Application of Triple Bottom Line Factors to Realize Business Performance in the Agro-Industry Sector

Abstract: In the development of business in the agro-industry sector, which is supposed to produce agricultural products, it turns out that in practice many face the threat of agrarian land extinction because it is shifted by industry and property so that the agrarian sector business still needs to be understood. The purpose of this study is to find out 1) what is the level of understanding of business people in terms of the triple bottom line concept, and 2) whether by understanding the triple bottom line concept affects business performance. This is a quantitative study in which data collection uses a questionnaire to obtain data on the understanding of the triple bottom line and its effect on business performance. The variables in this study are the triple bottom line and business performance. The study's population was the agro-industry business in Gondang Subdistrict, Mojokerto Regency, East Java Province, while the study sample was 25 agro-industry business people in Gondang District with a sampling stratifying approach. Technical data analysis uses descriptive analysis and model analysis. The descriptive analysis uses SPSS software, while analysis of PLS-SEM models uses Smart PLS software. The results of the analysis to test business people’s understanding of the triple bottom line concept and its influence on business performance in order to realize the business continuity of the agro-industry sector, show that: t-test for economic, social and environmental aspects, which means that business people understand the importance of using the triple bottom line concept in running a business. The triple bottom line concept is significantly proven to affect business performance. This is based on the statistical test used in the t-test value; significantly the factors found in the triple bottom line concept affect business performance.

Keywords: triple bottom line; business performance and business sustainability; agro-industry sector.

BACKGROUND

Business people realize that competitiveness is very important in strengthening internal potential and being able to adjust to external changes. An important factor in business lies not only in ownership of tangible and intangible assets but also in understanding the importance of business sustainability. Not a few business people experience failures which are the main causes of internal factors. Some research results say that a business like this usually damages the earth’s life support system. On the other hand, sustainable business practices from an economic, social and environmental perspective are essential. Business goals cannot only live in the short term, but businesses are also expected to be able to survive long term while maintaining the environment. Sustainable business can be seen in nine principles that serve as a foundation for managing impacts on stakeholders: ethics; governance; transparency; business relationships; financial returns; community involvement and economic development; value of goods and services; practice of employment; environmental protection (Epstein, 2008) The measurement of company sustainability can be seen from its performance by using sustainable indicators. Azapagic and Perdan (2000) define work frames with indicators consisting of economic, social and environmental. The measurement of a company’s sustainability can also be with multi indicators by providing complexity and very relevant in the context of continuous assessment (Munda, 2005). The combination of eco-efficiency indicators, environmental management systems, environmental costs, sustainable energy production, environmental damage costs, environmental levies, and the number of complaints that are included are mixed indicators that provide a good picture of environmental performance and responses from the industrial and energy sectors. Regarding the background above, this study aims to determine the extent to which business people understand the importance of business sustainability through understanding the triple bottom line concept and its effect on business performance. Also, this research is expected to benefit business people that the triple bottom line concept is a concept that needs to be implemented to achieve business sustainability.
There are many business sectors in Indonesia, and among them, there are still weaknesses in their competitive advantage at the world level. Related to this, Indonesia, through government policy, is striving to increase its productivity through various business sectors, including in the agro-industry sector, which is always a focus because Indonesia is known as an agricultural/agro-industrial country. The agro-industry sector in the Mojokerto Regency area, which is almost threatened by the use of settlements, industry, and property, has a problem because agro-industry business people and agro-industrial landowners consider that the agro-industry business is less profitable and prefer to sacrifice their costs to become residential, industrial and property. Seen in the short term, business people and landowners benefit, but in the long term, the mainstay potential as an agro-industry-producing region will be lost. In this context, to understand business people, especially businesses in the agro-industry sector who are increasingly facing threats, it is necessary to conduct this research with the title “Understanding the triple bottom line concept to realize business sustainability in the agro-industry sector in Gondang District, Mojokerto Regency, East Java Province.”

This study focused on finding out what is the level of understanding of business people regarding the triple bottom line concept, and also whether understanding the triple bottom line concept affects business performance. We evaluated the importance of the sustainability of the agro-industry business in the long term while paying attention to economic, social and environmental aspects (triple bottom line) so that in this case the government also plays a role in taking the policy. We evaluated the agro-industry business in Gondang District, Mojokerto Regency, East Java Province whether understood the importance of the triple bottom line or not and its triple bottom line effect.

