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The Dominant Factor of Strategy Innovation, and Market Orientation toward Competitive Advantage in Home industry of Madurese Traditional Clothes (Batik), Sumenep, Indonesia

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Abstract— A portion of Indonesian Micro, Small, and Medium Enterprises (MSMEs) face significant challenges related to declining responsiveness to consumer needs, weak departmental collaboration, and limited technology utilization. Additionally, there has been a notable decrease in consumer orientation, competitor orientation, and interdepartmental coordination. These challenges have led to fluctuating product pricing, lack of product focus, and limited product variation. This research aims to analyze the influence of strategic innovation and market orientation on competitive advantage within the home industry of Madurese traditional clothes (Batik) in Sumenep, Indonesia. The study involved 40 respondents. The independent variables include perception of consumer needs, departmental collaboration, technology utilization, consumer orientation, competitor orientation, and departmental coordination, while the dependent variable is competitive advantage. A quantitative method with factor analysis was employed, and data were gathered through observation, interviews, and simulated data. The results reveal three key factors: all six variables were identified and reduce to three factors. There are *External Orientation*, supported by competitor orientation, departmental collaboration, consumer needs responsiveness, and technology utilization, *Consumer Orientation*; and *Departmental Coordination*.

Keywords: *Batik, MSMEs, External Orientation, Consumer Orientation, Department Coordination*

1. INTRODUCTION

The rapid economic development in Indonesia, especially in the Sumenep district, has created a dynamic environment for Micro, Small, and Medium Enterprises (MSMEs). This rapid growth, coupled with technological advancements, has placed significant pressure on MSMEs to continuously enhance the quality and outcomes of their products while adapting to the evolving market demands. Data from the district's industry, cooperative, and MSME services indicate that there were 20 batik producers in Sumenep as of 2022. However, fierce competition for market share within the region has resulted in a decline in the number of active batik producers. As a result, MSMEs are forced to explore new and effective marketing strategies to maintain their competitive edge (Sugiarto & Hargyatni, 2024).

Batik production in Sumenep has become one of the key domestic industries in the district, reflecting the increasing role of MSMEs in the local economy. Batik manufacturers have been striving to improve the quality of their products and integrate more advanced technologies into their production processes. Despite these efforts, the competition in the local market remains fierce. As batik producers vie for market share, many face challenges related to maintaining product quality while simultaneously adapting to changing technological and consumer expectations. This has made it essential for batik producers to enhance both the quality of their products and their market positioning (Nasith et al., 2020).

However, MSMEs in Sumenep, particularly in the batik industry, are encountering significant obstacles that threaten their competitiveness. Key issues include a decline in departmental cooperation, insufficient utilization of technology, and a failure to adequately listen to consumer demands. Furthermore, batik producers are facing a sharp decline in consumer and competitor orientation, which has negatively impacted their ability to respond effectively to market changes. These challenges have prompted some producers to search for new strategic

approaches to not only survive but thrive in a competitive market environment (Pearce & Robinson, 1994). As a result, understanding the impact of these factors is crucial for developing sustainable business strategies for MSMEs in Sumenep.

This study aims to analyze and identify the dominant factors influencing the competitive advantage of MSMEs, with a specific focus on consumer needs, departmental collaboration, technology utilization, consumer orientation, competitor orientation, and departmental coordination. By examining these variables, the research seeks to determine which factors have the most significant impact on the performance of MSMEs, particularly the traditional Madurese batik home industry in Sumenep. The findings of this study will provide strategic recommendations to improve the competitiveness and sustainability of these enterprises in the face of market challenges, ensuring they are well-positioned for long-term success (Heizer, 2017).

2. LITERATURE REVIEW

2.1 Grand Strategy

Grand strategy refers to a comprehensive, long-term plan that outlines the major actions a firm intends to undertake to achieve its objectives within a dynamic and competitive environment. It serves as a roadmap for how an organization can reach its goals, taking into account internal and external conditions. Pearce and Robinson (1994) identified fourteen fundamental approaches to grand strategy, including concentration, market development, innovation, horizontal and vertical integration, joint ventures, strategic alliances, consortia, concentric and conglomerate diversification, turnaround strategies, divestiture, and liquidation.

