

Priority Determination System Analysis of Small and Medium Industries using AHP at the Department of Labor

Rini Agustina¹, Eddy Sutadji², Purnomo Purnomo², Dodit Suprianto³ and Khairul Anam¹

¹Faculty of Science & Technology, Universitas Kanjuruhan Malang, Malang, Indonesia

²Faculty of Engineering, University of Malang, Malang, Indonesia

³Department of Informatics, Polytechnic of Malang, Malang, Indonesia

riniagustina@unikama.ac.id, {eddy.sutadji.ft, purnomo.ft}@um.ac.id, dodit.suprianto@polinema.ac.id, qoirulanam08@gmail.com

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Abstract: Small and medium industries are now subject to considerable development considered by the government in addition is very useful in terms of improving people's income, is also capable of creating creativity in line with efforts to preserve and develop local cultural elements. The increasing number of small and medium enterprises resulted in industrial entrepreneurs must be able to think to grow their business. One concern of the Ministry of Industry and Labor is to provide support and training for small and medium industries. The provision of assistance to focus on all the small and medium industries, ranging from data collection to determine the criteria of small and medium industries that must comply with the provisions of the Ministry of Industry and Labor. Therefore, Ministry of Industry and Employment requires data processing techniques that conform to the standards and criteria to determine which industry a priority to be assisted and trained in each budget period. The system was developed using by AHP method. The analysis of the system is measured using a Likert Scale as a follow up of the development of decision support systems that have been carried out. The results of the analysis of system implementation Prioritizing Small and Medium Industries obtained through the yield of the questionnaire which has been given to the application, namely Small and medium-sized industry that showed that 85% said it was agreed to use this system.

1 INTRODUCTION

The existence of small and medium enterprises is very beneficial in terms of increasing incomes. It is also capable of creating creativity in line with efforts to preserve and develop local cultural elements. According to economist Akerklof and Romer (1993), the discovery of great ideas coincided with the discovery of millions of small ideas that keep the economy growing. Romer also found a poor country because people do not have access to the ideas used in the national industry to generate economic value. The structure of the world economy also experienced a rapid transformation along with economic growth, the former based on natural resources (SDA) now based on human resources, from the agricultural era to the industrial age and the information. Toffler (1980). According Howkins (2001), the new economy has emerged around the creative industries controlled by the laws of intellectual property such as patents, copyright, trademark, royalties and design.

Martinbiancho et al. (2007) states that the creative economy is a development concept based on creative assets potentially boost economic growth. Today there are many people who expand their business to the small and medium industry sector. The increasing number of enterprises engaged in the industry has resulted in employers must be able to think to grow their business.

Ministry of Industry and Labor has the function of 1) As a center for coaching and counselling, including raw materials and marketing assistance; 2. As the complementary equipment are not used together for the region to improve the product; 3. As a workplace for a number of small industrial entrepreneurs. Syahrudin (2002). The existence of the centers of industrial growth is expected to yield more production coupled with increased production quality into production with a high selling power.

One of the concerns of the Ministry of Industry and Labor is to provide support and training for small and medium industries. Provision of assistance

provided by the Ministry of Industry and Labor to focus on all the small and medium industries included in the collection of data from the Department of Industry and Labor, and small industries that meet the criteria set by the Ministry of Industry and Labor for assistance and exercise. Such assistance can be distributed evenly to all small and medium industries in the region. Therefore, the Ministry of Industry and Employment require information in accordance with the criteria for determining the industry will be assisted and trained.

As a follow up of the development of a decision support system that has been done, need to be analyzed in an attempt to control and review the usefulness of the system, whether it is appropriate or need to be improved based on the same criteria.

2 METHODS

The importance of the role of small industry in developing the national economy is shown by the enactment of the Law of the Republic of Indonesia number 20 of 2008 on Micro, Small and Medium Enterprises. In this Act stipulated that the empowerment of Micro, Small and Medium Enterprises have to be comprehensive, and continually optimized through the development of a favorable climate, the provision of business opportunities, support, protection and development of broad, so as to improve the position, role and potential of Enterprises micro, Small and Medium Enterprises in realizing economic growth, equity and improvement of people's income, job creation, and poverty alleviation.