**Literature Review**

The concept of sustainable development has a major impact on the development of the concept of the triple bottom line. For example, the Organization for Economic Cooperation and Development (OECD) formulates “business contributions for sustainable development and corporate behavior that does not merely guarantee returns to shareholders, wages for employees and makes products and services for customers, but business enterprises also must pay attention to various things that are considered important and the values of society.” The description of the triple bottom line states that all of these concepts are adapted from the concept of sustainable development, now the company voluntarily prepares sustainability reports every year. The reports outline the impact of the company’s organization on the economy, society, and the environment. One of the initial models used by companies in developing their resistance report is to adopt the accounting method that is funeral of the triple bottom line. More studies by Atkinson (2000), Elkington (2004) and Munda (2005), the triple bottom line concept is an extension of the traditional accounting concept, which only makes a single bottom line, namely the financial results of a company’s economic activity. In more detail, Elkington describes the triple bottom line as follows:

The three lines of the triple bottom line represent society, the economy, and the environment. Society depends on the global ecosystem, which hears the ultimate bottom line. The three lines are not stable; they are in constant flux, due to social, political, economic and environmental pressures, cycles and conflicts.

From the above understanding and explanation, it can be concluded that company activities related to the economy, society and environment are closely related to society. Especially in social and environmental activities by the definition of OECD and from Seattle (1997) that no direct return can be felt by the company. Therefore it is very important that the use of the triple bottom line is disclosed in the company’s annual report. The current research is development research that aims to prove the role of the application of the triple bottom line concept in influencing business performance in the agro-industry business sector.

**Business Performance**

Performance according can be defined as follows: “performance is a management accounting statement that will actually compare between an activity with a standard.” In terms of performance measurement, basically it is by comparing the results obtained with costs that arise to determine the level of efficiency, while measuring the effectiveness is done by comparing the hash obtained with a set target. Bengali thus performance appraisal is the periodic determination of the operational effectiveness of an organization, part of the organization, and employees, based on the targets, standards, and criteria previously set.

In some cases, management is an administrator of the capital that is used in the company and is tasked with optimizing net income for all assets used, therefore management is the party responsible for achieving company goals, so management has an interest in knowing, measuring, planning and controlling all financial risks. Included in the scope of these responsibilities, management must create a healthy financial ratio so that it can guarantee the achievement of the interests of all parties − both internal and external − of the company. Financial ratios are numbers obtained from the comparison of financial statement posts with other posts that have a relevant and significant relationship. This financial ratio is very important in analyzing the financial condition of the company.
There are several methods and measures used as analytical techniques (including various financial ratios) to evaluate company performance. In this study, the focus is on the measurement of Business Performance, a measure of non-financial performance and a measure of the ability of a company to respond to economic changes that occur.

Company performance can be measured through various aspects, both financial and non-financial. Company performance is closely related to the management control system of the company concerned. According to Anthony and Govindarajan (2004), management control systems are processes where managers influence other organizational members to implement organizational strategies. Mahoney et al., (1963) state that performance (performance) is the result of work that can be achieved by a person or group of people in an organization, by the authority and responsibility of each, to achieve organizational goals. Managerial performance is the individual performance of organizational members in managerial activities including planning, investigation, coordination, staffing arrangements, negotiations, and others. Someone who holds a managerial position is expected to be able to produce a managerial performance. Unlike the performance of employees, which is generally concrete, managerial performance is abstract and complex (Mulyadi and Johny, 1999: 164). Many studies include managerial performance, including strategic management, marketing, and operations management. Lakhal et al., (2006) describe that the company’s performance includes:

**Financial Performance**

Financial performance is the result of operating activities, and the financial success of these operations will have logical consequences for the fundamental activities of the company’s better operations (Kaplan and Norton, 1992). Lakhal et al., (2006) identified three financial performances that were influenced by the existence of quality management implementation. The three financial performances are Return on Investment (ROI), Return on Assets (ROA), Sales Growth.

