THE DEVELOPMENT OF LEATHER CRAFTS INDUSTRY INTAKO COOPERATIVE'S STRATEGY IN TANGGULANGIN IN FACING ASEAN ECONOMIC COMMUNITY (AEC) 2015 WITH ANALYTICAL HIERARCHY PROCESS CLOSURE

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ABSTRACT

In facing the Asean Economic Community (AEC) 2015, the challenge that is being faced by Indonesian citizens of using the ASEAN market, the competitiveness is still relatively low compared other ASEANs, especially Singapore, Malaysia, and Thailand.

The problem that was faced by grand entrepreneurs which incorporated in INTAKO cooperative in facing competitiveness are qualified products, SNI certificated and primary services. Then leather crafts industry in Tanggulangin, Sidoarjo needs a development strategy so that leather crafts industry in Tanggulangin could not cease to exist and is prepared to face the competitiveness.

The purpose of this research is to know the leather crafts industry's development work model which incorporated in INTAKO cooperative in facing ASEAN market especially MEA 2015's enforcement. This development strategy is capable to compete with other/similar products from ASEAN nations. We wish that the choosing of this strategy model is capable to elevate quality products using skilled human resources, fueled raw material supplies, supporting modernized media and tools, product innovation, primary service and integrated promotion.

The chosen criterias on this strategy model placement are skilled human resources, fueled raw material supplies, supporting modernized media and tools, product innovation, primary service and integrated promotion. In the process of choosing this strategy, it took incorporated entrepreneurs in INTAKO cooperative. Those entrepreneurs uses A, B, and C name symbols. In this research, computation method of decision-making system is Analytical Hierarchy Process (AHP). The process of finishing AHP methods are: a. Deciding criteria's priority sequence, b. Deciding a weighed value to candidates, c. Making matrix filled with criteria's priority and weighed value, d. Shape counted with AHP method. The final result of the highest priority value in entrepreneur C as a precise competing strategy model because it has the highest value in the machine up to 0,1099, raw materials as much as 0,0945 and product innovation as 0,0662.

Keywords: Competing strategy election system, priority, criteria and Analytical Hierarchy Process

INTRODUCTION

Tanggulangin is one of the districts in Sidoarjo that some of the civilians are working in a small leather crafts industry. Varieties of needs in leather materials are produced in this place, starting from slippers, shoes, bags, wallets, suitcases, and jackets, and other things based on leather materials. This leather crafts industry actually started from 1939, and at that time some of the Tanggulangin's bags craftsmen started with bags and suitcases.

The AEC 2015 enforcement had made the government prioritized 9 industry sector to develop in order to fill ASEAN markets, some of them are; agro-based industries (CPO, cocoa, rubbers), fish-processed product industries, TPT industries, shoes and leathers industries, furniture industries, food and beverage industries, and basic metal, iron, and steel industries.

The quality product's standard will subscribe to ASEAN's quality standard. Up until now, UMKM products that have chances in ASEAN market, was obstacled by that quality standard.

The role of small and medium industries have a particularly important role when judging in terms of number of business units and labor. The government does not rule out the role of small and medium industries as one of the national economy. Instead, the government should become actively involved in creating a policy in favor of Small and Medium Industries.

The problems faced by Small and Medium Industry always faltered HR problems, poor product quality, product has not been certified SNI, limited promotion and product innovation and product prices are more expensive. These problems should be immediately sought a solution that Small and Medium Industry products especially businessmen who are members of cooperatives INTAKO Tanggulangin can compete. Moreover, with the implementation of MEAs in December 2015 will be pushed to work hard in order to compete with other products ASEAM State. Therefore, it needs the method used to develop and select appropriate strategies. Through the Analytical Hierarchy Process (AHP), which is the concept of changing the qualitative values into quantitative values. So that decisions can be taken more objective.

Based on the background of the problems above, the problems in this study can be formulated as follows: what strategy used in developing the leather industry in waas by using Analytical Hierarchy Process (AHP). The purpose of this study was to determine what kind of strategy used in developing the leather industry.

LITERATURE REVIEW

Management strategies can be defined as the art and science in formulating, implementing and evaluating decisions that enable cross-functional organization reach the goal. Strategic management is synonymous with the term strategic planning. In essence, a strategic plan is a tactical game of a company. Just like a football team of a company requires a good strategic plan to be able to compete successfully. The strategic plan resulting from a tough managerial choice of many good alternatives, and it indicates a commitment to the market, policies, procedures, and certain operations over the course of action the other "losers profitable". (Fred R. David, 2009: 5-6).

