The Success Factors of Knitting Small Medium Enterprises: A Case Study on SME Centre

Endang Chumaidiyah[1*], Anton Abdulbasah Kamil[2], Husni Amani[3]

[1,2,3] *School of Industrial and System Engineering, Telkom University, Indonesia*
Jl. Telekomunikasi No.1, Ters. Buah Batu, Banding, Indonesia

[1]endangcn@gmail.com
[2]kamil.antonabdulbasah@gmail.com
[3]husni.amani@gmail.com

[*]*Corresponding Author:* E-mail: endangcn@gmail.com

***Abstract*— SMEs are the largest business group that plays an important role in driving the economy because it involves large numbers of workers. But SMEs have lower productivity compared to large scale businesses. Therefore, The SMEs are needed to improve the competitiveness by identifying critical success factors. This paper aims to identify critical success factors in knitting SMEs by using factor analysis methods. The results obtained show that of the 10 variables identified in the group into 4 factors, namely the main factor (25.6%), supporting factors (20.8%), local competitor factors (12.3%), and global competitor factors (11.7 %). The four factors in accordance with their priorities are the factors that determine the success of an SME or critical success factors with an influence level of 70.4%. The main factors impacted the success of SMEs are marketing, machine, creativity in product design, and government policies. The contribution of this paper is the finding an operational success factors that is important for increasing the productivity and competitiveness of SMEs.**

***Keywords*—** *Success Factors, SME, Factors Analysis, Productivity*

1. Introduction

SMEs are the largest and dominant business organization in Indonesia, which plays a significant role in the economy. Overall SMEs represent around 99% of the total businesses in Indonesia, which absorb 97% of total employment, and contribute 57% of annual GDP [1]. The number of SMEs in Indonesia is estimated to be around 55 million SMEs which employ around 108 million workers, but their productivity are lower than 4% compared to large scale businesses. This low productivity is generally caused by manual production processes, conventional production methods, and less reliable labor.

Small and medium enterprises are one of the drivers of the economic growth in a country. Therefore the success of these SMEs is a factor that needs the attention of various parties to encourage SMEs to be able to run their businesses productively and sustainably. SMEs have considerable potential even though they are small in size but the number of perpetrators is very large so that it involves large numbers of workers and is able to drive the economy. SMEs can be considered as a driving force for the world economy [2]. In developing countries SMEs are the main source of income that forms the basis for the birth of large numbers of entrepreneurs and employment providers [3].

SMEs in general have several limitations in many aspect such as finance, marketing, production, and quality; including small size, lack of funding and lack of adequate leadership [4]. They also have weakness in their business value chain [5].

Based on various opportunities, challenges, and constraints faced by SMEs, efforts need to be made to improve the competitiveness of SME businesses through the dominant factors in supporting the success of SME businesses. These factors are critical success factors that need to be improved according to their priorities. This paper aims to discuss the success factors in SMEs with a case study at the knitting industry centre. That is one of the industrial centre that need to be developed where there are currently around 200 SMEs. The results of this study are expected to be a reference in increasing the competitiveness of SME businesses, especially for the knitting industry.

2. Literature Review

The success factor of SMEs is very important for the sustainability of business and the society's economy because of its large numbers, both formal and informal SMEs. According to the study that the success of SMEs depends on several special factors identified as critical success factors (CFS), namely brand reputation, customer service and reliable delivery excellence, while innovation is found not to contribute to SME success [6]. CSF for lean implementation in SMEs including leadership, management, finance organizational culture and skills / expertise [7].

Indicators the success factors of SMEs can be determined from various aspects related to the functional organization. Key success factors for logistics providers include organization, management, human resource, customer satisfaction [8]. Eight CSFs that have been identified for contractors at Ghanaian, namely culture of quality and zero defects, organizational design, work culture and work environment, customer satisfaction, strategy, leadership, measurement, information analysis and knowledge management and implementation of lean principles [9].