2.2 MSME

In the Indonesian context, Micro, Small, and Medium Enterprises (MSMEs) play a vital role in economic development. MSMEs are categorized based on their net worth and annual revenue. Micro enterprises have a net worth of up to IDR 50 million and annual revenue of up to IDR 300 million. Small enterprises range between IDR 50 million and IDR 500 million in net worth, with revenue up to IDR 2.5 billion. Meanwhile, medium enterprises possess a net worth between IDR 500 million and IDR 10 billion, generating revenue up to IDR 50 billion (Sugiarto & Hargyatni, 2024).

Strategy innovation, encompassing product, process, and market innovation, enables MSMEs to gain greater benefits when paired with effective communication and relationship building. By embracing diverse and unique product innovations, businesses can attract more buyers. This is especially significant for Batik MSMEs in Sumenep District, where enhancing innovation and market orientation is expected to positively impact business performance (Sugiarto & Hargyatni, 2024).

Market orientation is essential for companies aiming to achieve superior performance. It includes behaviors and strategies that align business activities with customer needs, preferences, and demands. Cultivating a market-oriented culture allows businesses to better understand and respond to market dynamics, thereby improving their overall performance. MSMEs stand to benefit substantially from adopting such orientations alongside continuous innovation (Sugiarto & Hargyatni, 2024).

Lastly, competitive advantage is defined as the combination of factors that set a business apart from its competitors, offering a distinct and superior market position. Its key dimensions include innovation, differentiation, and cost leadership. Market orientation is known to enhance competitive advantage, which subsequently boosts business performance. Thus, it is crucial for MSMEs—such as salted egg producers in Sumenep—to prioritize product innovation, market responsiveness, and performance optimization to sustain and strengthen their competitive advantage (Sugiarto & Hargyatni, 2024).

3. RESEARCH METHODS

3.1 Factor Analysis and Measurement Tools

Factor analysis is a statistical tool used to reduce and simplify complex variables by identifying new factors that are supported by a group of observed variables, which are then structured into a hierarchical data model (Dillon & Goldstein, 1984). This method is particularly useful in identifying underlying dimensions within large datasets, helping researchers to organize and interpret complex information effectively.

To measure individual perceptions, the Likert scale is commonly employed. This scale typically ranges across five or seven points and is used to evaluate attitudes or responses to various statements. The five-point Likert scale assumes that the strength or intensity of an individual's attitude can be normatively assessed. For example, responses might range from "strongly disagree" (1), "disagree" (2), "neutral" (3), "agree" (4), to "strongly agree" (5). This allows for a standardized interpretation of subjective opinions and attitudes.

Additionally, the framework for defining and regulating Micro, Small, and Medium Enterprises (MSMEs) in Indonesia is established under Government Law No. 20 of 2008, which serves as a legal basis for MSME classification and policy.

3.2 Mathematical Model

Mathematical model of Factor Analysis (Dillon, W. R., 1984, Nasith, A. 2020, Purwono, B. S. A., 2023):

$$X = \Lambda f + e \quad (1)$$

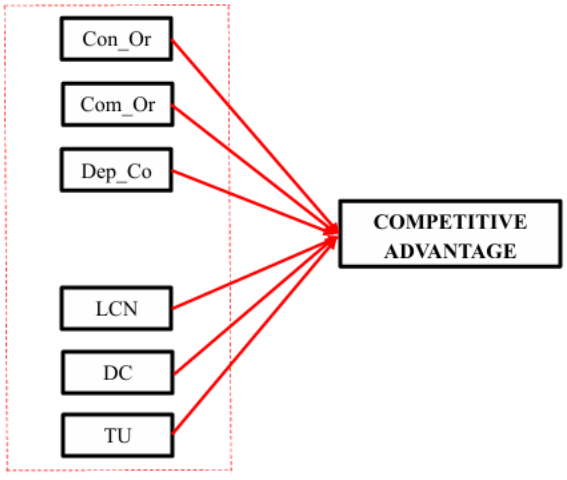
Where:
X = m - research variables, $X' = (x_1, x_2, \ldots, x_m)$
f = n - common factors, $f' = (f_1, f_2, \ldots, f_n)$
e = p - unique factors, $e_i = (e_1, e_2, \ldots, e_p)$.
Λ = m x n matrix of unknown constants called factor loadings.