Fred R. David (2006) defines the strategy is a means to achieve long-term goals. The strategy is the potential actions that require top-level management decisions and resource companies in large numbers. The strategy has consequences multifunctional and multidimensional and needs to take into account the external and internal factors facing the company.

In principle generic strategies grouped into 4 groups based strategy generic strategy model of Fred R. David, namely: (a). Strategy Integration (Integration Strategy), (b). Intensive Strategy (Intensive Strategy), (c) .Strategi Diversification (Diversification Strategy) and (d) Strategies Survived (Defensive Strategy).

Analytical Hierarchy Process (AHP)

Analytical Hierarchy Process (AHP) developed by Thomas L Saaty (1980). AHP is used to solve problems that are complex. Qualitative data generated from the perception, experience and

intuition. The problem can be felt, it was observed, but did not support the completeness of numeric data to model quantitatively. The basic concept is the use of AHP pairwise comparison matrices (, atriks pairwise comparisons) to produce a relative weighting between the criteria and alternatives. One criterion will be compared with other criteria in terms of how important to the achievement of objectives in it (Saaty, 1986).

Table 1. Scale basis pairwise comparisons

Importance level	Definition	Specification
1	Same Importance	Both elements have the same effect
3	Slightly more importantly	very impartially experience and assessment of the elements compared with their partner
5	More Important	One element is preferred and practically very real domination, compared with elements of partner.
7	Very Important	One element proved to be well-liked and very real practical domination, compared with elements of partner
9	Absolute	One more important element of absolute proven preferable to his partner, the highest confidence.
2,4,6,8	Central Value Granted	if there is any doubt in the assessment between two adjacent levels of interest.

(Source: Saaty, 1986)

Assessment in comparing between one criterion with other criteria are independently of one another, and this can lead to inconsistencies. Saaty (1990) have proved that the consistency index of matrix ordo n.

Basic Principles and Axiom AHP.

AHP is based on three basic principles, namely: (1). Decomposition With this principle structure of a complex problem is divided into sections hierarchically. Defined objectives of common till specific. In its simplest form the structure will be compared to objectives, criteria and alternative level. Each set of alternatives may be divided further into more detailed levels, covering more other criteria. The top level of the hierarchy is the aim which consists of a single element. The next level may contain several elements, in which these elements can be compared, have a similar interest and does not have too glaring differences. If the difference is too large to be made new level. (2). Comparative assessment / judgment (comparative judgments). With this principle will be built pairwise comparison of all existing elements with the aim of producing a scale of the relative importance of the element. Assessment generate the numeric rating scale. Pairwise comparisons in the form of a matrix when combined will produce a priority. and (3). Priority synthesis is done by multiplying the local priorities with the priorities of the relevant criteria at the level it and add it to each element in the affected level criteria. The result is a combination known as global priorities which are then used for local priorities are weighing of the elements at its lowest level in accordance with the criteria.

AHP is based on 3 main axioms:

1. Reciprocal Axiom

This axiom states if the PC (EA, EB) is a pairwise comparison between element A and element B, taking into account C as the parent element, showing how many times more property owned elements of A to B, then the PC (EB, EA) = 1 / PC (EA, EB). For example, if a 5 times greater than B, then B = 1/5 A.

2. Axiom Homogeneity

This axiom states that the elements being compared does not differ too much. If the difference is too large, the results obtained containing a high error value. When the hierarchy is built, we

must try to arrange the elements so that these elements do not produce results with low accuracy and a high inconsistency.

3. Axiom of Dependency

This axiom states that the priority element in the hierarchy does not depend on the element level below. This axiom allows us to apply the principle of hierarchical composition

Many methods can be used in the decision-making system. One such method used in this study is Analytical Hierarchy Process (AHP). The concept of AHP method is to change the values of the qualitative into quantitative values. So that the decisions of which can be taken more objective. In this study, the AHP method was applied to the system development stratagi compete against MEA December 2015. To determine the selection of appropriate strategies necessary criteria used in judging are:

1. skilled human resources.
2. Enough supply of raw material
3. Modern machinery
4. Product innovation.
5. Services
6. Promotion.