The advantages of CSF are related to performance achievement and sustainability of business, the CSF is very useful for managers and decision makers [10]. CSF can be defined as a factor that needs to be closely monitored by the manager in order to ensure the success of a job and as a means to identify important elements needed by the organization to achieve goals more effectively. This represents a set of very important issues where organizations must focus on limited resources for success [11].

The success factor important not only for SMEs but also important for medium and large companies, especially for business continuity. The main CFS that applies to large companies is also indicated to occur in SMEs [12]. Particularly for SMEs have both internal and external constraints [13].

Generally based on the literature review above, almost previous studies on critical success factors companies take a functional variable as research variable. This is as the finding of critical success factors were influenced by functional factors in organizations such as leadership, management, finance, skills/expertise, measurement, organizational, and culture [7]-[9] [14].

There is also a study stated that the factors hindered success of SME entrepreneurs in Bangladesh are infrastructure, politics, market access and capital [15]. The entire study above discusses at the functional level of the organization as research variable and has not yet discussed at a more operational level.

3. Research Methodology

The data processing was carried out using factor analysis, while the variables used consisted of 10 variables consisting of internal and external variables that influence the success of SMEs. It is based on the results obtained from the SWOT analysis [16]. Internal variables consist of labor skills, machine, method, product design (creativity), capital, and marketing. The external variable consists of local competitors, global competitors (imported products), and government policies. The framework of the critical success factors in these knitting SMEs can be explained in the following figure 1.

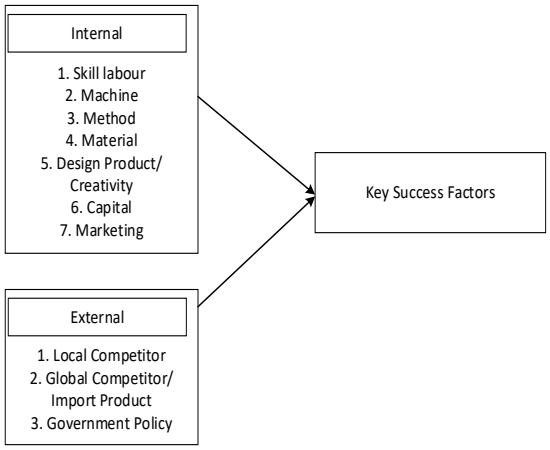

Figure 1. The Success Factors Framework

The data sources in this study were obtained from the questionnaires on 50 knitting SME respondents to measure perceptions of these variables which according to their most influenced the level of success of SME businesses. Based on the factor analysis, there are ten variables identified, namely:

1. Labour skill
2. Machine
3. Method
4. Material
5. Design product(creativity)
6. Capital
7. Marketing
8. Local competitors
9. Global competitors (import product)
10. Policy of the government

The rating scale uses an ordinal scale from 1 to 5 as follows: very low (1), low (2), medium (3), high (4), and very high (5). The average calculation results for the 10 variables obtained from the questionnaire as shown in table 1.

Table 1. Mean of Variables

No	Variable	Mean	Score
X1	Labor skill	3,92	high
X2	Machine	3,10	average
X3	Method	3,26	average
X4	Materials	3,63	high
X5	Design product (creativity)	3,42	high
X6	Capital	4,08	high
X7	Marketing	3,25	average
X8	Local Competition	3,54	high
X9	Global Competition (imported products)	3,51	high
X10	Government Policy	2,40	low

Score:

1,00 – 1,80 : very low 3,41 – 4,20 : high
1,81 – 2,60 : low 4,20 > : very high
2,61 – 3,40 : average

Kaiser Meyer Olkin (KMO) measure of sampling adequacy is conducted to know whether the sample size is adequate or not for conducting factor analysis [17], as show in table2. It is found that KMO (0.729) is greater than 0.6 which indicates that the sample size is large enough to conduct factor analysis. The Bartlett's test of sphericity is significant ($p<0.001$) that is, the coefficient matrix is non-singular. Therefore, it is possible to conduct factor analysis.

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.729
Bartlett's Test of Sphericity	Approx. Chi-Square	128.434
	df	45
	Sig.	0.000

Table 3 presents how much of the total variance explained by factors. It is revealed that four factors have eigenvalue more than 1 and these factors explained more than 70% of the variation of total. Scree plot (Figure 2) also shows that the eigenvalue has significantly change for 4 factors.

