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BUSINESS STRATEGIES OF SMALL AND MEDIUM ENTERPRISES (SMEs) IN FACING COVID-19 PANDEMIC: A CASE STUDY ON SMEs WEAVING CRAFTSMEN IN TANA TORAJA REGENCY

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ABSTRACT

The covid-19 pandemic has affected downgrade of economics in the world especially in Indonesia. SMEs as one of the business sectors that most affected by the Covid-19 pandemic need to have the right business strategy in order to bounce back from adversity due to the COVID-19 pandemic. This study using a SWOT analysis to identify internal and external factors of SMEs Weaving in Tana Toraja Regency and uses a SWOT matrix to formulate the right business strategy. TOPSIS method is used to rank alternative business strategies. Based on the results of the SWOT matrix, there are four alternative business strategies for Toraja Weaving SMEs. The proposed alternative business strategy is made in a simulation to test the effect of the alternative business strategy. By using a dynamic system method with Powersim 10 software, the simulation results shows that if the weaving SMEs implement the four of business strategy such as making weaving product innovations, utilizing digital marketing to market woven products, utilizing a business license to obtain capital for the development of a weaving business, making a special weaving tourism village will increase the value sales profit by 131% in a year with a profit rate of Rp.728,606.753, - until the end of 2032..

Keywords: SMEs, Business Strategy, SWOT, Topsis, Dynamic System

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1. INTRODUCTION

The impact of the Covid-19 virus pandemic on the economic sector itself was felt by the actors, not only large economic sectors such as the medium and small-scale economic sectors were also affected (Rosyada and Wigiawati, 2020: 71; and Shafi, Liu, and Ren, 2020 : 1). Furthermore, according to Liguori and Pittz (2020: 106); Fitriyani, Sudiyarti, and Fietroh (2020: 87); Fabeil, Pazim, and Langgat (2020: 837) the impacts felt by micro, small and medium enterprises during the Covid-19 pandemic include difficulties in accessing business capital, many employees being laid off because it is not possible to work remotely, declining sales. , lack of skills in the field of information technology, disruption of product delivery.

The impact of the Covid-19 pandemic was also felt by SME actors in Tana Toraja Regency, South Sulawesi. One of the economic sectors of Tana Toraja Regency that has been affected by the Covid-19 pandemic is weaving cloth craftsmen. Toraja woven fabric is one of the handicrafts of Tana Toraja which is a characteristic of Tana Toraja Regency. Not only that, the Toraja woven fabric is also a superior product that is sought after by tourists to be used as souvenirs. Based on data obtained from the Office of Cooperatives, Micro, Small and Medium Enterprises, there are 189 SMEs Weaving Craftsmen spread across Tana Toraja Regency and all of these SMEs are affected by the Covid-19 pandemic. The impact felt by these business actors was the decline in sales turnover of woven fabrics in 2020 by 70% -80% compared to the previous year (Monitoring and Evaluation Division of the Tana Toraja SME Service, 2021).

Based on the background of the problem above, the aims of this study are as follows:

1. To identify the factors that influence the business strategy of weaving SMEs in Tana Toraja Regency in facing of the Covid-19 Pandemic.
2. To evaluate the existing business strategy of Weaving SMEs in Tana Toraja Regency in facing of the Covid-19 Pandemic.
3. To Design a weaving SME business strategy in Tana Toraja Regency in facing of the Covid-19 Pandemic.

This study uses several methods in processing data, so that it can determine the right method with a higher level of accuracy. To determine business strategy using SWOT analysis. According to Ozbek, Pabuccu, and Osmer (2020: 17) explain that this SWOT analysis is an analysis in the form of a matrix that is used to assess the strengths and weaknesses as well as the opportunities and threats of a project, product, or other sector in formulating alternative business strategies. Furthermore, to choose the best strategy, it is necessary to carry out further analysis of the alternative strategies generated by SWOT. The further analysis used is TOPSIS (Technique For Order Preference By Similarity To Ideal Solution) analysis. The main advantages of TOPSIS compared to other MCDM methods in decision-making complex problems are easy to use, can take into account all types of criteria, rational logic and easy to understand for practitioners, the calculation process is very easy, the concept allows pursuing the best alternative criteria described in simple mathematics. , and important weights can be entered easily (Nasab, 2012). According to Usman & Moengin (2017), the TOPSIS method is carried out with the principle that the chosen alternative must have the longest distance from the negative ideal solution and the shortest distance from the positive ideal solution from a geometric point of view.

After ranking alternative business strategies using the TOPSIS method, a simulation is then made to find out whether there is an effect of the proposed alternative business strategy after implementation. Business strategy simulation is carried out using dynamic system simulation. System dynamics is a method used to describe dynamically, modelling, simulate and analyze complex systems to obtain a detailed picture of decision making (Guo et al, 2018). System dynamic modeling can be used as a tool to evaluate the short-term and long-term impacts of policies or decisions taken so as to provide clear information in the future (Hasan et al, 2015). The results of the research are expected to be useful for actors of Tana Toraja Weaving SMEs in order to face the Covid-19 pandemic.