To determine priorities among criteria, tailored to the needs of a proper strategy by entrepreneurs who are members of cooperatives INTAKO. So that it has full authority in filling priority values. It also includes full authority charging priority among strategic value to each criterion. However, for things that are quantitative criteria eg skilled human resources, supply of raw materials, machine equipment moder, services and promotions can use the data available at the Cooperative INTAKO. As for the other criteria, can be used qualitative data, the results of direct observation to entrepreneurs who are members of the cooperative INTAKO. In this study, a computer program used was Microsoft Ecxel. The program can also be used for decision-making system for other problems. Results of this study will greatly assist employers who are members of the cooperative INTAKO in choosing a competitive strategy objectively. Nevertheless, the results of this study are not the only tool used for decision making, due to the things that are subjective.
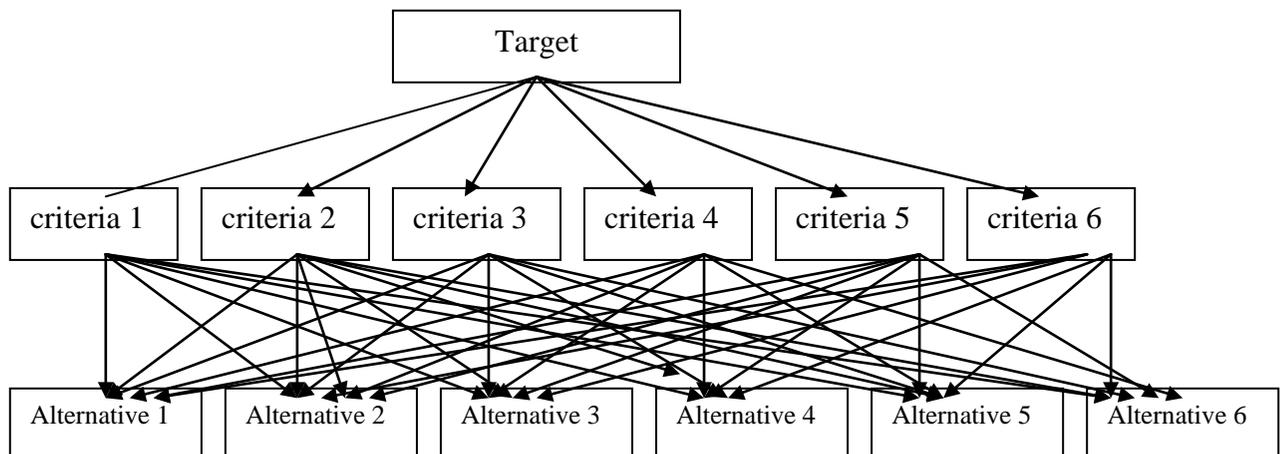

Figure 1. The steps of AHP.

The steps of AHP are:
1. Determine the types of criteria that will become official candidates structural requirements.
2. Develop criteria in the form of a matrix pairs.

3. sum matrix column.
4. Calculate the value of the column elements criteria by the formula each element column matrix is divided by the number of columns.
5. Calculate the value of the priority criteria matrix rows sum formula to the results of step 4 and the result is 5 divided by the number of criteria.
6. Determine alternatives that would be an option.
7. Develop alternatives that have been determined in matrix form pairs for each criterion. So there will be as many as n matrix between alternate pairs.
8. Each matrix between alternate pairs of n matrices, each matrix summed per column.
9. Calculating the value of each alternative priority matrix between alternate pairs with formulas such as step 4 and step 5.
10. Test the consistency of each matrix between alternate pairs with formulas each matrix element pairs in step 2 multiplied by the value of the priority criteria. The result of each row add up, then the result is divided by each of the priority criteria values of n α, α, α, ..., α 1 2 3.
11. Counting Lamda max with formula

$$\alpha \max = \frac{\Sigma\, \alpha}{n}$$

12. Calculating the CI by the formula

$$Cl = \frac{\Sigma\, \alpha \max}{n}$$

13. Counting of formula RC

$$CR = \frac{Cl}{RC}$$

where RC is the value derived from a random table like Table 1.

Table 2. Ratio Consistense

1	2	3	4	5	6	7	8	9	10	11
0,00	0,00	0.58	0,90	1,12	1,24	1,32	1,41	1,45	1,49	1,51

If CR <0.1 then the value of the pairwise comparison matrix given criteria consistent. If CR> 01, then the value of the pairwise comparison matrix given criteria inconsistent. So if it is not consistent, then filling the values of the matrix elements in pairs on the criteria and alternatives should be repeated

14. Develop a matrix of rows between alternative criteria versus the contents on the calculation process of step 7, step 8 and step 9.
15. Develop a matrix of rows between alternative criteria versus the contents on the calculation process of step 7, step 8 and step 9.