Subsequently, followed by Government Regulation No. 32 of 1998 on the fostering and development of small businesses. The essence of this rule is the recognition and efforts to empower them. This was revealed by the PP. small businesses are an integral part of the national economy which have a position, potential and strategic and important role in realizing the national economic development. Hasibuan (2001) argues that development is an attempt to improve the ability to fit the needs of work.

Application systems are designed using the analytic hierarchy process (AHP) in determining the matrix of key performance indicators. Saaty (2001). Application of system analysis was performed using a Likert scale (Bertram, 2010).

Data analysis was performed in order to determine the extent to which the quality of the system, whether it meets expectations or not. For it is in beta testing conducted research on the respondent

or potential users of the system by collecting data using questionnaires. The analysis used was Likert Scale, in increasing, items that do not clearly show the relationship with the studied attitude can still be put into the scale. Likert scale is easier to make and have a relatively high reliability. Likert scale can display the items expressed in several alternative responses (SS = strongly agree, S = agree, KS = disagree, TS = disagree).

In this study, the test application using a questionnaire. The data obtained by 30 respondents who have tested the system prioritizing with AHP. Questionnaire for users consists of 10 questions and the use of alternative answers 1 through 4.

Data from the questionnaire, and then look for the percentage of each answer by using the formula:

$$Y = P / Q \times 100\% \tag{1}$$

Information:

Y Result of calculation =

P = Number of scales answers

Q = the highest value is multiplied by the number of respondents

So that calculation can be translated back to the results of the response scale required interpretation criteria as follows:

0-20% = Strongly Disagree

20-40% = Disagree

40-60% = Doubtful

60-80% = Agree

80-100% = Strongly Agree

Here is the calculation of the percentage of answers to the questionnaire results obtained from the 30 respondents who have been tested in this study.

Table 1: Instrument Questionnaire Questions.

No	Aspect	Instrument	No Problem
1	Software	Application is easy to use	1
		Instructions on the application clear and easily understandable	2
		Applications run smoothly	3
		Applications provide accurate recommendations	4
2	Visual communications	Showing output corresponding application navigation	5
		User Interface design attractive and communicative applications	6
3	Evaluation	Applications are in accordance with the	7

	provisions of the labor department	
	Application selection prioritization help small and medium-sized industrial proposals	8
	This application helps prioritize by giving the best recommendations of proposals	9
	This application is eligible to be used in any assessment of the proposals	10

3 ITEM ANALYSIS QUESTIONS

Table 2: Results of Analysis Calculation Item.

No Problem	SS	S	KS	TS	Total	%
1	13	15	2	0	101	84%
2	14	12	4	0	100	83%
3	12	15	0	3	96	80%
4	12	16	2	0	100	83%
5	17	11	0	2	103	86%
6	14	16	0	0	104	87%
7	10	18	2	0	98	82%
8	15	15	0	0	105	88%
9	13	17	0	0	103	86%
10	17	10	3	0	104	87%
Average						85%

Based on the analysis prioritization system design of small and medium industry development is very helpful by 85% in determining assistance and budget allocations in accordance with the priorities set by the government.

4 CONCLUSIONS

Based on the description of the discussion it can be concluded that:

- decision support systems to determine the development of small and medium industries can help local governments to identify beneficiaries and training to benefit the recipient to the ultimate criterion, it concurs with research conducted Rahma and Dana (2012) which states that the solution given by a system developed by AHP quite accurate and closer to the human ability to make decisions.

- The result of the application of systems analysis Prioritizing Small and Medium Industry Development in the Department of Labor can run as expected, it can be known through the yield of the questionnaire that was given to the visitors showed that 85% said it was agreed to use this system. Similar research has also been conducted researches by Lelono (2016) who tested the old system with a new system using AHP to do the filtering as much as 7 families or 19% who actually deserve help and 81% were declared unfit to get help from 36 KK,

Suggestion development can be done using another method that DSS, such as SAW, TOPSIS, and Certainty Factor.

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