3.3 Dendrogram

A dendrogram is a tree-like diagram used to represent hierarchical relationships, commonly applied in various fields, including clustering and taxonomy. This visual tool is particularly useful in depicting how different elements are grouped together based on their similarity, facilitating a clearer understanding of the data structure. In educational management, for example, dendrograms can illustrate the organization of clusters formed during analysis, aiding in decision-making processes (Nasith et al., 2020). The utility of dendrograms extends to various domains, such as environmental management and organizational behavior, where they help visualize complex relationships and enhance the interpretation of hierarchical data (Dillon, W. R., 1984).

4. RESULTS AND DISCUSSION

The research utilized multiple data collection methods, including observation, interviews, and simulated data, to analyze the Batik production process. The Central Batik production is located approximately 14 kilometers from the heart of Sumenep. Figure 2 presents the location of the Madurese traditional clothing center, Al-Barokah Batik, which plays a significant role in the region's batik industry. The combination of observational and interview data provides valuable insights into the operational aspects of batik production, emphasizing the importance of this location in sustaining the traditional craft.



Where:
LCN = Listening Costumer Needs
Dep Co = Department Collaboration
TU = Technology Utilization
Con_Or = Consumer Orientation
Com_Or = Competitor Orientation
Dep_Co = Department Coordination

Figure 1. The conceptual research framework

Figure 2. The location of Madurese Traditional Clothes Al – Barokah Batik.

Figures 3(a), 3(b), and 3(c) display the variation of the Madurese Traditional Clothes, specifically the Al-Barokah Batik. These figures highlight the distinct patterns, colors, and designs that characterize this local batik, which is an integral part of the region's cultural heritage. Each variation presented in the figures showcases the artistry and craftsmanship involved in creating this traditional garment, reflecting both the historical and contemporary influences on Madurese batik production. The images illustrate the detailed process and the diversity of styles that have evolved in response to consumer preferences and market trends. This visual representation provides valuable insight into how Al-Barokah Batik continues to adapt while preserving its cultural significance.

(a. New Pattern) (b. Old Pattern) (c. New Dress and Certificate)

Figure 3. The variation of Madurese Traditional Clothes Al – Barokah Batik

4.1 Statistic descriptive

The mean of the perception of the consumer needs, departmental collaboration, technology utilization, consumer orientation, competitor's orientation, and departmental coordination are 2.5750, 3.8000, 2.4750, 2.9750, 3.1000, and 3.5000 (variation from not agree till agree).

Table 1. Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
Con_Or	40	1.00	5.00	2.5750	1.43021
Com_Or	40	2.00	5.00	3.8000	1.13680
Dep_Co	40	1.00	4.00	2.4750	1.10911
LCN	40	2.00	4.00	2.9750	.83166
DC	40	1.00	5.00	3.1000	1.44648
TU	40	2.00	5.00	3.5000	1.10940

Table 2 shows a) Six variables (independent) reduced to three factors. b). Cumulative of the initial eigenvalue percentage was 65.238 percent (>50 percent). This means that the data information accumulated exceed 50 percent (that representation > 50 percent) is good.

Table 2 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.464	24.395	24.395	1.464	24.395	24.395
2	1.379	22.990	47.385	1.379	22.990	47.385
3	1.071	17.853	65.238	1.071	17.853	65.238
4	.893	14.878	80.116			
5	.751	12.522	92.638			
6	.442	7.362	100.000			

Extraction Method: Principal Component Analysis.

4.2

The 1

$$\text{Con\_Or} = 0.073\, f_1 + \mathbf{0.882}\, f_2 - 0.150\, f_3 + e_1 \quad (2)$$

$$\text{Com\_Or} = \mathbf{-0.426}\, f_1 + 0.328\, f_2 + 0.064\, f_3 + e_2 \quad (3)$$

$$\text{Dep\_Co} = \mathbf{0.673}\, f_1 - 0.458\, f_2 + 0.229\, f_3 + e_3 \quad (4)$$

