THE EFFECT OF ENVIRONMENTAL MANAGEMENT BASED MICRO, SMALL & MEDIUM ENTERPRISES (MSMES) EMPOWERMENT ON THE ACHIEVEMENT OF SUSTAINABLE DEVELOPMENT

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ABSTRACT

The purposes of this study were: (1) To find out whether the factors of the environmental management based MSME empowerment are able to measure the variables of the environmental management based MSME empowerment in Aceh Tamiang Regency (2) To find out whether the factors of sustainable development are able to measure the variables of sustainable development in Aceh Regency Tamiang (3) To find out how the effect of the environmental management based MSME empowerment on sustainable development in Aceh Tamiang Regency. It is a descriptive-quantitative study. The population of this study was the target population of all MSMEs in Aceh Tamiang regency for a total of 965 enterprises and 300 respondents were taken for the sample of the study to meet the criteria of SEM test sample considered the fittest for maximum likelihood analysis. The data were analyzed using structural equation modeling (SEM) technique by using AMOS. The results showed that (1) The factors of the environmental management based MSME empowerment are able to measure the variables of the environmental management based MSME empowerment in Aceh Tamiang Regency, (2) the factors of sustainable development are able to measure the variables of sustainable development in Aceh Tamiang Regency, and (3) the environmental management based MSME empowerment has significant effect on sustainable development in Aceh Tamiang Regency.

Key words: Empowerment, SMEs, environmental management, sustainable development.

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1. INTRODUCTION

Development aims to improve the welfare of the people, and to make innovation in society. Sustainable development is the goal of Aceh Tamiang to continue to make the region and the people getting out of poverty, survive in the competition, and excel with its economy, so that makes Aceh Tamiang as one of the regions that can be equated with other regions that have a growing and prosperous economy. The sustainable development can still not be perceived by Aceh Tamiang people since they have not put some concerns with the surrounding environment, means that the activity of economic growth has not involved activities that have some effect on the environment, health and welfare of the people of Aceh Tamiang. The people of Aceh Tamiang, as the actors of MSMEs are not accompanied by the guidelines from government on how to manage the business properly and safely and to make products that have the quality for both national and international competitions. The government has not maximally provided education on environmental management based business to the people, so that the people only focus on increasing income to improve their economy but forget their surrounding environment.

Micro, Small, and Medium Enterprises is one of the economic entities of which existence dominates the economy of the people in the rural and urban areas. According to Urata (2000), MSMEs play a leading role in economic activities in various sectors, such as the largest employers, the development of regional economic activities and community empowerment, creators of new markets and innovation, and for those which are able to conduct international trade, are able to contribute to maintain the balance of payments through its contribution in generating exports (Muda et al., 2016 & Ferine et al., 2017). In contrast to the development of MSMEs that is not balanced with the management of environment-based enterprises as well as having concern on the environment, the Business actors do not conserve the environment for the community and ecology when conducting production process or waste management from production. Whereas, a good company, either it is small or large scale company, should implement environmental management system in its production process because it will generate a positive image for the company. According to Mejia et al. (2004), the performance of an enterprise is influenced by CSR and ethical responsibility. This ethic will produce a good culture in waste management in order to not to cause environmental pollution, to perform reforestation or to specifically greening the open space of the city. A trader, in addition to make profit, must also pay attention to the surrounding environment by allocating some of its income to help the community which needs and plays a role in maintaining environmental sustainability.

SMEs, as business actors who perform activities to meet the needs of human life, are the main source of environmental damage. The effects from their businesses arising from their efforts to obtain raw materials, in production processes and managing waste generated at the time of and after the production. The efforts made by the relevant agencies and governments to overcome such issues have not provided significant results to reduce or prevent the rate of environmental damage caused by the activities conducted by MSMEs. Therefore, the development of environmental management-based MSME which is aimed at conducting environmentally friendly business is considered in line with the objectives of sustainable development in Aceh Tamiang Regency as it is the main concept to alleviate poverty through the provision of decent and sustainable livelihoods and that minimizes the depletion of natural resources, environmental degradation, and socio-cultural instability. The development of environmental management-based MSME is considered to support sustainable development because of the process of change in the effort of exploitation of natural resources, investment
activities, technological development orientation, and institutional change which are directed
to be in line with the fulfillment of the present and future needs in Aceh Tamiang Regency.