Table 3. Factors for explaining Total Variance

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
X1	3.546	35.456	35.456	3.546	35.456	35.456	2.563	25.632	25.632
X2	1.297	12.974	48.430	1.297	12.974	48.430	2.083	20.833	46.465
X3	1.165	11.648	60.079	1.165	11.648	60.079	1.225	12.255	58.720
X4	1.030	10.300	70.378	1.030	10.300	70.378	1.166	11.658	70.378
X5	.892	8.922	79.300						
X6	.635	6.349	85.649						
X7	.515	5.152	90.801						
X8	.385	3.845	94.646						
X9	.314	3.139	97.786						
X10	.221	2.214	100.000						

Extraction Method: Principal Component Analysis.

Figure 2 show the scree plot of the component and eigenvalue, Table 4 is the rotated component matrix of influential factors.

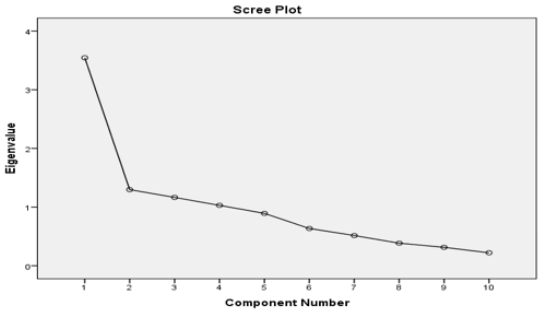

Figure 2. Scree plot of the component and eigenvalue

Table 4. Rotated Component Matrix of influential factors

	Component			
	1	2	3	4
labor skills (X1)	.076	**.757**	.155	.031
the machine (X2)	**.810**	.348	.146	-.099
the method (X3)	.273	**.487**	.345	-.104
the material (X4)	.431	**.727**	-.254	-.128
creativity (X5)	**.577**	.133	.036	**-.485**
capital (X6)	.093	**.757**	-.058	.093
marketing (X7)	**.818**	.136	-.114	.178
local competitors (X8)	.142	.066	-.005	**.912**
foreign competitors (X9)	.086	.007	**.927**	-.008
policy (X10)	**.776**	.100	.346	.143

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

4. Result and Analysis

This study proposed research variables are operational variables for production factors in knitting SMEs which are very important for business success. The operational variables in turn can provide solutions to overcome the problems of manufacturing SMEs in general and can be applied to increased competitiveness.

Based on the results of data processing, there are four groups that determine the success of knitting businesses as shown in table 5 below.

Table 5. Grouping of Manifest Variables Based on Factor Weight

Factor	Latent Variable Name/ Factor	Weight	Manifest Variable
1	Main	25,6%	X2, X5, X7, X10
2	Supporting	20,8%	X1, X3, X4, X6
3	Local competitors	12,3%	X9
4	Global Competitors	11,7%	X8

The four groups of factors as a whole as much as 70.4% are the determinants of the success of the

knitting business, while the remaining 29.6% comes from other factors that have not been accommodated in the four groups of factors. This is as shown in figure 5 below.

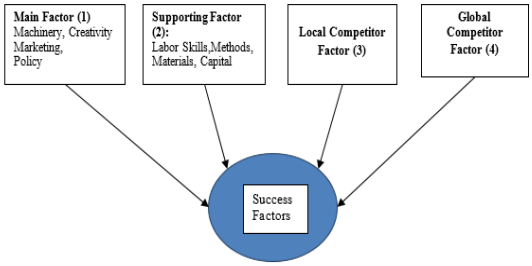

Figure 3. Analysis of SF Determinants

The first factor group consists of machinery, creativity, marketing, and government policy, which are the factors that determine the success of the knitting SMEs business at 25.6%. These factors are important for the continuity of SMEs which machinery and creativity are the keys to producing products that can be accepted by the market, therefore this factor is referred to as the main factor that determines the success of knitting SMEs.