**Product Quality**

Conceptually, Crosby (1984) states that Product Quality is the suitability of product specifications to meet customer needs by their request, on the relevance of all the dimensional criteria contained in the product concerned. Furthermore, Crosby (1996) in Demirbag et al., (2006) defines quality as “conformance to requirements or specifications” that is based on customer needs. So that a product or service is said to be of quality if the product or service can meet customer needs, desires and satisfaction. Garvin (1987) states that there are eight dimensions to assess product quality, namely: performance, reliability, serviceability, conformance, durability, features, aesthetic, perceived quality. Lakhal et al., (2006) state that product quality can be measured from four dimensions, namely: reliability, durability, tenacity, regularity.

**Operational Performance**

Operational performance is the suitability of the process and performance evaluation of the company’s internal operations on conditions or meeting requirements in terms of costs, customer service, delivery of goods to customers, quality, flexibility and quality of product/service processes (Brah and Lim, 2006). Furthermore, Brah and Lim (2006) state that the company’s operational performance can be assessed or viewed from two dimensions, namely: the dimension of cost and the dimension of flexibility and quality of delivery. Five indicators measure the cost dimension, and three indicators measure the dimensions of flexibility and quality of delivery. Lakhaletal (2006) identified that operational performance could be seen in terms of waste level, productivity, and cycle time. Furthermore, Operational Performance in the context of this research is measured by two indicators, namely in terms of cost, flexibility, and quality of delivery compared to its competitors. Meanwhile the measure of company performance according to Tyles et al., (2005) can be measured through the company’s ability to achieve: 1) finance, which includes non-financial profit, growth, return on assets, stock performance, 2) which includes leadership, competitiveness, new product success; and 3) in response to economic changes, i.e., ability to respond to economic change.

**Review of the Triple Bottom Line**

Business activities at the level of international companies, regional companies and small companies all have an impact on natural systems, natural resources, and clean water supplies and include increases in pollutants and hazardous waste. Company sustainability is something that is expected and maintained by every company. Sustainability will be achieved if the company itself pays attention to aspects that support sustainability itself. Therefore companies need to take into account environmental aspects and social aspects in addition to economic aspects so that the environment, society, and economy run normally and positively, and thus the sustainability of the company will be achieved. “Business as usual” damages the life support system of the earth (Edwards, 2006). Sustainable business practices from an economic, social and environmental perspective are essential not only so that corporations can survive in the short term, but also for the health of the earth in the long run. The Brent Spar offshore facility in the Shell oil company in 1995 began Shell’s plan to dump old platform facilities into the open sea. Although this plan was approved by the British government, with opposition from Greenpeace activists and the international community, the plan was canceled. As a result of the incident in the North Sea, Shell has experienced a decline in sales of up to 50% in Germany (The Brent Spar, n.d). Next Shell uses a variety of scenarios to estimate future alternatives and identify
The balance between economic/financial performance, social responsibility, and environmental sustainability can be expressed by the triple bottom line model. The Danish health company Novo Nordisk adopts a triple bottom line model for businesses that benefit corporations, are socially responsible and pay attention to the environment. With the increasing attention from the business community on the development and implementation of proactive sustainable strategies while increasing stakeholder engagement.

Effective, sustainable strategies require an in-depth understanding of the causal relationship between the alternative steps taken, the impact of these steps on sustainable performance, stakeholder reactions that may occur, as well as potential and actual impacts on financial performance. The company’s Sustainability Model uses social, environmental and economic dimensions as basically. The sustainable model illustrates the drivers of company sustainability performance, actions that can be taken by decision-makers who influence performance, along with the consequences for social, environmental and economic performance. The input model consists of external context, internal context, business context, and human and financial resources. The input facilitates the understanding of complex factors that must be considered and also the limitations that exist within the company. In-depth evaluation of the input and the possible effects on sustainable performance and finance and the development of appropriate processes can be made. Sustainable strategies, structures, systems, programs, and actions have a major impact on the costs and benefits of corporate action, social and environmental impacts, and long-term financial impacts through sustainable performance.