2. LITERATURE REVIEW

2.1. Environmental Management Based MSME Empowerment

Empowerment is an effort to empower (develop a person from a state of having no or less
power to of having power) in order to achieve a better life. Noor (2011) expressed the
Chambers’ opinion that community empowerment is a concept of economic development that
encapsulates social values. This concept reflects a new paradigm in development, which is
“people centered, participatory, empowering, and sustainable”. Empowerment arises due to
failure and hope. The failure here is the failure of economic development models to reduce
poverty and to have sustainable environment. Meanwhile, expectation arises due to alternative
development that incorporates democratic values, gender equality, and adequate economic
growth (Rifai, 2013).

2.2. Sustainable Development

The concept of sustainable development is a manifestation of the concerns of the world
community on human activities that have some effect on the environment. The concerns of
the world community about human activities affecting the environment, health and welfare of
society, have developed into an international political agreement to guide development into
sustainable development. Salim (1990) mentioned that sustainable development aims to
improve the welfare of society and meet the needs and aspirations of the people. In essence,
sustainable development is beneficial to achieve equitable distribution of development
between the present and future generations. According to Sutamihardja (2004), the concept of
sustainable development is the existence of contradictions in the policies due to the needs for
natural resources in reducing poverty and the needs to prevent environmental degradation.
Sustainable development must be able to meet the basic needs of the people and to have the
broadest opportunity to achieve goals for a better life without compromising future
generations.

2.3. Conceptual Framework

Sustainable development is a development process that covers urban areas, businesses,
community and other essential elements to meet current needs without compromising the
fulfillment of the needs of future generations. The Indonesia Financial Services Authority
(OJK) states that sustainable development involves 3 dimensions of development, namely
environment, social and economy. UMKM as one of the driving forces of the nation's
economy becomes a program that is capable of supporting sustainable development to
overcome some issues, such as poverty, unemployment and social imbalance as faced by
Aceh Tamiang Regency. The environmental management based MSME empowerment will
involve good management of governance and concern on the environment and is expected to
support the people of Aceh Tamiang to create environmentally friendly MSMEs and to help
sustainable development for the people of Aceh Tamiang at the present and for future
generations.
2.4. Hypotheses
The hypotheses of this study are as follows:

- The factors of the environmental management based MSME empowerment are able to measure the variables of the environmental management based MSME empowerment in Aceh Tamiang Regency.
- The factors of sustainable development are able to measure the variables of sustainable development in Aceh Tamiang Regency.
- The environmental management based MSME empowerment has a significant effect on sustainable development in Aceh Tamiang Regency.

3. RESEARCH METHOD
3.1. Type of Research
It is a descriptive-quantitative research and is categorized as research and development. Descriptive research is research conducted to determine the value of an independent variable, either one variable or more (independent) without making comparisons, or connecting with other variables (Lutfie et al., 2016; Gusnardi et al. 2017; Achmad et al., 2017; Badaruddin et al., 2017; Syahyunan et al., 2017; Muda, 2017 & Erwin et al., 2018). The results of the research must contain the details used, both in collecting data and in analyzing data and also the literature study conducted. Logical deduction must be clearly related to the theoretical framework used if the theoretical framework for it has been developed. This study assesses the nature of the visible conditions. The purpose in this study is limited to describing the characteristics of something as it is.

3.2. Types and Sources of Data
Primary Data
Primary data were collected through the distribution of questionnaires to the respondents, the MSMEs actors in Aceh Tamiang Regency.

Secondary Data
Secondary data are the data obtained and collected by the researcher from any available sources, including the data from BPS of Aceh Tamiang Regency. The data of this study were obtained from several sources and collected using several techniques, as follows:

- Interviews conducted to all employees of Regional Development Agency, Department for Cooperatives, Department of Industrya and Trade to obtain data on actors in Aceh Tamiang Regency.
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- Documentation to obtain data on MSME actors in Aceh Tamiang Regency.
- Questionnaire as primary data source distributed to all respondents to obtain information about the environmental management based MSME empowerment program and sustainable development in Aceh Tamiang Regency.

3.3. Population and Sample of Research

The population of this study was the target population of all MSMEs in Aceh Tamiang regency for a total of 965 enterprises (Department of Industry and Trade of Aceh Tamiang, 2018) which were the enterprises which generate waste in their production process and business activities conducted. This study wanted to meet the criteria of Chi-Square model of SEM test which are sensitive to the sample size (Muda and Dharsuky, 2015 & 2016; Lubis et al., 2016; Tarmizi et al., 2016; Sirojuzilam et al., 2016 & 2017; Muda and Hutapea, 2018 & Pohan et al., 2018). The good sample size for maximum likelihood estimation should consist about 100-300 samples, so that there will be only 300 respondents as sample in order to meet the criteria of SEM test sample considered the fittest for the maximum likelihood analysis.