2. RESEARCH METHODS

The method used in this study is a combination of qualitative and quantitative methods. Qualitative data processing was carried out by conducting interviews with Weaving SMEs in Tana Toraja Regency and filling out questionnaires by experts. Qualitative data processing from the results of the interview was then grouped with a SWOT analysis. SWOT analysis was conducted to determine the internal and external factors that affect the sales of SMEs and to formulate alternative business strategies with a SWOT matrix in accordance with the current position of SMEs in weaving. Quantitative analysis was carried out using the TOPSIS method to determine the priority of each alternative business strategy. The proposed business strategy recommendations are then tested by modeling and simulating dynamic systems to test the effectiveness of the proposed alternative business strategies as an illustration for SMEs Weaving. Alternative business strategy modeling and simulation using the help of Powersim 10 software.

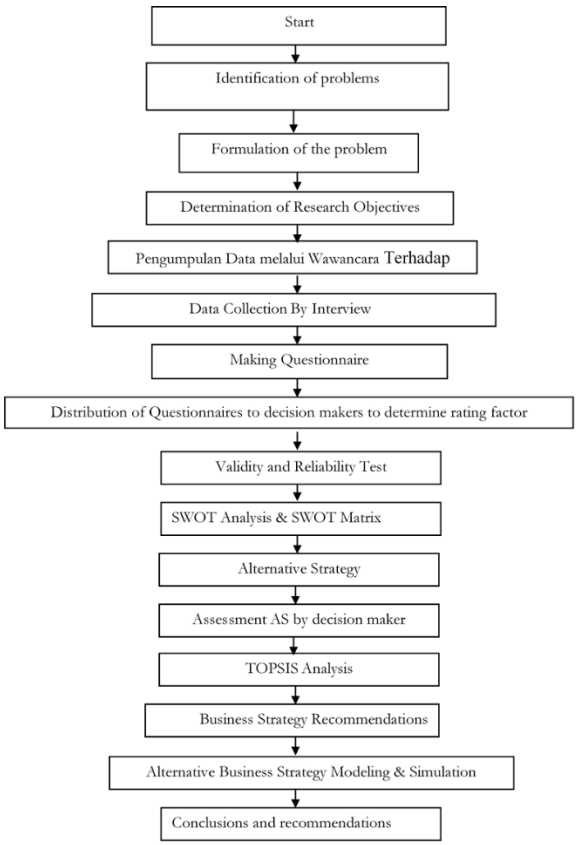

Figure 1. Reasearch Flow

3. FINDINGS AND DISCUSSION

3.1. Findings

SWOT analysis is used to determine the strategy used after looking at the strengths, weaknesses, opportunities and threats of the weaving SMEs in Tana Toraja Regency. The SWOT analysis begins with the identification of positive aspects, namely strengths and negative aspects, namely weaknesses of the internal organization. Meanwhile, from external organizations, opportunities and threats are identified. After conducting in-depth interviews with 82 actors of weaving SMEs in Tana Toraja Regency, the internal and external factors of weaving SMEs in Tana Toraja can be concluded as listed in Table 1.

Table 1. SWOT Analysis

Code	Internal Factor
	Strength
S1	Have a recognized business status
S2	Have profit
S3	Product motives variatived
S4	The price is quite competitive
S5	Equipment is sufficient Eco-Friendly
S6	Privately owned
S7	Handmade products
S8	High Product Quality
	Weakness
W1	Still lack of product innovation
W2	The Limitation of skilled workers
W3	Lack of promotion and marketing links/preferring mouth to mouth
W4	Lack of own capital/limited working capital
W5	Limited/Scarcity of raw materials
W6	Less creative workers
W7	Promotion is less aggressive and not routine
W8	Weaving only as a side job
W9	Production process is relatively need a long time
W10	Production location is quite far from the market/less strategic
W11	Hasn't been able to make a medium price product with good quality
	Opportunity
O1	There is provision of training materials from the government for weaving

O2	There is technological development
O3	Spacious market with a position as a tourist area
O4	Become a mandatory uniform for PNS (Civil Servants) on certain days
O5	The more people who carry out traditional ceremonies, the more this product will be sold
O6	Increased public awareness of collecting woven fabrics
O7	Opening of export market
O8	An increasingly dynamic marketing model
O9	The selling price is quite stable
	Threats
T1	Competitors who charge relatively lower prices
T2	Increase in raw material prices
T3	There is a pandemic that causes Social Limitations in large scale
T4	Regeneration of weavers and not easy to transfer weaving skills
T5	Global Market Opening
T6	Changes in customer tastes
T7	The decline in people's purchasing power due to the pandemic
T8	The number of modern woven fabrics which are cheaper

Determination of the rating to determine the level of importance of internal and external factors. Determination of this rating is done by distributing questionnaires to experts who have an interest in MSMEs and understand the condition of MSMEs as many as 12 people, namely the Head of the MSME Office Tana Toraja, Secretary to the MSME Office Tana Toraja, Head of the North Toraja Industry Service, Secretary to the North Toraja MSME Service, Head of North Toraja DPPKAD, North Makale Secretary of State, Chair and Management of the Tana Toraja MSME Association, Lecturers, and Entrepreneurs.