Zu (2009) revealed the theory of the triple bottom line with three main aspects: namely, economic, social and environmental. The triple bottom line concept contains a broader spectrum than the performance of companies that only focus on Business Performance. On the triple bottom line, performance must include the values and criteria for measuring a company’s success, namely economic, environmental and social. This means extending a simple reporting framework to take into account the social and environmental performance in addition to the Business Performance and indicating the essence of sustainable development by measuring the impact of these three aspects from the company’s operational activities. The concept of sustainable development has a big impact on the development of the concept of the triple bottom line. For example, the organization for economic cooperation and development (OECD) formulates “business contributions for sustainable development and corporate behavior that does not solely guarantee returns to shareholders, pay employees and manufacture products and services for customers but business enterprises also must pay attention to various things that are considered important and the values of society.” The description of the triple bottom line is a description stating that all of these concepts are adapted from the concept of sustainable development, now the company voluntarily prepares reports every year, known as sustainability reports. The report outlines the impact of the company’s organization on the economy, social, environment. One of the initial models used by companies in developing their resistance report is to adopt accounting methods that are funeral of the triple bottom line. Elkington (1997) the triple bottom line concept is an extension of the traditional accounting concept which only makes a single bottom line, namely the financial results of a company’s economic activity. In more detail, Elkington describes the triple bottom lines as follows: “The three lines of the triple bottom line represent society, the economy, and the environment. Society depends on the global ecosystem, which hears represents the ultimate bottom line. The three lines are not stable; they are in constant flux, due to social, political, economic and environmental pressures, cycles and conflicts.” From the above understanding and explanation, it can be concluded that company activities related to the economy, social and environment are closely related to society. Especially in social and environmental activities by the definition of OECD and from Seattle (1997) that the company can feel no direct return. Therefore the Triple Bottom Line disclosure is very important to be disclosed in the company’s annual report. The current research is development research that wants to prove the role of the application of the triple bottom line concept to influence business performance in the agro-industry business sector.

Research Hypothesis
Based on the formulation of the problem, previous research and literature review, the research hypothesis can be formulated as follows:
1. Agro-industry business actors in Gondang Subdistrict, Mojokerto Regency, East Java Province, understand the importance of the triple bottom line
2. The triple bottom line affects the business performance of the agro-industry sector in Gondang District, Mojokerto Regency, East Java Province
RESEARCH METHODS

Research design
This research is quantitative research, which means it will be conducted to obtain an overview of the performance of the agro-industry business in the Gondang Subdistrict, Mojokerto Regency, East Java Province by applying the triple bottom line.

Population and samples
The population and sample in the study were the agro-industry sector business people in Gondang District, Mojokerto Regency, East Java Province. Because of various limitations, not all agro-industry sector business people are respondents to the study. The sample was chosen using the accidental method, namely the selection of respondents based on the respondents found in the study site as many as 25 respondents.

METHOD OF COLLECTING DATA
The research data are in the form of primary from September to November 2017. Data collection was made through surveys, documentation and a questionnaire. The questionnaire contains a list of questions to respondents consisting of triple bottom line variables and business performance. Data are obtained from the answers to 30 questions.

The process of measuring the questionnaire is done by giving a scale or value of measurement, using an interval scale of 1 to 5. Following is the weighting of the score on the research instrument.

Research variables and research variable indicators
The variables used in this study are exogenous latent variables and endogenous latent variables. For the exogenous latent variable, the triple bottom line is used, while the endogenous latent variables are business performance.

Data analysis method
The analytical method used in this study uses Partial Least Square-Structural Equation Modeling (PLS-SEM). PLS-SEM is the second generation of SEM. This method has advantages such as the sampels that are used are small; they can be used to predict and develop theories and have a high degree of flexibility for research, or it can be said that PLS-SEM is a powerful analytical method because it is not based on many assumptions (Ghozali, 2008).

The data analysis technique used descriptive analysis and analysis of the PLS-SEM model. The descriptive analysis uses SPSS version 20 software, while analysis of the PLS-SEM model uses SmartPLS 3.2.6 software. Analysis of the first year PLS-SEM model.

Data analysis and discussion
The process of collecting data through questionnaires was performed by surveying agro-industry sector business people in Gondang District, Mojokerto Regency. Of the total number of questionnaires distributed, all of them were filled out and returned as many as 25 questionnaires. These questionnaires were all worthy of being used in data input requirements. After distributing the questionnaire, the questionnaire results were processed into data ready for analysis.