3.4. Data Analysis Technique

The data analysis technique used was the structural equation modeling test using AMOS and SPSS to perform the descriptive statistics analysis. Structural Equation Modeling (SEM) is an integrated analysis between confirmatory factor analysis, path analysis and simultaneous equation models. SEM can be used to conduct three analyzes simultaneously, namely checking instrument validity and reliability, testing the model of the relationship between latent variables and indicators (through factor analysis) and obtaining a model that is useful for prediction (Azlina et al., 2017; Sadalia et al., 2017; Dalimunthe et al., 2017; Situmorang et al., 2017; Tarmizi et al., 2017; Marhayanie et al., 2017; Muda et al., 2018; Muda & Hasibuan, 2018 & Muda, and Windari, 2018). Variable measurement scale in SEM analysis measures indicators of a latent variable using a Likert Scale. Structural Equation Modeling (SEM) is a statistical tool used to solve multilevel models simultaneously which cannot be solved by linear regression equations. SEM is a statistical modeling technique that is very common and is now increasingly popular widely used in various sciences (Lubis et al., 2016; Handoko et al., 2107; Hasan et al., 2107; Erlina et al., 2107; Muda et al., 2017; Hutagalung et al., 2017; Erlina and Muda, 2018; Eriadi et al., 2018; Sari et al., 2018; Muda, & Nurlina, 2018 and Muda & Naibaho, 2018). Unlike statistical methods such as parametric, non-parametric or multivariate, SEM involves a lot of very complex mathematical calculations. Currently there are several statistical application programs that are used to complete SEM and one of them is the Analysis Moment of Structural (AMOS). This program is a continuation of statistical data processing with SPSS. Training materials specifically study the basic concepts of SEM and how to use AMOS in creating and processing a SEM model. After attending this training, participants are expected to master the basics of SEM well and can create and process a SEM model using AMOS. Determining the type of measurement scale on this Likert Scale is the most controversial and much debated matter. This controversy arises because the treatment of ordinal variables is considered a continuous variable suggests that Likert scale can be analyzed parametrically. This is because the Likert scale can be considered as interval data. In the process of analyzing a research model, various stages are carried out to test the quality of the data and its compatibility with various indicators commonly used before arriving at the core stages of the analysis of the research model (Dalimunthe et al., 2016; Yahya et al., 2107; Muda et al., 2017; Sadalia et al., 2018; Erlina and Muda, 2018 and Muda et al., 2018). This discussion will illustrate the Goodness of Fit Index with its application for
Structural Equation Modeling (SEM) using Tools AMOS Version 20. Match Model Test on SEM is divided into 3 (three) parts, namely:

1. Absolute Match Test with its components such as:
   - Chi square, measures how close the covariance matrix is the prediction of the model and the covariance matrix of the sample data (Muda and Erlina, 2018).
   - Goodness of Fit Index (GFI), describes the overall suitability of the model calculated from the residual square of the predicted model compared to the actual data.
   - Root Mean Square Error of Approximation (RMSEA), is a measure that describes the tendency of chi-square to reject a model with a large sample size.

2. Incremental Match Tests such as:
   - Adjusted Goodness Fit of Index (AGFI), is the development of GFI that has been adjusted to the ratio of degree of freedom.
   - The Tucker Lewis Index (TLI), is an incremental suitability index comparing models tested with the baseline model
   - Normed Fit Index (NFI), is a measure of comparison with the proposed model and null model.
   - The Comparative Fit Index (CFI), is an incremental suitability index. this index is relatively insensitive to the size of the sample and is less affected by the complexity of the model.
   - The Incremental Fit Index (IFI), is used to overcome the problem of parsimony and sample size, which is related to NFI.
   - Relative Fit Index (RFI), is a derivative of NFI and CFI.

3. Parsimoni Match Test like:
   Parsimonious Goodness of Fit Index (PGFI) and Parsimonious Normed Fit Index (PNFI), are used to compare better compatibility with alternative models. Akaike Information Criterion (AIC) and the Consistent Akaike Information Criterion (CAIC), are indices that describe the compatibility of comparisons between models.