$$\text{LCN} = \mathbf{-670}\, f_1 - 0.378\, f_2 + 0.266\, f_3 + e_4 \quad (5)$$

$$\text{DC} = 0.276\, f_1 - 0.179\, f_2 - \mathbf{0.806}\, f_3 + e5 \quad (6)$$

$$\text{TU} = \mathbf{0.546}\, f_1 + 0.330\, f_2 + 0.522\, f_3 + e6 \quad (7)$$

Equation 2 means the contribution of External Orientation (first factor - the lowest contribution) is 7.5 percent to Consumer orientation, 88.2 percent to consumer orientation (second factor – the biggest contribution), and 15 percent (negative contribution of third factor - the second biggest contribution) to Consumer orientation. Equation 3 means the contribution of External Orientation (negative contribution of first factor - the biggest contribution) is 42.6 percent to Consumer orientation, 32.8 percent to consumer orientation (second factor – the second biggest contribution), and 6.4 percent (third factor - the lowest contribution) to competitor orientation.

Table 3 Component Matrix

	Component		
	1	2	3
Con_Or	.073	.882	-.150
Com_Or	-.426	.328	.064
Dep_Co	.673	-.458	.229
LCN	-.670	-.378	.266
DC	.276	-.179	-.806
TU	.546	.330	.522

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

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4.3 Dendrogram

The research findings are further illustrated through the dendrogram presented in Figure 4. This diagram visually represents the clustering of data, offering a clear depiction of the hierarchical relationships among the elements analyzed. The dendrogram serves as a useful tool for understanding the grouping of various attributes in the batik production process, providing a comprehensive overview of how different variables relate to one another. By analyzing this dendrogram, researchers can gain a deeper understanding of the data structure, which supports the study's objectives.

Figure 2 shows six variables reduce to three factors, there are *External Orientation*, supported by competitor orientation, departmental collaboration, consumer needs responsiveness, and technology utilization, *Consumer Orientation*; and *Departmental Coordination*.

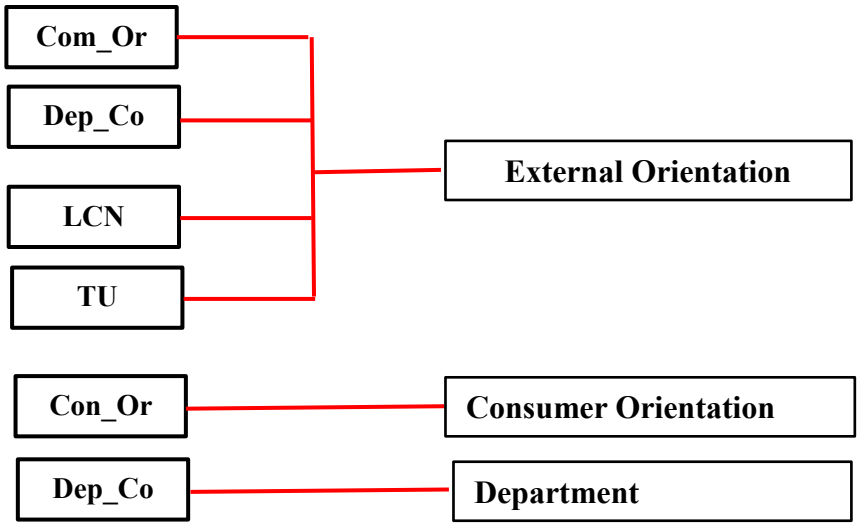

Figure 4. Dendrogram

5. CONCLUSIONS AND PRACTICAL IMPLICATION

The conclusion of this research are

1. Six variables include: the consumer needs, departmental collaboration, technology utilization, consumer orientation, competitor's orientation, and departmental coordination.
2. The six variables reduce to three factors, there are External Orientation, Consumer Orientation; and Departmental Coordination.
3. The first factor, known as External Orientation, was supported by the four variables of Competitor Orientation, Department Collaboration, Listening Costumer Needs, and Technology Utilization.
4. The second factor, known as Consumer Orientation.
5. The third factor, known as Department Coordination.

These findings underscore the importance of both external factors (such as market trends and consumer preferences) and internal factors (like coordination and collaboration) in driving the success of Batik production. The research offers valuable insights for producers aiming to improve operational efficiency and product quality while maintaining a strong consumer focus.

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