Table 4.6 Calculation of the Internal Strategic Factor Analysis Matrix Summary (IFAS) & External Strategic Factor Analysis Matrix Summary (EFAS)

Internal Strategy Factors	**Total**	**Weight**	**Rating**	**Score**
a. Kekuatan				
1. Have a recognized business status	55	0,10	4,6	0,45
2. Have profit	54	0,10	4,5	0,43
3. Product motives variatived	56	0,10	4,7	0,46
4. The price is quite competitive	49	0,09	4,1	0,36
5. Equipment is sufficient	52	0,09	4,3	0,40
6. Eco-Friendly	49	0,09	4,1	0,36
7. Handmade products	52	0,09	4,3	0,40
8. High Product Quality	49	0,09	4,1	0,36
Total	**416**	**0,74**		**3,21**
b. Kelemahan	**Total**	**Weight**	**Rating**	**Score**
1. Lack in product innovation	16	0,03	1,3	0,04
2. The Limitation of skilled workers	16	0,03	1,3	0,04
3. Lack of promotion and marketing links/preferring mouth to mouth	15	0,03	1,3	0,03
4. Lack of own capital/limited working capital	14	0,02	1,2	0,03
5. Limited/Scarcity of raw materials	16	0,03	1,3	0,04
6. Less creative workers	17	0,03	1,4	0,04
7. Promotion is less aggressive and not routine	15	0,03	1,3	0,03
8. Weaving only as a side job	19	0,03	1,6	0,05
9. Production location is far from the market/less	19	0,03	1,6	0,05
Total	**147**	**0,26**		**0,36**
Totally of Strengths and Weaknesses	**563**	**1,00**		**3,57**

Eksternal Strategy Factors	**Total**	**Weight**	**Rating**	**Score**
c. Peluang				
1. There is provision of training materials from the government for weaving	50	0,10	4,2	0,40
2. Spacious market with a position as a tourist area	51	0,10	4,3	0,42
3. Become a mandatory uniform for Civil Servants on certain days	48	0,09	4,0	0,37
4. The more people who carry out traditional ceremonies, the more this product will be sold	55	0,11	4,6	0,48
5. Increased public awareness of collecting woven	48	0,09	4,0	0,37
6. Opening of export market	47	0,09	3,9	0,35
7. An increasingly dynamic marketing model	53	0,10	4,4	0,45
8. The selling price is quite stable	53	0,10	4,4	0,45
Total	**405**	**0,78**		**3,28**
d. Ancaman	**Total**	**Weight**	**Rating**	**Score**
1. Competitors who charge relatively lower prices	21	0,04	1,8	0,07
2. Increase in raw material prices	28	0,05	2,3	0,13
3. There is a pandemic that causes Social Limitations in large scale	16	0,03	1,3	0,04
4. Regeneration of weavers and not easy to transfer weaving skills	19	0,04	1,6	0,06
5. The decline in people's purchasing power due to the pandemic	16	0,03	1,3	0,04
6. The number of modern woven fabrics which are	17	0,03	1,4	0,05
Total	**117**	**0,22**		**0,38**
Totally of Opportunity and Threats	**522**	**1,00**		**3,66**

Description:

• Weight: is the importance of each factor: very important = 1.00, very unimportant = 0.00 Total weight is 1.00

The rating shows the level of response/influence of these factors on MSMEs, 1=Main Weaknesses, 2=Small Weaknesses/Threats, 3=Medium Strengths/weaknesses/opportunities/threats, 4=Small Strengths, 5=Main Strengths.

• Score is the product of Weight and Rating

Then the total results of the calculation of the IFAS and EFAS matrix scores are as follows:

• Total score of strength (strengths) = 3.21.

• Total score of weaknesses (weaknesses) = 0.36.

• Total score of opportunities (opportunities) = 3.28.

• Total score of threats (threats) = 0.38.

From the results of the calculations on these factors, it can be described in the Cartesian Diagram SWOT analysis, can be seen in Figure 4.1.
The formula to find the coordinates of the point is as follows:
(X,Y) = Coordinates of internal analysis ; external analysis coordinates
= total score of strengths−total score of weakness ; total opportunity score−total threat score
= 3.21 – 0.36 ; 3.28 – 0.38
= 2.85 ; 2.9
So, the coordinates of the point are at 2.85 ; 2.9)

Quadran Anatomy :
1. Quadran I : Growth
2. Quadran II : Stable
3. Quadran III : Survive
4. Quadran IV : Diversification

Based on the recapitulation of the results of the SWOT analysis, it can be concluded that the SMEs Weaving in Tana Toraja Regency are in the upper right quadrant or the development or growth quadrant (strengths less weaknesses are positive and opportunities minus threats are positive).

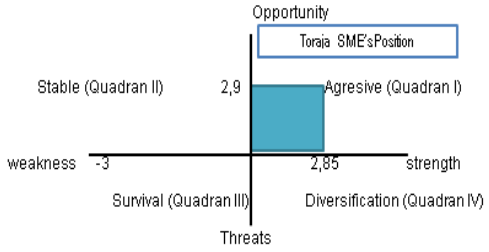

Figure 2. SWOT Cartecius Diagram

The tool used to formulate alternative business strategies for SMEs in Tana Toraja Regency is the SWOT matrix. The total value of internal and external factors can be described in the SWOT analysis diagram and the SWOT matrix combination formula. The alternative formulation of the S-O,W-O,S-T,W-T strategy is an alternative used to carry out the business strategy plan of Weaving SMEs in Tana Toraja Regency in the future. The following is the result of a combination of matrices obtained from indicators and a combination of internal and external factors is carried out.