4. RESULTS AND DISCUSSION

4.1. Result

4.1.1. Respondent Characteristics

The respondents of this study were described as several criteria, namely age, gender, educational background, business field, length of business, owned assets, information of UMKM development, development of environmental management based MSME, the use of environmental management system (environmentally friendly business actors). The MSME actors who became the respondents of this study were dominated by those aged 35-55 years old, which was about 60% of total respondents, so it is known that business actors are in productive ages who are capable of conducting business actively and potentially to support the growth of MSMEs in Aceh Tamiang Regency. Based on educational background, it is known that the respondents of this study were dominated by those who have senior high school education or equal (92%), while there were only 7% and 1% of respondents who have Bachelor and Diploma degrees, respectively. There is an indication that the MSME actors in Aceh Tamiang Regency have a low educational background and are limited, in particular, having low knowledge on the practice of environmental management systems on business management possessed. The educational background of senior high school/equivalent of most business actors in Aceh Tamiang Regency also describes that with limited knowledge and skill, the majority of the business sector is the home industry in the form of food processing
which utilizes natural resources in Aceh Tamiang Regency. There are 78% home industry actors, and the rest consists of manufacturing businesses (5%) and services (17%). Therefore, the home industry has the greatest potential to contribute most waste in Aceh Tamiang Regency. It is also known that there are many business actors who have run their business for a long time, as most of the business actors (77%) have run their business for more than 3 years, 12% for 1-3 years, and 11% for new businesses under 1 year. Other data showed that there are 88% business actors in Aceh Tamiang Regency own assets that are still categorized small assets worth under 50 million rupiahs. Meanwhile, there are 9% and 3% business actors own assets worth 50-200 million and above 200, respectively. This condition became clear when it was known that the majority of business actors in Aceh Tamiang Regency are the home-industry business actors who are more on processing or selling food that relies on the potentials of natural resources in Aceh Tamiang Regency. So that SMEs in Aceh Tamiang Regency are small industry that have not developed significantly. Based on the criteria of information concerning environmental management system based MSME development, the respondent data showed that there are 88% respondents who do not know the information concerning environmental management system that can be applied to MSME management. Meanwhile, there are only 12% respondents who know the information concerning environmental management system based MSME development. Furthermore, the criteria of respondents based on participation in the environmental management based MSME management, it is known that 94% respondents stated that they never follow the development of environmental management based MSME management. Meanwhile, 6% respondents stated they ever follow the development of environmental management based MSME management independently, apart from the government program. The next data is the respondent criteria on the use of environmental management system in MSME management. It is known that there are 66% of MSME actors who do not implement environmental management system in their MSME management because it is also known that the majority of MSME actors (88%) do not know the environmental management based MSME management system, so that they do not apply it in the management of the business conducted. While the rest, 34% of business actors, do not apply the environmental management system in their business management when there are some business actors have already obtained information concerning environmental management based MSME management.

4.1.2. Results of Data Processing

The followings are the results of data analysis, as follows:

*Full Model Test*

![Full Model Test of the Research](image)
The results of Full Mode Test of Structural Equation Model were then tested for Goodness of Fit of the model based on the Table of Goodness of Fit below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Goodness of Fit Index</th>
<th>Cut-off Value</th>
<th>Results Analysis</th>
<th>Evaluation Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$\chi^2$ - Chi-square</td>
<td>expected to be small (Nurzaimah et al., 2016)</td>
<td>117,610</td>
<td>Good fit</td>
</tr>
<tr>
<td>2</td>
<td>probability</td>
<td>$\geq 0.05$ Nurlina &amp; Muda, I. (2017)</td>
<td>0.207</td>
<td>Good fit</td>
</tr>
<tr>
<td>3</td>
<td>CMIN / DF</td>
<td>$&lt;2.00$</td>
<td>1.110</td>
<td>Good Fit</td>
</tr>
<tr>
<td>4</td>
<td>RMSEA</td>
<td>$\leq 0.08$</td>
<td>0.019</td>
<td>Good Fit</td>
</tr>
<tr>
<td>5</td>
<td>GFI</td>
<td>$\geq 0.90$ (Muda et al., 2018)</td>
<td>0.962</td>
<td>Good Fit</td>
</tr>
<tr>
<td>6</td>
<td>AGFI</td>
<td>$\geq 0.90$ (Nasir et al., 2017)</td>
<td>0.932</td>
<td>Good Fit</td>
</tr>
<tr>
<td>7</td>
<td>TLI</td>
<td>$\geq 0.90$</td>
<td>0.992</td>
<td>Good Fit</td>
</tr>
<tr>
<td>8</td>
<td>CFI</td>
<td>$\geq 0.90$</td>
<td>0.995</td>
<td>Good Fit</td>
</tr>
</tbody>
</table>

Source: Results of Data Processing (2018).