The second factor group consists of the expertise of labor, methods, material, and capital which are the determinants of success of the business with a percentage of 20.8%. These factors support the production process of knitting SMEs which are facilities and infrastructure, therefore this factor is called a supporting factor. The second important variable group in the continuity of the business of knitting SMEs, namely: Labor Skills, Method. Material, and Capital.

The third factor group is the local competitor which determines the success of the business with a percentage of 12.3%. Competition between knit craftsmen is one of the obstacles that must be accepted by craftsmen who do not only come from the same industrial centers but can also come from employers in other industrial centers. In addition, there are also competitors from other substitute products such as shirts and other clothing products.

The fourth factor group is a global competitor originating from imported knit products from abroad, which determines business success by 11.7%. This is because the import of knit products that flood the domestic market is a threat to the sustainability of the business of local knitting craftsmen. Moreover, imported knit products have better quality at competitive prices and most are produced using automatic knitting machines.

Furthermore the analysis will be focused on the main factor affect success of SME. The results of this study it was found that the main factors which impact the success of manufacturing SMEs from the most influence successive for the internal variables are:

1. Marketing is an effort to introduce, distribute and deliver the products to the consumers. There is a positive relationship between marketing efforts carried out with financial performance [18], the studies on marketing in SMEs have been carried out for more than 20 years [19]. The currently trend of marketing is done using internet marketing or e-commerce [20][21].
2. Machine is the production facilities which tangible goods in the form of facilities used to conducting production including equipment, tools and technology. This is used directly to produce the products, in accordance with argue [22], major program in manufacturing agility for SME [23].
3. Creativity is the ability to create new ideas, including innovations in product design. This is consistent with the finding that investment in R & D will improve the performance of SMEs which are intangible leverage [24]. This is also supported by the results of research on innovation in supporting the success of SMEs [25][26].

While from the external environment the variable that influence success of SMEs originating namely policy. Policy is government support to increasing the empowerment of SMEs. Government policy in supporting SME economic development as an influence on the external environment [27]. The success of economic development requires good business regulation design [28], there is a relationship between the critical category and policy reform [29].

This study finding can be applied to improve the SME competitiveness especially in manufacturing, through an increase in the main internal variables from the highest influence are marketing, machinery (tangible), and creativity (intangible). As well one external variable is a conducive policy from the government. These four variables are a priority in achieving SME success.

5. Conclusion

Based on the results of the discussion of the analysis of SMEs' success factors on 10 variables in this study, there were 4 latent groups of variables, namely the main factor group, supporting factors, local competitor factors, and global competitor factors.

The main factor group of 25.6% determines the success of SMEs consisting of machinery, creativity, marketing, and government policy. This

group is the most important variables that determine the success of a knitting business.

The group of supporting factors of 20.8% determines the success of the knitting business which consists of workforce, methods, material, and capital. This group is the second most important variables that need to be considered in achieving the success of the knitting SME business.

The third factor has only one variable, namely local competitor, which determines business success by 12.3%. The existence of competition among knitting business actors encourages SMEs to be more efficient and maintain local business competition in a fair and healthy manner.

The fourth factor also only consists of one variable, namely global competitor, which affects business success by 11.7%. Global competitors come from the number of imported knit products that pose a threat to business continuity due to better product quality.

Efforts to improve the success of SMEs are carried out by prioritizing improvements in internal capabilities in terms of marketing, machine, and creativity in product design. Whereas from the external environment is a conducive policy from the government needed to support the success of SMEs.

The novelties of this paper is the finding an operational success factor that is important for increasing the productivity and competitiveness of SMEs. These factors are marketing, machine, creativity in product design, and government policy.

The limitation of this paper is has not linked the analysis with the results of the average calculation of each variable or descriptive analysis. In the next study, cluster analysis will be carried out which enables the settlement of problems in each categories business actors to be done situationally so that the solution is more effective.

Acknowledgments

The authors would like to thank for DRPM Ristekdikti, Indonesia Government to support for grant funding to this research. The second also thank for PPM, Telkom University, Indonesia for support to conduct research and writing this paper.

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