Descriptive analysis
Descriptive statistics are intended to analyze data based on the results obtained from respondents’ answers to each measurement of both exogenous and endogenous latent variables. The following table is obtained from the SEM output.

From the descriptive analysis, it can be seen that the number of samples used is 25. Exogenous latent variables, namely X (triple bottom line), have a range of values of between 60 and 75, while the average is 64.8 and the standard deviation is 5.099. The standard deviation value indicates a deviation of 5.099 from the average value of respondents’ answers to 15 questions about economic, social and environmental aspects.

The endogenous latent variable Y (Business Performance) has a range of values of between 70 and 100, while the average is 80.6 and the standard deviation is 9.05. The standard deviation value indicates a deviation of 9.05 from the average value of respondents’ answers to one question about Business Performance.

Model analysis
Processing data using PLS-SEM requires two stages in assessing the model of a study (Ghozali, 2008). The first stage is the stage of analysis or evaluation of the measurement model (outer model), while the second stage is the analysis of the structural model (inner model). The following are path diagrams, which explain the outer and inner model stages using SmartPLS software. In the first year progress report, researchers only process triple bottom line latent data and Business Performance data, while for latent variables, business sustainability will be discussed in the second year.

Path chart with SmartPLS
The following is a path diagram that will be used in the first year research, where the yellow box shows indicators that affect the latent variable (blue circle). From the analysis, it can be explained that the triple bottom line is influenced by three indicators, namely economic, social and environmental aspects, while the Business Performance variable is influenced by one indicator; this can be interpreted as meaning the indicator is the same as the variable.
Measurement model analysis

Analysis of the measurement model is done by testing the validity and reliability of the research instrument. In this study, there are several stages in conducting validity and reliability tests, namely: convergent validity, average variance extracted (AVE), discriminant validity, and reliability.

Convergent validity

Convergent validity of the measurement model with reflexive indicators is assessed based on the correlation between the values of the indicators estimated with SmartPLS. The size used in the indicator is said to be high if the cross-loading value is 0.7 with the variables measured. But according to Ghozali (2008), the initial stage of research on the development of a scale of measurement of cross-loading values between 0.5 and 0.6 is considered sufficient. In this study, across the loading limit of 0.6 will be used so that the magnitude of the indicator that is below that value will be issued from the next analysis. The results of processing using SmartPLS can be seen in Table: The values for each indicator have met the convergent validity, which is more than 0.6. The value for the triple bottom line indicator ranges from 0.728 to 0.962, while for indicator Y the value is 1, which indicates that the indicator is the same as the variable. Thus the indicator has sufficiently described each variable to be measured.

Average variance extracted (AVE)

In confirmatory factor analysis, the average percentage of AVE values between indicators of a set of latent variables is a summary of convergent indicators. A good variable if the value is AVE 50.5. The AVE value from the results of SmartPLS processing. From the AVE analysis, it can be seen that the variable bottom line and Business Performance variables are already good because the AVE value obtained is more than 0.5.

Discriminant validity

Discriminant validity measures how far a construct is completely different from other models. The model has good discriminant validity if each indicator value of a latent variable has a greater value than the value of the other latent variables. With SmartPLS, discriminant validity can be seen through the value of cross factor loadings.

Based on the table of values of cross factor loadings from economic aspect indicators (X1), social (X2) and environment (X3), the triple bottom line variables have a greater value of 0.889; 0.952; 0.728 when compared to Business Performance variables, 0.841; 0.926; 0.664, and vice versa − with the Y indicator of Business Performance the value is greater, namely 1 when compared to the triple bottom line which is 0.950. So that both of these latent variables have met discriminant validity.

Reliability

Reliability testing can be determined by looking at the composite reliability table: if the value is, 70.7 then it is said to be good and can proceed to the next stage. The following are the results of the reliability test using SmartPLS. From the reliability analysis, it can be seen that each of the triple bottom line variables and Business Performance has a high level of reliability.

