sabato, G. (2007). Modelling credit risk for SMEs: Evidence from the U.S. market, *Abacus*, *43*(3), 332-357.

Beaver, W.H., McNichols, M.F., & Rhie, J.W. (2005). Have financial statements become less Model to Bank Failure, *Journal of Banking and Finance*, 10 (4). 71-111.

Behr, P., & Güttler, A. (2007). Credit risk assessment and relationship lending: An empirical analysis of German small and medium-sized enterprises, *Journal of Small Business Management, 45*(2), 194-213.

Cao, Y. (2012). A survival analysis of small and medium enterprises (SMEs) in central China and their determinants, *African Journal of Business Management*, 6(10), 3834-3850.

Carter, D.A., Simkins, B., & Simpson, W.G. (2003). Corporate Governance, Board Diversity, and Firm Value, *The Financial Review*, 38(1), 33-53.

Charitou, A., & Stephanou-Charitou, M. (2015). Bankruptcy Prediction and Financial Information, *Wiley Encyclopedia of Management*, 1-8.

Ciampi, F. (2015). Corporate governance characteristics and default prediction modeling for small enterprises: an empirical analysis of Italian firms, *Journal of Business Research*, 65(5), 1012-1025.

Cox, R.A.K., Kimmel, R.K. & Wang G.W.Y. (2017). Proportional Hazards Model of Bank Failure: Evidence from USA, *Journal of Economic & Financial Studies*, 5(03), 35-45.

Elloumi, F., & Gueyie, J. (2001). Financial Distress and corporate governance: an survival analysis, *Corporate Governance*, 1(1). 15-23.

Jardin, C.P., & Pereira, E.T. (2013). Corporate Bankruptcy of Portuguese Firms**,** *Zagreb International Review of Economics & Business*, 16(2), 39-56.

Katchova A., & Enlow, S. (2013). Financial performance of publicly- traded agribusinesses, *Agricultural Finance Review*, 73(1), 58-73.

Kim, B., & Hwang, J. (2019). Longitudinal small and medium enterprise (SME) data on survival, research and development (R&D) investment, and patent applications in Korea's innovation clusters from 2008 to 2014. *Data in brief*, 25, 1-6.

Kleinbaum, D.G., & Klein M. (2012). *Survival Analysis, A Self-Learning Text* (3rd Ed.), Springer New York Dordrecht Heidelberg London.

Kristanti, F.T., Effendi, N. (2017). A Survival of Indonesia Distressed Company Using Cox Hazard Model, *Int. Journal of Economics and Management*, 11(S1), 157-169.

Kristanti, F.T., & Isynuwardhana, D. (2018). How long are The Survival Time in The Industrial Sector of Indonesian Companies, *International Journal of Engineering & Technologies*, 7(4.38), 856-860.

Kristanti, F.T. (2015). The Test Of Gender Diversity And Financial Structure To The Cost Of Financial Distress: Evidence From Indonesian Family Business, *Proceeding GTAR-2015*, 2, 554-565.

Kristanti, F.T., Effendi, N., Herwany, A., & Febrian, E. (2016). Does Corporate Governance Affect the Distress of Indonesian Company? A Survival Analysis Using Cox Hazard Model with Time-Dependent Covariates, *Advanced Science Letters*, 22, 4326-4329.

Kristanti, F.T. & Iswandi. (2019). The Difference of Company's Performance from CEO Diversity. *Polish Journal of Management Studies*, 19(2), 240-249.

Kristanti, F.T., Rahayu, S., & Isynuwardhana, D. (2019). Integrating Capital Structure, Financial and Non-Financial Performance: Distress Prediction of SMEs, *Acc. Fin. Review*, 4 (2), 56-62.

Liu, J., & Wilson, N. (2002). Corporate Failure Rates and the Impact of the 1986 Insolvency Act: An Econometric Analysis, *Managerial Finance*, 28(6), 61-71.

Majid, M. S., Hamdani., Nasir M., & Faisal,. (2018). SMEs' Credit Demand and Economic Growth in Indonesia, *Regional Science Inquiry*, X(2). 121-133.