Based on the Table of Goodness of Fit Test, it is known that the research model can be accepted and included in the criteria of Good Fit Model. Furthermore, the model analysis can be used for testing the hypothesis of this research.

### Table 2 Regression Weight on Predictor Factors for Financial Education

<table>
<thead>
<tr>
<th>Relationship between Variables</th>
<th>Estimate</th>
<th>$p$</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Management Based MSME Empowerment $\Rightarrow$ Sustainable Development</td>
<td>0.770</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Environmental Management Based MSME Empowerment $\Rightarrow$ Environmental permit</td>
<td>1.000</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Environmental Management Based MSME Empowerment $\Rightarrow$ Development of environmentally friendly business infrastructure</td>
<td>1.000</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Environmental Management Based MSME Empowerment $\Rightarrow$ Type of environmental impact of the business</td>
<td>1.000</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Environmental Management Based MSME Empowerment $\Rightarrow$ How to manage a business</td>
<td>1.000</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Environmental Management Based MSME Empowerment $\Rightarrow$ How to monitor the business</td>
<td>1.000</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Environmental Management Based MSME Empowerment $\Rightarrow$ Potential risk of environmental damage</td>
<td>1.000</td>
<td>0.030</td>
<td>Significant</td>
</tr>
<tr>
<td>Sustainable Development $\Rightarrow$ Ecological sustainability</td>
<td>1.000</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Sustainable Development $\Rightarrow$ Economic sustainability</td>
<td>1.000</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Environmental Management Based MSME Empowerment $\Rightarrow$ Sustainable Development</td>
<td>0.770</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Sustainable Development $\Rightarrow$ Political sustainability</td>
<td>1.000</td>
<td>0.000</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Source: Results of Data Processing (2018).

### 4.1.3. Hypothesis Test

The followings are the results of data analysis used to answer the hypothesis of this research by using output regression weight, as follows:

- The environmental management based MSME empowerment has significant effect on sustainable development in Aceh Tamiang Regency, with a $p$-value of 0.000 estimate value of 0.770. Thus, hypothesis 1 of this research is accepted.
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- The factors of the environmental management based MSME empowerment are known to be able to measure the variables of environmental management based MSME empowerment. There are several factors of environmental management based MSME empowerment, such as environmental permit, environmentally friendly business infrastructure development, type of environmental impact of the business, the business management and business monitoring, are known to be able to measure the environmental management based MSME empowerment in Aceh Tamiang Regency with a significance p-value of 0.000 and estimate value of (1,000). Therefore, it is known that hypothesis 2 of this research is accepted.

- The factors of sustainable development, such as ecological sustainability, economic sustainability, socio-cultural sustainability and political sustainability, are known to be able to measure the variables of sustainable development in Aceh Tamiang Regency with a p-value of 0.000 and estimate value of 1,000. Therefore, hypothesis 3 of this research is accepted.

4.2. Discussion
Based on the results of the research, it is known that all factors, such as environmental permit, environmentally friendly business infrastructure development, the type of environmental impact arises from the business performed, business management and monitoring, the potential risk of environmental damage caused by the business performed by MSMEs in Aceh Tamiang Regency, have significant effect on the environmental management based MSME empowerment. It means that all factors can contribute to the environmental management based MSME empowerment. Then, it is known that the factors that measure the sustainable development of ecological sustainability, economic sustainability, socio-cultural sustainability, and political sustainability are known to have significant effect on sustainable development of Aceh Tamiang Regency. It means that all factors are able to play a role to support sustainable development in Aceh Tamiang Regency through the role of environmental management based MSME empowerment in Aceh Tamiang Regency. The environmental management based MSME empowerment is also known to have significant effect on sustainable development in Aceh Tamiang Regency. The MSME empowerment to become environmentally friendly businesses is proven to have a strong effect and significantly support the ecological sustainability, economic sustainability, socio-cultural sustainability and political sustainability that will have a positive effect on the welfare of the people of Aceh Tamiang in the present and the future. The people of Aceh Tamiang highly need this environmental management based empowerment. They need guidance on how to manage the business into an environmentally friendly business that will not only benefit the community but also the environment and support their business continuity in the future. The survey results explain that the majority of people who become entrepreneurs are not fully aware of the methods or strategies for empowering businesses based on environmental management. Whereas, previously, there were some business actors who have already known that there have been some regulations issued regarding the obligation for the business actors to obtain environmental permits before starting a business, so that the business would not have the potential to environmental damage and support the development. It is also known there are some business actors who preserve the environment in running their business but the method used is still not fully in accordance with the methods of environmental management based business management.