Result

Table 1: Path Coefficient

<table>
<thead>
<tr>
<th>Path Coefficient</th>
<th>Original sample (O)</th>
<th>Sample Mean (M)</th>
<th>Standard Deviation (STDEV)</th>
<th>T Statistics((\frac{a}{STDEV}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple bottom line→Business performance</td>
<td>0.950</td>
<td>0.947</td>
<td>0.023</td>
<td>41.716</td>
</tr>
</tbody>
</table>

Table 2: Other Loadings

<table>
<thead>
<tr>
<th>Key Variabel</th>
<th>Original sample (O)</th>
<th>Sample Mean (M)</th>
<th>Standard Deviation (STDEV)</th>
<th>T Statistics((\frac{a}{STDEV}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 Economic aspect</td>
<td>0.889</td>
<td>0.895</td>
<td>0.045</td>
<td>19.649</td>
</tr>
<tr>
<td>X2 Social aspect</td>
<td>0.952</td>
<td>0.954</td>
<td>0.016</td>
<td>59.247</td>
</tr>
<tr>
<td>X3 Environmental aspect</td>
<td>0.728</td>
<td>0.702</td>
<td>0.169</td>
<td>4.319</td>
</tr>
<tr>
<td>Y Business performance</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>
Table 3: R Square

<table>
<thead>
<tr>
<th></th>
<th>Original Sample (O)</th>
<th>Sample Mean (M)</th>
<th>Standard Deviation (STDEV)</th>
<th>T Statistics (t/STDEV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business performance</td>
<td>0.902</td>
<td>0.898</td>
<td>0.042</td>
<td>21.322</td>
</tr>
</tbody>
</table>

Structural model analysis

The next analysis is the analysis of structural models. This analysis was conducted to determine the relationship between the R-square of the research model. The structural model was evaluated using the R-square for the dependent variable t-test and the significance of the structural path parameter coefficients.

In SmartPLS the statistical test for each hypothesized relationship is carried out using simulation. In this case, the bootstrap method is applied to the sample. Bootstrap testing is also intended to minimize the problem of research data abnormalities. The table above explains that the measurement results of the relationship between the triple bottom line variables on Business Performance have a coefficient value of 0.950 with a value of t count of 41.716.

The table explains that the triple bottom line has a contribution to Business Performance of 90.2% and the remaining 9.8% is influenced by other variables not discussed in this study.

Hypothesis Testing 1

Agro-industry business actors in Gondang Subdistrict, Mojokerto Regency, Timur Province, understand the importance of the triple bottom line.

With the Real Level: α used in this study is 5%.

Determining the Statistical Test: The statistical test used is the t-test value for economic, social and environmental aspects, each of which has a value of 19.649; 59.247 and 4.319 (Table).

Determining Decision Criteria: The sample used is 25 and α = 5%, so the t table used is 0.684

Conclusion: Because t-statistic <t-table this means H0 is rejected. This means that H1 is accepted and the conclusion of the triple bottom line concept influences Business Performance.

Discussion

By understanding the triple bottom line principle, the agro-industry sector business in Gondang Subdistrict, Mojokerto Regency, East Java Province shows that business people were carrying out their business always pay attention to inputs in terms of economic, social and environmental aspects. This means that a sustainable business always considers these three aspects so that the business has economic value, pays attention to the surrounding social aspects and does not damage the environment. The results of this study align with the theory put forward by Edward (2006) and the results of research conducted by Zu (2009), that suggest that to create business sustainability it is necessary to apply the triple bottom line concept. There is little difference between this study result with the result of Edward and Zu. Edward and Zu insist that the sustainability of business is mostly can be measured from economic aspect only. However, this study found that other aspects, beside economic aspect, of business sustainability is social and environmental aspect.

The proof is that the triple bottom line concept influences the business performance of the agro-industry sector in Gondang District, Mojokerto Regency, East Java Province, showing that economic, social and environmental aspects affect business performance. The business performance will be achieved optimally if there is support for economic problems, business, and social and environmental issues. These three aspects are inputs in running a business. This is in accordance with Elkington (1997) and the results of the study of Tyles et al., (2005), that business performance will be optimal and have sustainability if business people conduct their business by applying the triple bottom line concept.

Conclusion

Inadvertently the agro-industry business has understood the principle of the triple bottom line even though the proportion for environmental aspects is relatively small. There is an influence between the triple bottom line and business performance, with the triple
bottom line contributing to business performance by 90.2% and the remaining 9.8% influenced by other variables. This study is expected to be taken into consideration in the agro-industry sector business in East Java province always to pay attention to the triple bottom line concept.

REFERENCES