Pederzoli, C., & Torricelli, C. (2010). A parsimonious default prediction model for Italian SMEs, *Banks and Bank Systems*, 5(4), 5-9.

Ptak–Chmielewska, P. (2013). Semiparametric Cox Regression Model in Estimation of Small and Micro Enterprises Survival in The Malopolska Voivodeship, *Quantitative Methods in Economics*, 5(2), 169-180.

Purves, N., & Niblock, S.J. (2018). Predictors of corporate survival in the U.S. and Australia: an exploratory case study, *Journal of Strategy and Management*, 11(3). 351-370.

Russel, L.A., Langemeier, M.R., & Briggeman, B.C. (2013). The impact of liquidity and solvency on cost efficiency, *Agricultural Finance Review*, 73(3), 413-425.

Smith, N., Smith, V., & Verner, M. (2006,). Do Women in Top Management Affect Firm Performance? A Panel Study of 2500 Danish Firms, *International Journal of Productivity and Performance Management*, 55(7), 569-593.

PRZETRWANIE MAŁYCH I ŚREDNICH PRZEDSIĘBIORSTW

Streszczenie: Artykuł omawia problemy związane z małymi i średnimi przedsiębiorstwami (MŚP) w krajach rozwijających się które zawsze kojarzą się z problemami gospodarczymi i społecznymi (na przykład: ubóstwo, bezrobocie, nierówności ekonomiczne). Dlatego oczekuje się, że rozwój tego biznesu pozytywnie wpłynie na te kwestie. Aby to zrozumieć, MŚP muszą być zrównoważone, a przynajmniej muszą być w stanie uniknąć kłopotów finansowych. Trudności finansowe występują, gdy firma nie jest w stanie wypełnić swoich zobowiązań. Niniejsze badanie ma na celu analizę czasu przeżycia i czynników warunkujących trudności finansowe MŚP w Indonezji. Próbki celowe zastosowane w danych spółek notowanych na giełdzie w Indonezji dały 34 próbki MŚP. Zastosowana analiza przeżycia, ponieważ jest bardziej spójna i dokładna. Zastosowano model zagrożenia Coxa i stwierdzono, że w przypadku MŚP w Indonezji prawdopodobieństwo wystąpienia trudności finansowych po ośmiu latach było niewielkie. Wiek i kapitał obrotowy netto do sumy bilansowej negatywnie wpłynęły na trudną sytuację finansową, podczas gdy inflacja i wzrost gospodarczy miały pozytywny wpływ na trudną sytuację finansową MŚP w Indonezji. Dlatego ważne jest, aby firmy mogły przetrwać do ośmiu lat dzięki optymalnemu kapitałowi obrotowemu, ponieważ firmy są trudne do kontrolowania w skali makro makro. Zaleca się decydentom, aby monitorowali inflację i wzrost gospodarczy, aby indonezyjskie MŚP mogły przetrwać.

Słowa kluczowe: trudna sytuacja finansowa, MŚP, analiza przeżycia

中小企业的生存

摘要:发展中国家的中小企业(SME)始终与经济和社会问题(例如:贫困，失业，经济不平等)相关。因此，该业务的发展有望为这些问题做出积极贡献。为了实现这一点，中小企业必须具有可持续性，至少它们必须能够避免财务困境。当公司无法履行其义务时，就会发生财务困境。这项研究旨在分析印尼中小企业遭受财务困扰的生存时间和决定因素。在印度尼西亚证券交易所上市的公司数据中使用的有目的抽样产生了34个中小企业样本。使用生存分析是因为它更加一致和准确。使用了Cox危害模型，发现对于印度尼西亚的中小型企业来说，八年后遭受财务困扰的可能性很小。年龄和净营运资金占总资产的比重对财务困境产生了负面影响，而通货膨胀和经济增长对印尼中小企业的财务困境产生了积极影响。因此，重要的是公司要拥有最佳的营运资金才能生存八年，因为宏观因素很难被公司控制。建议决策者保持对通货膨胀和经济增长的监控，以便印尼中小企业能够生存。

关键词:财务危机，中小企业，生存分析