After making the SWOT matrix, then making a quantitative model analysis as the basis for the total score for each factor in each S-O, W-O, S-T and W-T strategy. The following is a table of the quantitative model of strategy formulation.

Table 3. Quantitative Strategy Combination Planner Calculation Matrix

	Strength (S)	**Weakness (W)**
Opportunities(O)	S-O Strategy: Using strengths to take advantage of opportunities. The calculation is: Total score of Strength(S) + total score of Opportunities(O)= 3.21 + 3.28 = 6.49	W-O Strategy: Minimizing weaknesses by taking advantage of opportunities The calculation is: Total score Weakness(W) + total score Opportunities(O) = 0.36 + 3.28 = 3.64
Treaths(T)	ST Strategy: Using force to deal with threats The calculation is: Total score Strength(S) + total score Treaths(T) = 3.21 + 0.38 = 3.59	W-T Strategy: Minimize weaknesses and avoid threats The calculation is: Total score of Weakness (W) + total score of Treaths(T) = 0.36 + 0.38 = 0.74

Based on the Calculation Matrix Table of the Quantitative Strategy Combination Planner above, the alternative strategy that has the highest score is the S-O Strategy alternative or the Development and Growth Strategy. Strategy Development and growth is the development of SMEs Weaving Tana Toraja Regency by

maximizing strengths to take advantage of opportunities.

Next, determine the company's strategic position, referring to the results of internal matrix analysis (IFAS) and external matrix analysis (EFAS). The company's strategic position is seen by quadrant. The quadrant position is used to determine the right strategic alternatives to be taken by the company. The strategic position of the company is seen in Figure 1. From Figure 1 it is known that the company's position is in quadrant 1. This shows that the strength factor is greater than the weakness factor and the opportunity factor is greater than the threat faced by the weaving SMEs. The strategy that should be implemented by Tana Toraja Weaving SMEs is to support an aggressive growth policy. The type of strategy used by the company is the S-O strategy.

Based on the results of the SWOT analysis and matrix, an alternative business strategy is obtained that is in accordance with the environmental conditions of the SMEs Weaving in Tana Toraja Regency which will be developed. The alternative business strategies can be seen in Table 4.

Table 4. Alternative Business Strategy for Weaving SMEs in Tana Toraja Regency

Code	Business Strategy Alternative
A1	Using a business license to obtain capital for the development of a weaving business
A2	Making Woven Product Innovation
A3	Using Digital Marketing to sell the weaving products
A4	Creating a special tourist village for Toraja Weaving

The process of quantitative analysis using the Fuzzy TOPSIS method is carried out with the following steps:

a. Determining Alternative Decision Matrix

To determine the alternative decision matrix, a performance rating will be calculated, the AS value (Attractiveness Score) will be calculated, this AS value is calculated based on the attractiveness or relevance of each criterion to the alternative strategy obtained from the results of distributing questionnaires to the experts. The determination of the rating of alternative strategies is determined through the results of the opinions of 6 experts who understand the conditions of the Tana Toraja Weaving. The assessment is divided into 5 scales SMEs as shown in Table 5.

Table 5. Rating scale by expert

No	Condition	Fuzzy Numerical	Scale
1	Very Related (VR)	(0.75,1.00,1.00)	5
2	Enough Related (ER)	(0.50,0.75,1.00)	4
3	Middle Related (MR)	(0.25,0.50,0.75)	3
4	Not Related (NR)	(0.00,0.25,0.50)	2
5	Very Not Related (VAR)	(0.00,0.00,0.25)	1

The results of the alternative decision matrix which is the AS value of each criterion based on data obtained from 6 experts are presented in Table 6.

Table 6. Alternative Decision Matrix

Strategi	Criteria								
	S1	S2	S3	S4	S5	S6	S7	S8	
A1	4,5	2,5	2,3	1,8	3	2	2,7	3,5	
A2	2,5	2,5	4,3	2,5	3	2,7	4,3	4,7	
A3	2,3	2,2	4,3	3	2,2	2	3,8	4,5	
A4	2,3	2	3,2	2,5	2,2	1,7	3,7	3,8	
	W1	W2	W3	W4	W5	W6	W7	W8	W9
A1	2,7	1,8	1,8	4,7	1,7	1,5	1,7	1,2	1,7
A2	4	2,5	2,2	2,7	2,2	2,8	2	1,2	1
A3	2,5	2,2	4,7	2,3	1,5	3,5	4,7	2,5	3
A4	2,2	1,8	3,5	2,2	1,7	2,8	3	2	2,8
	O1	O2	O3	O4	O5	O6	O7	O8	
A1	2	2	1,3	1,5	1,5	1,5	1,7	1,3	
A2	4,2	3,5	3	3,2	3,5	4,5	3,7	3,2	
A3	2	3,7	2,5	2,7	3,7	4,7	4,7	2,5	
A4	1,2	4,3	1	1,5	2,2	1,7	1,8	1,7	
	T1	T2	T3	T4	T5	T6			
A1	2	2,2	2,2	1,3	1,3	1,2			
A2	3,5	2,8	3,8	2,5	3,5	4,5			
A3	3,5	2,5	4,8	1,7	4,3	3,3			
A4	1,5	1,2	3	1,2	2	1,5			