RESEARCH METHODS
This research was conducted in several leather industry located in Sidoarjo regency Tanggulangain engaged in craft bags and suitcases. The choice of location is done with the consideration that the District Tanggulangin is one of the centers of SMEs handicraft bags and suitcases in Sidoarjo. The data used are primary data and secondary data. The primary data obtained through interviews and questionnaires by respondents. It also conducted direct observation in the field to obtain additional information such as knowing the factors supporting competitiveness. Secondary data were obtained through the study of literature (books, journals and articles related to the topic of research), as well as internal reporting data bags and luggage

industry. Sampling was done by using one of the methods of non-probability sampling, ie purposive sampling in April-June 2015. Criteria for the respondent to be studied have knowledge and have experience of the object under study. Respondents were chosen to represent a company that is considered to have a deep understanding of the conditions of competition and the overall condition of the company, such as administrators, entrepreneurs who are members of cooperatives INTAKO, Department Disperindag Sidoarjo, Kadin of East Java.

Processing and analysis of data in this research use to work out and adopt a strategy to increase the competitiveness of companies used Analytic Hierarchy Process (AHP) to formulate the best strategy for small and medium industries in the District Tanggulangin. Data processing is done using Microsoft Excel 2007. Potential industrial bags and suitcases large enough to realize for the SMEs. Consequently until it's been quite a lot of companies as well as SMEs that cultivate these efforts, causing the emergence of competitors who engaged in manufacturing bags and luggage. Entry AEC 2015 demanding SMEs bags and suitcases in District Tanggulangin can improve the quality of its products in order to have a competitive advantage in the marketplace. Scheme framework of this research can be seen in Figure 2.
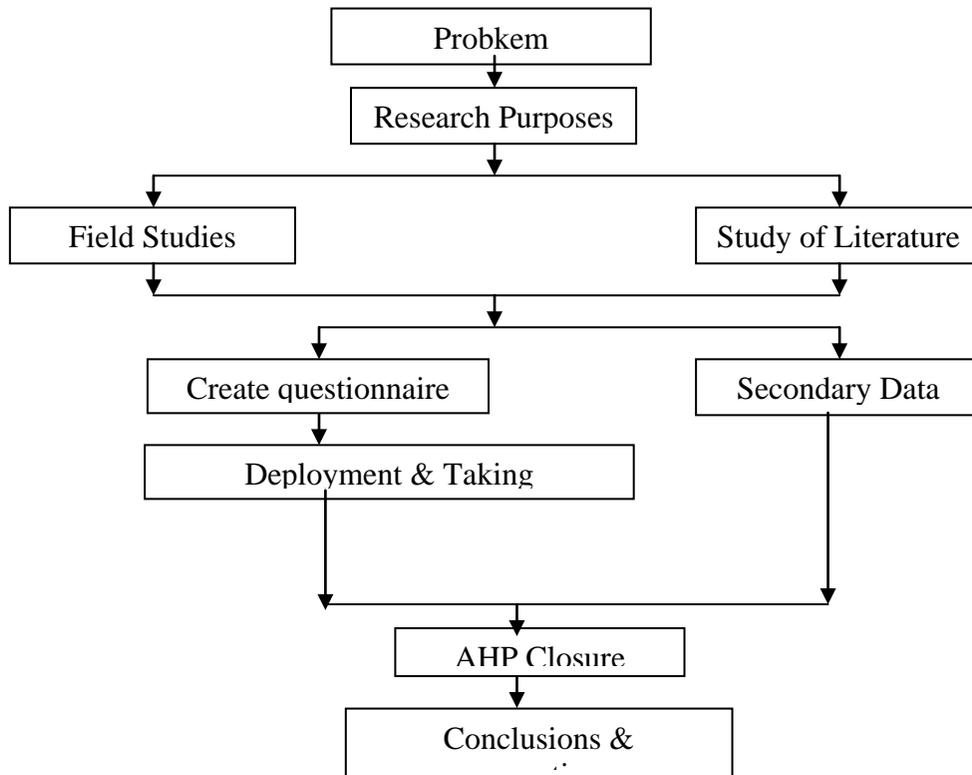

Figure 2. Research Methodology

DISCUSSION

The main respondents interviewed were 3 people comprising the Board of cooperative INTAKO Tanggulangin, Senior Staf Disperindag Sidoarjo, East Java Chamber of Commerce. Respondents were given the questionnaire in this study are 5 entrepreneurs who are members of the cooperative INTAKO Tanggulangin. Of the five who made respondents, as many as three respondents met the criteria. While that does not meet the criteria as much as 2 respondents with details of one person was out of town, and one person did not return.