Usually, business actors do not have an environmental permit when starting a business, means that they do not have a business permit which should be firstly reported to the related parties, so that they directly run their business by utilizing resources owned. In addition, business actors in Aceh Tamiang Regency do not build environmentally friendly infrastructures to support business operations, even they and their employees do not
understand how to run and monitor businesses to not to cause environmental damage. In general, business actors are known to be industrial businesses that process or sell food by utilizing the potential of natural resources owned by Aceh Tamiang. They do not know that their businesses has the potential to produce waste that can damage the environment. So that it is very important to guide them in conducting their businesses, together with their employees, to be able to run environmentally friendly businesses so as to achieve sustainable development for the welfare of the future.

Sustainable development is a development in the field of ecology, economy, socio-culture and politics. MSMEs, as one of the driving factors of economy, are considered quite important and contribute greatly in the development of sustainable development in the economic field that will lead to ecological, socio-cultural and political sustainability for the people in Aceh Tamiang Regency. The environmental management based MSME empowerment will guide the business actors and employees, all parties involved in the production process to run and monitor the business, using all the environmentally friendly infrastructures, so that the businesses and products produced and sold do not only bring economic benefits but also to not to threat the future of ecological sustainability. Meanwhile, in terms of socio-cultural sustainability, the community will be accustomed to maintain and preserve the environment, motivated to preserve the environment, and to be more cultured, because it does not only focus on profit but also to think about the interests of future generations. Business actors are required to be able to have proper waste management or even to not to produce chemical waste that damages the environment because the nowadays environment is not only important to our generation, but also to future generations.

The results of this study are supported by the research conducted by Ciemleja and Lace (2012) that the business ability to improve its performance in the future should continue to do sustainable business development by combining three functions, namely social, economic and ecological functions. The most significant factors for sustainability are the social environment, knowledge management, human resources and value creation which entirely require the empowerment of how to manage the business and how to monitor the business so as not to damage the environment or not to cause harmful effect on the environment. However, there are also some challenges faced in this development as stated by Sudaryanto (2014) that the biggest challenge in MSME development is that the information is not fully received by business actors, and has lack of assistance for technological capacity improvement. In addition, there are also limited capital and low human resources in the mastery of knowledge, so that this development requires synergies and hard efforts from the government and community and microfinance institutions to continue to assist the community in running a good business for the environment for the sake of sustainable development in the future. Rifa'i (2013) states in his research that UMKM has some obstacles to both the internal and external environment, so that there is a need of development or labsite program as useful program to help and develop society in studying and analyzing and as learning media for society to preserve the potentials of the nature and industry to become a community empowerment program that will lead to the success of sustainable development in the future.

5. CONCLUSIONS AND SUGGESTIONS

5.1. Conclusions

- The environmental management based MSME empowerment has a strong and significant effect on the success of sustainable development in Aceh Tamiang Regency because it is able to achieve ecological and economic sustainability, so that it is able to support the long-lasting and durable business productivity.
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- Environmental permit, environmentally friendly business infrastructure development, the type of environmental effects that arise from the business conducted, business management and monitoring, and the potential environmental damage caused by the business conducted are able to measure the variables of the environmental management based MSME empowerment.

- Ecological sustainability, economic sustainability, socio-cultural sustainability and political sustainability factors are known to measure the success of sustainable development in Aceh Tamiang Regency.

5.2. Suggestions

- The government needs to socialize continuously and direct about the regulation and environmental permit for business actors so that the business is either environmentally friendly or based on ecology.

- Business actors, by involving their employees, should continue to improve their insights and knowledge about environmentally friendly business management methods and strategies.

- Governments may involve other parties in empowering businesses into environmentally friendly businesses, such as universities, research institutes, ecologists and technological innovations, microfinance institutions to provide strategies for business actors in facing the challenges arise in running the ecologically-based industries.

- Microfinance institutions need to conduct development and socialization of environmentally friendly business financing, so that can provide help to the government to develop the business actors in Aceh Tamiang Regency to be environmentally friendly business actors.

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