b. Determining a Normalized Decision Matrix

After knowing the value of interest criteria for each alternative strategy, then the next step is to normalize based on Equation:

$$r_{ij} = \frac{x_{ij}}{\sqrt{\sum_{i=1}^{m} {x_{ij}}^2}}$$

The results of the normalized decision matrix are shown in Table 7

Table 7. Normalized Decision Matrix

Strategi	Criteria								
	S1	S2	S3	S4	S5	S6	S7	S8	
A1	0,644	0,455	0,269	0,316	0,485	0,403	0,300	0,344	
A2	0,358	0,455	0,500	0,431	0,485	0,537	0,487	0,459	
A3	0,334	0,394	0,500	0,517	0,350	0,403	0,431	0,443	
A4	0,334	0,364	0,365	0,431	0,350	0,336	0,412	0,377	
	W1	W2	W3	W4	W5	W6	W7	W8	W9
A1	0,328	0,285	0,254	0,676	0,380	0,201	0,250	0,267	0,344
A2	0,492	0,389	0,300	0,386	0,493	0,380	0,300	0,267	0,206
A3	0,307	0,337	0,646	0,338	0,342	0,470	0,701	0,572	0,618
A4	0,266	0,285	0,484	0,314	0,380	0,380	0,451	0,457	0,584
	O1	O2	O3	O4	O5	O6	O7	O8	
A1	0,264	0,255	0,281	0,279	0,223	0,177	0,223	0,252	
A2	0,549	0,446	0,631	0,588	0,521	0,530	0,491	0,598	
A3	0,264	0,468	0,526	0,495	0,546	0,550	0,625	0,472	
A4	0,154	0,553	0,210	0,279	0,322	0,196	0,245	0,315	
	T1	T2	T3	T4	T5	T6			
A1	0,309	0,388	0,270	0,243	0,194	0,162			
A2	0,540	0,508	0,477	0,455	0,509	0,625			
A3	0,540	0,448	0,602	0,303	0,630	0,463			
A4	0,231	0,209	0,373	0,212	0,291	0,208			

c. Determining the Weighted Normalized Decision Matrix

The weighted normalized decision matrix (yi) is the result of multiplying the normalized matrix with each criterion weight. The equation used in this calculation is Equation: $\widetilde{V}_{ij} = \tilde{x}_{ij} \text{ x } w_i$

The result of the weighted normalized decision matrix is shown in Table 8.

Table 8. Weighted Normalized Decision Matrix

Strategi	Criteria								
	S1	S2	S3	S4	S5	S6	S7	S8	
A1	0,033	0,023	0,014	0,014	0,023	0,018	0,014	0,016	
A2	0,018	0,023	0,026	0,019	0,023	0,024	0,023	0,021	
A3	0,017	0,020	0,026	0,023	0,017	0,018	0,021	0,020	
A4	0,017	0,018	0,019	0,019	0,017	0,015	0,020	0,017	
	W1	W2	W3	W4	W5	W6	W7	W8	W9
A1	0,005	0,004	0,004	0,009	0,006	0,003	0,003	0,005	0,006
A2	0,007	0,006	0,004	0,005	0,007	0,006	0,004	0,005	0,004
A3	0,005	0,005	0,009	0,004	0,005	0,007	0,010	0,010	0,011
A4	0,004	0,004	0,007	0,004	0,006	0,006	0,006	0,008	0,010
	O1	O2	O3	O4	O5	O6	O7	O8	
A1	0,012	0,012	0,012	0,014	0,010	0,008	0,011	0,012	
A2	0,025	0,021	0,028	0,030	0,023	0,023	0,024	0,029	
A3	0,012	0,022	0,023	0,025	0,024	0,024	0,031	0,023	
A4	0,007	0,026	0,009	0,014	0,014	0,009	0,012	0,015	
	T1	T2	T3	T4	T5	T6			
A1	0,006	0,010	0,004	0,004	0,003	0,003			
A2	0,010	0,013	0,007	0,008	0,008	0,010			
A3	0,010	0,012	0,009	0,005	0,009	0,007			
A4	0,004	0,005	0,006	0,004	0,004	0,003			

d. Determine the matrix of positive ideal solution and negative ideal solution

The positive ideal solution matrix is the number of best values that each criterion has, while the negative ideal solution matrix is the number of worst values that each criterion has. In determining the positive and negative ideal solutions, each of the existing criteria is classified into benefit and cost criteria. The benefit criterion is a criterion whose value is maximized while the cost criterion is the minimum cost value. In the selection of this alternative strategy which is classified as a benefit criterion is a criterion obtained from internal factors of strength and external factors of opportunity, while the cost criterion is a criterion obtained from internal factors of weakness and external factors. external threats. Determine the positive ideal solution matrix and negative ideal solution from the following equation:

$A^+ = \{{V^+}_1 \ldots . {V^*}_i\}$ dan $A^- = \{{V^-}_1 \ldots . {V^*}_i\}$

The results of the positive ideal solution matrix can be seen based on Table 9

Table 9. Positive ideal matrix and negative ideal solution

Strategi	Criteria								
	S1	S2	S3	S4	S5	S6	S7	S8	
A^+	0,033	0,023	0,026	0,023	0,023	0,024	0,023	0,021	

A-	0,015	0,018	0,014	0,014	0,017	0,015	0,014	0,016	
	W1	W2	W3	W4	W5	W6	W7	W8	W9
A+	0,004	0,004	0,004	0,004	0,005	0,003	0,003	0,005	0,004
A-	0,009	0,010	0,009	0,009	0,007	0,009	0,010	0,010	0,011
	O1	O2	O3	O4	O5	O6	O7	O8	
A+	0,028	0,026	0,028	0,030	0,024	0,024	0,031	0,029	
A-	0,007	0,012	0,009	0,014	0,010	0,008	0,011	0,012	
	T1	T2	T3	T4	T5	T6			
A+	0,004	0,005	0,003	0,004	0,003	0,003			
A-	0,010	0,005	0,009	0,010	0,009	0,010			

e. Determine the distance value of each alternative with a positive ideal solution matrix and a negative ideal solution matrix

The determination of the distance between each alternative with a positive ideal solution and a negative ideal solution is calculated based on the value of the weighted normalized decision and the ideal solution. The calculation of the alternative distance value to the positive ideal solution is obtained by the equation:

$$D_i^+ = \sqrt{\sum_{j=1}^{m}(A^+ - \tilde{V}_{ij})2} \quad \text{and}$$

$$D_i^- = \sqrt{\sum_{j=1}^{m}(A^- - \tilde{V}_{ij})2}$$

The range of values for each alternative can be seen in Table 10.

Table 10. Distance of Positive Ideal Solution and Negative Ideal Solution

Alternatif	D_i^+	D_i^-
A1	0,0500	0,0288
A2	0,0231	0,0505
A3	0,0322	0,0429
A4	0,0498	0,0240

f. Determining the preference value of each alternative

The preference value is used to determine the priority of each alternative strategy. The preference value is based on the distance value of each alternative to the positive ideal solution and the negative ideal solution. The preference value for each alternative (Vi) is formulated in the equation:

$V_i = \frac{D_i^-}{D_i^- + D_i^*}$, i = 1, 2,… , m.

The value of the distance preference for each alternative can be seen in Table 11 below.

Table 11. Preference Value of Each Alternative

Alternative	Preferensi (V_i)	Rank
A1	0,3659	3
A2	0,6866	1
A3	0,5715	2
A4	0,3256	4

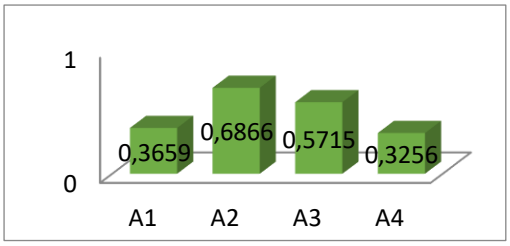

Figure 3. Business Strategy Alternative Ranking Results

Based on the value of the distance calculation for each alternative business strategy, the shortest distance from the positive ideal solution is the A3 business strategy alternative with a value of 0.0231, the farthest distance from the negative ideal solution is the A3 business strategy alternative strategy with a value of 0.0505. Meanwhile, Table 4.18 and Figure 4.2 above show the final result of the calculation, namely the preference value. By sorting the highest value to the lowest value from the preference value that has been obtained, it can be seen the best alternative business strategy because it has the highest preference value, namely the alternative A3 business strategy of 0.6866, namely making weaving product innovations. The second alternative business strategy is the A4 alternative of 0.5715, namely utilizing digital marketing to market Weaving products. The third-order alternative business strategy is alternative A1 of 0.3659, which is to use a business license to obtain capital for the development of a weaving business. The fourth alternative business strategy is alternative A5 of 0.3256, namely making a special tourism village for Toraja Weaving.

After ranking alternative business strategies using the Fuzzy Topsis method, then proceed to make strategy modeling in system simulation. The system simulation model used is a dynamic system simulation. Before doing the modeling, a causal loop diagram (CLD) or a causal diagram is needed. The purpose of a system dynamics

methodology based on a causal or causal philosophy is to gain an in-depth understanding of the workings of a system. The causal relationship of the variables that affect the balance of the weaving business system in Tana Toraja Regency. The causal loop diagram (CLD) of SMEs Weaving in Tana Toraja Regency can be seen in Figure 4.3 below.