Table 3. Calculation Results Criteria Strategy

Items	HRD	Raw Materials	Machine	Innovation	Services	Promotion
Skilled human resources	1,0000	3,0000	0,5000	1,5000	2,0000	3,0000
Adequate supply of raw materials	0,3333	1,0000	2,0000	1,5000	3,0000	2,0000
Modern machine tools	2,0000	0,5000	1,0000	2,0000	3,0000	3,0000
Product innovation	0,6667	0,6667	0,5000	1,0000	3,0000	2,0000
Services	0,5000	0,3333	0,3333	0,3333	1,0000	0,5000
Promotion	0,3333	0,5000	0,3333	0,5000	2,0000	1,0000
Result	4,8333	6,0000	4,6667	6,8333	14,0000	11,5000

Table 4. Distribution Amount Value Column

Items	HRD	Raw Materials	Machine	Innovation	Services	Promotion	Amount
Skilled human resources	0,2069	0,5000	0,1071	0,2195	0,1429	0,2609	1,4373
Adequate supply of raw materials	0,0690	0,1667	0,4286	0,2195	0,2143	0,1739	1,2719
Modern machine tools	0,4138	0,0833	0,2143	0,2927	0,2143	0,2609	1,4793
Product innovation	0,1379	0,1111	0,1071	0,1463	0,2143	0,1739	0,8907
Services	0,1034	0,0556	0,0714	0,0488	0,0714	0,0435	0,3941
Promotion	0,0690	0,0833	0,0714	0,0732	0,1429	0,0870	0,5267

Table 5. Priority Value Criteria

Items	Prioritas Kriteria
Skilled human resources	0,2395
Adequate supply of raw materials	0,2120
Modern machine tools	0,2465
Product innovation	0,1485
Services	0,0657
Promotion	0,0878

After the resulting priority criteria, the next step calculating personal priority candidate by inserting a score to each candidate for each criterion. The input is an analogy that is shown in Table 6a, 6b, 6c, 6d, 6e, 6f.

Table 6a. HR

Entrepreneur	A	B	C
A	1,0000	3,0000	2,0000
B	0,3333	1,0000	1,5000
C	0,5000	0,6667	1,0000
	1,8333	4,6667	4,5000

Table 6b. Raw material

Entrepreneur	A	B	C
A	1,0000	1,5000	0,5000
B	0,6667	1,0000	0,7500
C	2,0000	1,3333	1,0000
	3,6667	3,8333	2,2500

Table 6c. Machine

Entrepreneur	A	B	C
A	1,0000	1,5000	0,5000
B	0,6667	1,0000	0,7500
C	2,0000	1,3333	1,0000
	3,6667	3,8333	2,2500

Table 6d. Innovation

Entrepreneur	A	B	C
A	1,0000	1,5000	0,5000
B	0,6667	1,0000	0,7500
C	2,0000	1,3333	1,0000
	3,6667	3,8333	2,2500

Table 6e. Services

Entrepreneur	A	B	C
A	1,0000	1,5000	2,0000
B	0,6667	1,0000	0,7500
C	0,5000	1,3333	1,0000
	2,1667	3,8333	3,7500

Table 6f. Promotion

Entrepreneur	A	B	C
A	1,0000	0,5000	1,5000
B	2,0000	1,0000	0,7500
C	0,6667	1,3333	1,0000
	3,6667	2,8333	3,2500

The result is a balanced priority aspiring entrepreneurs to each criterion. The results shown in Table 7

Table 7. Score Each Prospective Employers

Entrepreneur	HRD	Raw Materials	Machine	Innovation	Services	Promotion
A	0,5443	0,2954	0,2954	0,2954	0,4621	0,3036
B	0,2431	0,2587	0,2587	0,2587	0,2562	0,3764
C	0,2126	0,4459	0,4459	0,4459	0,2818	0,3200

Furthermore, the formula is to calculate Lamda divided line results in the form of priority criteria lambda values shown in Table 8.

Table 8. Lamda value for each criterion

	Number of lines	Priority	Lamda
Skilled human resources	0,3443	0,2395	1,4373
Adequate supply of raw materials	0,2696	0,2120	1,2719
Modern machine tools	0,3647	0,2465	1,4793

Product innovation	0,1322	0,1485	0,8907
Services	0,0259	0,0657	0,3941
Promotion	0,0462	0,0878	0,5267

From 8 in the above table can be calculated value of Lamda max, CI and CR by the formula (1), (2) and (3) the result is:

$$\alpha max = \frac{7}{7} = 1$$

Because CR <0.1 then the value of the pairwise comparison matrix given criteria consistent.

Next is to calculate the value of each criterion prospective entrepreneurs for each item criteria matrix formula in Table 5 multiplied by the matrix in Table 4, the results shown in Table 9.

Table 9. Priority Each Prospective Employers

Entrepreneurs	HRD	Raw Materials	Machine	Innovation	Services	Promotion
Entrepreneurs A	0,1304	0,0626	0,0728	0,0439	0,0304	0,0266
Entrepreneurs B	0,0582	0,0548	0,0638	0,0384	0,0168	0,0330
Entrepreneurs C	0,0509	0,0945	0,1099	0,0662	0,0185	0,0281

Last is a global priority calculating sums by way of rows in the table 9, the results are shown in Table 10.

Table 10. Global Priority of each candidate Entrepreneurs

	Prioritas
Pengusaha A	0,3667
Pengusaha B	0,2651
Pengusaha C	0,3682

From Table 10 above resulting priority value for each prospective employer and the highest result is the entrepreneur C of 0.3682, second is A businessman at 0.3667 and the last is a businessman and amounted to 0.2651. These results can be illustrated in the figure below.
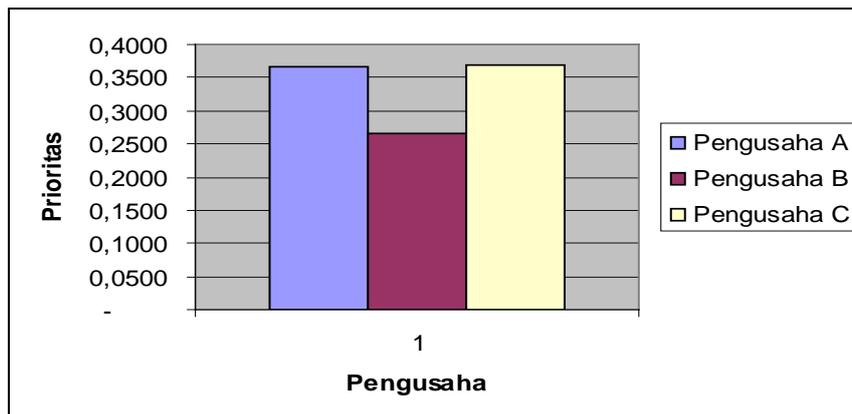

Figure 3. Results of Processing by AHP

CONCLUSION

Based on the results of data processing and analysis in the previous chapter, it can be concluded as follows:

1. It can be built a system of decision making using AHP method to determine the order of priority in determining the selection of the right competitive strategy for employers who are members of cooperatives in the face of AEC 2015 INTAKO.
2. The results of the simulation for the selection of the right competitive strategy conducted three pengsaua A, B and C in the face of MEA 2015 Entrepreneur C is the highest at 0.3682, the next A businessman at 0.3667 and 0.2651 for the last businessman Bs.
3. The successful entrepreneur C due to machinery, raw material and product innovation has the highest value.
4. This simulation can also be used for decision making an issue of another

Suggestion

Suggestions can be submitted in this research are:

1. Most of the assessment in this study done intuitively by some managers of companies belonging to the Cooperative INTAKO Tanggulangin, so this study relied heavily on the experience of managers and administrators of the Cooperative INTAKO (subjective), although based on objective data.
2. The research appears as a reaction to dynamic market conditions. Therefore, if there is a significant change in the market, the formulation of strategies in this study has the advantage because it can be applied to all companies in various industrial fields including entrepreneurs who are members of cooperatives INTAKO. Therefore, this study should be done through discussions with some company managers to avoid excessive subjective element, as was done by researchers with focused discussions with some of the company managers who have experience in the field of SMEs especially business leather craftsmen, head of the company , as well as Industry and Trade, Chamber of Commerce, this is done to avoid subjective elements in order to produce a strategy that this study really valid. In addition, the formulation of the strategy needs to be done regularly to get an overview of the dynamic market, for example in a period of half a year or even once a year, this is done because of market conditions which change at any time.
3. Simulation businessman C can be used as examples in addition to manual or guide for other entrepreneurs who are members of cooperatives INTAKO and can be made an example of a white paper guide for employers in addressing the AEC 2015.

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