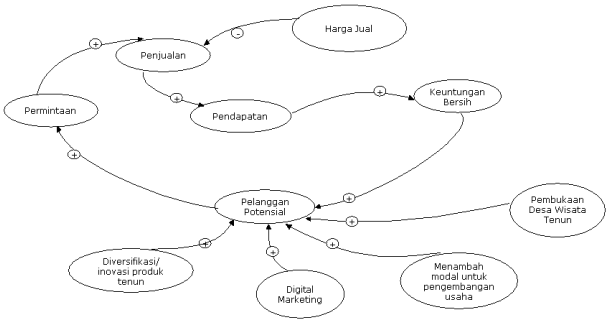

Figure 4. Causal Loop Diagram (CLD)

The results of business activities (businesses) run by SMEs Weaving in Tana Toraja Regency are based on sales of woven products according to consumer demand. The selling price occupies a priority in terms of consumer interest in the company, if the selling price is high it will have an impact on declining sales and vice versa, if the selling price is affordable then sales will increase, as well as the company's income. Revenue is then reduced by costs, including operational/overhead/routine costs, raw materials, labor, and so on which affect the profits to be received by MSMEs. In an effort to increase MSME profits, a causal loop diagram is described regarding business strategies for weaving SMEs in Tana Toraja Regency in getting the number of customers through strategies for making weaving product innovations, using digital marketing to market products, developing weaving businesses by utilizing business permits, and creating villages. weaving tours. The number of customers is influenced by the presence of new customers (potential customers) and the large number of new customers will be determined by a good business strategy so that product demand will continue to increase and make business revenues also continue to increase. After the CLD is formed, then a computer model is built which is called a flow diagram or stock flow diagram (SFD).

SFD is translated more broadly using computer symbols according to the selected software, namely Powersim studio 10. The following is a picture of the SFD of Weaving SMEs in Tana Toraja Regency based on the sales history of Weaving SMEs in 2020-2021 along with the proposed scenarios that will be carried out.

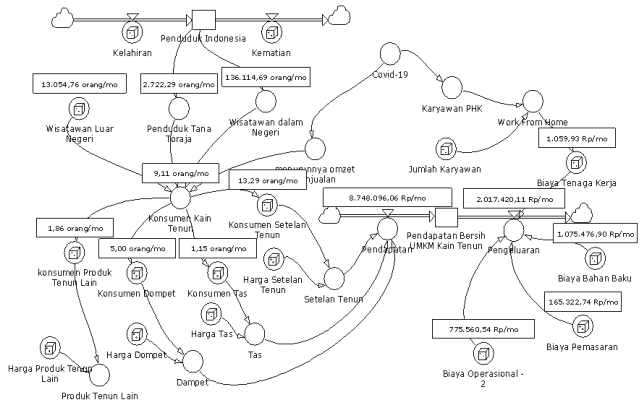

Figure 5. Stock Flow Diagram

The simulation carried out is to generate a diagram to find out the net profit from weaving sales using a weaving product innovation scenario, using digital marketing to market weaving products, developing a weaving business by utilizing a business license, as well as creating a special weaving tourism village along with the profit rate level which is the final result. from the simulation of the profit value. Meanwhile, the profit value rate is built by the sales value variable minus the costs incurred by the weaving SMEs actors. According to (Hartrisari, 2007) simulations using a dynamic system model can provide an explanation of the processes that occur in the system and predict the results of various scenarios.
The results of the simulation will be displayed on a graph chart and table of the results of data processing with Powersim 10 software between the net income of weaving sales for 1 year.

The following is the result of the simulation of weaving sales before the implementation of the proposed alternative business strategy for selling woven fabrics using historical sales data for the period 2020 and 2021.

Table 12. Net Profit from Weaving Sales Before Implementation of the Proposed Strategy

Time	Laba Bersih (First) (Rp)
2022	18.000.000,00
2023	20.201.366,46
2024	23.251.894,63
2025	25.673.094,16
2026	43.336.642,86
2027	54.160.416,64
2028	163.650.791,88
2029	228.554.861,49
2030	231.529.628,75
2031	239.370.925,88
2032	315.676.089,99

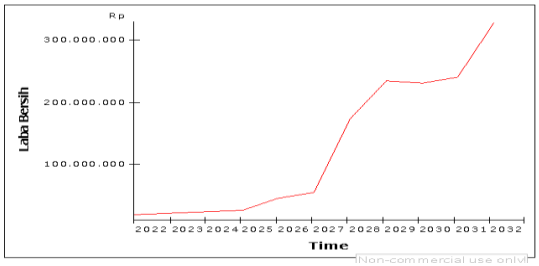

Figure 6. Graph of Simulation Net Profit Rate of Weaving Sales in 2022 Before Business Strategy Implementation

Based on the figures and tables above, it is known that the net profit of weaving sales in 2032 before implementing the business strategy is Rp. 315.676.089,99 at the end of 2032. The amount an increase in the number of customers will have an impact on the number of requests and also on revenue. So this will have an impact on the amount of profit earned each year.

Next, a simulation is made for the proposed alternative business strategy for selling woven fabrics. In this simulation, the model will run for 12 months based on historical data on weaving sales. The proposed alternative business strategy is to create woven product innovations, utilize digital marketing to market woven products, develop a weaving business by utilizing business permits, and create a special weaving tourism village. The depiction of the simulation model is depicted in the stock flow diagram below using Powersim 10 software with tables and graphs of the rate of profit and net income of weaving sales.

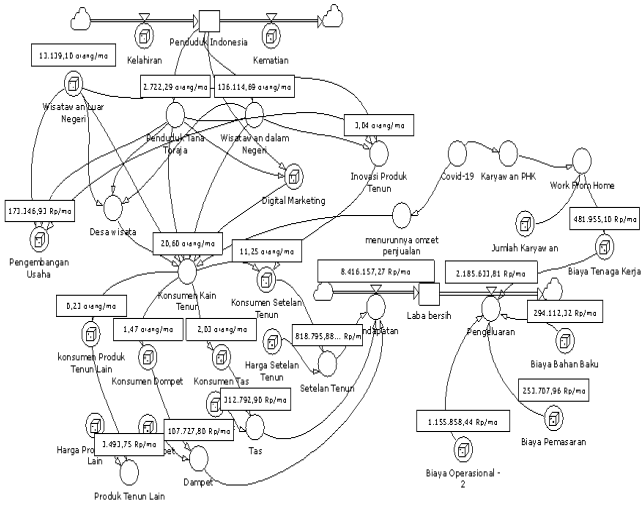

Figure 7. Stock Flow Diagram of Combined Alternative Proposed

Table 13. Profit Rate of Weaving Sales Proposed Alternative Combined

Time	Laba bersih (First) (Rp)
2022	18.000.000,00
2023	171.053.715,18
2024	182.500.797,04
2025	205.440.579,65
2026	267.860.140,82
2027	370.288.455,46
2028	383.645.471,43
2029	582.526.221,64
2030	624.414.359,07
2031	692.818.526,67
2032	728.606.753,56

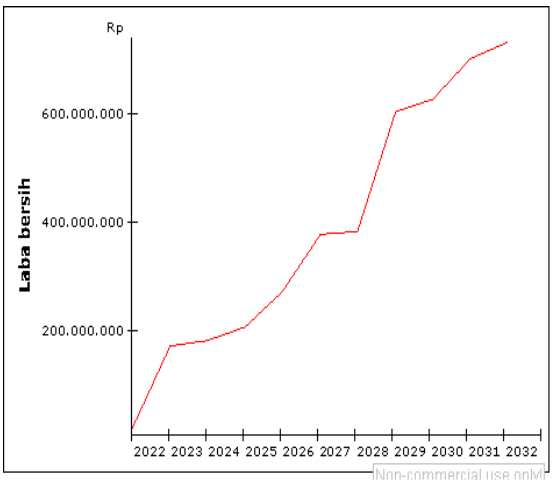

Figure 8. Graph of Profit Rate Rate of Weaving Sales Proposed Joint Strategy

Based on the table and figure above, if the weaving SMEs implement all the proposed business strategies, such as: making product innovations, utilizing digital marketing to market weaving products, developing businesses by utilizing business permits, and creating a special weaving tourism village, there will be an increase in the profit value of weaving sales about 131% with a profit rate of Rp. 728.606.753,56 until the end of 2032.

4.CONCLUSION AND SUGGESTION

Based on the research that has been done, the following conclusions can be drawn:

1. The environmental factor that most influences the business strategy of the SME Weaving in Tana Toraja Regency is the internal strength factor with a score of 3.21, namely having a recognized business status, having a profit, quite varied product motives, quite competitive prices, adequate equipment, environmentally friendly, handmade products, and high quality products. The second factor is the external opportunity factor with a score of 3.28, namely the provision of material through training from the government for weaving, the broad market with a position as a tourist area, becoming a mandatory uniform for civil servants in Tana Toraja Regency on certain days, more products are sold if available. traditional ceremonies, opening of export markets, increasingly dynamic marketing models, and fairly stable selling prices.
2. Based on the results of the evaluation of the business strategy carried out by the weaving SMEs in Tana Toraja Regency, the existing business strategy is influenced by several factors, namely: the lack of knowledge of Weaving SMEs about business strategies, the lack of product innovation, the lack of knowledge of SMEs about online media so that marketing still mostly rely on word of mouth, less aggressive and not routine in marketing products, as well as a lack of skilled and creative workforce.
3. Alternative business strategies recommended for Toraja Weaving SMEs are making product innovations, utilizing digital marketing to market Weaving products, utilizing business licenses to obtain capital for the development of a weaving business and creating a special tourism village for Toraja Weaving. Based on the simulation carried out using the dynamic system method with the help of Powersim 10 software, if the weaving SMEs implement the four proposed business strategies, there will be an increase in the profit value of weaving sales by 131% in a year with a profit rate of Rp.728,606.753, - until the end of 2032.

From some of the results that can be concluded in this study, in order to improve the development of SMEs Weaving Tana Toraja Regency, there are several suggestions that will be submitted:

1. To further increase the capacity of SMEs in weaving, full support from the government is needed, especially in terms of access to capital so that the businesses of SMEs can develop more.
2. The business strategy that has been proposed by the researcher should be taken into consideration by the weaving SMEs or can be implemented in the hope of solving the problems currently being faced by the weaving SMEs. And in its implementation, it

must be accompanied by supervision and evaluation from the government, so that the strategy implemented can be followed by all MSME actors, especially MSME Weaving in Tana Toraja Regency, which in the end the strategy objectives can be achieved.

3. The method used in the process of determining alternative strategies and the business strategy decision-making process in this study can be developed by adding other methods to increase reliability in the alternative strategy decision support system.

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