

The Effect of Knowledge Sharing and Entrepreneurial Leadership on Batik Business Performance in Madura During the Pandemic Era

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ABSTRACT

This study investigated the effect of knowledge sharing and entrepreneurial leadership on business performance, the characteristics of Batik Small and Medium Enterprises (SMEs) and its workers during the pandemic of Coronavirus era. The sum of respondents is 136 Small and Medium Enterprises (SMEs). Data collection used the questionnaire shared by e-mail and mobile phone. Those SMEs come from three cities in Madura Island, namely Bangkalan, Pamekasan, and Sumenep. Data analyses used the Structural Equation Modeling (SEM). Based on AMOS output, the result of this research exemplifies that knowledge sharing is estimated to have 16% effect on business performance, and entrepreneurial leadership is estimated to have 50% effect on business performance. Batik SMEs have workers ranging from 2 to 30 people, adopting functional organizational-structure, national-area market, and having social media such as Facebook, WhatsApp, and Instagram. The characteristics of workers are mostly male, high-school education level, and few of them are graduated from bachelor degree.

Keywords: Knowledge Sharing, Entrepreneurial Leadership, Business Performance, Batik SMEs

1. INTRODUCTION

Small and medium enterprises in the current era of industrialization are facing a changing environment. In addition, the COVID-19 pandemic has forced business actors to follow health protocols. Likewise, Batik SMEs have changed their production activities. Employees are allowed to perform batik work at home, with more flexible working hours. However, employees are required to meet a number of production targets. If the production target is achieved, it is expected that employee performance will also be achieved. In other words, when employee performance is achieved, expectedly the performance of SMEs can be achieved as well. However, there are many factors that influence the achievement of employee performance, including intrinsic motivation, skills, proactiveness, adaptability, and commitment, as expressed by (Diamantidis & Chatzoglou, 2019) [1].

In addition, other factors that can affect employee performance, are knowledge sharing and entrepreneurial leadership. Knowledge sharing which consists of explicit and tacit knowledge sharing can affect organizational performance among high-tech companies in China (Wang et al., 2016) [2]. Likewise, knowledge sharing and business processes affect organizational performance (Oyemomi et al., 2016) [3]. Meanwhile, the tendency to share knowledge has a

positive impact on knowledge sharing behavior which then mediates the relationship between knowledge sharing tendencies and individual performance (Henttonen et al., 2016) [4]. Based on the three studies, what is different is the effect of knowledge sharing on organizational performance and individual performance. Therefore, it is interesting to study batik SMEs regarding the effect of sharing knowledge, whether it affects employee performance and/or business performance.

In addition to knowledge sharing, another variable that can affect performance business is entrepreneurial leadership (Sandybayev, 2019) [5], which stated that entrepreneurial-mindset leaders or entrepreneurial-leadership styles among SMEs in the United States and the United Arab Emirates gain more benefits to improve and strengthen their organizational performance. Likewise, Leitch stated that entrepreneurial leadership can be seen from the point of view of individual entrepreneurial-leadership, organizational entrepreneurial-leadership, entrepreneurial leadership in the context of contemporary culture and ideas (Leitch & Volery, 2017) [6]. Meanwhile, Imran stated that organizational support and entrepreneurial leadership have a positive effect on SMEs in Oman (Imran & Aldaas, 2020) [7].

Batik SMEs in Madura is one among the small and medium businesses that produces fabric products with various motifs that characterize certain areas and are able to preserve local

cultural products from generation to generation. Some areas in Madura that have Batik SMEs are Bangkalan, Pamekasan, and Sumenep cities. Most of the batik in Madura has a bold and bright color pattern. The city of Bangkalan has the characteristics of batik with bright natural motifs. Batik SMEs in Bangkalan are very active in participating in various competitions in order to maintain their business image. In addition, various ways are sought, both by fostering employees and increasing business capital by making loans to financial institutions, as well as by improving product quality with more contemporary motifs and building networks with distributors and batik sellers as souvenirs. To improve the performance of these Batik SMEs, the owners have extraordinary entrepreneurial leadership. This means that business owners have entrepreneurial skills and employee-oriented leadership (Sandybayev, 2019) [5].

Based on the description above, it can be stated that the problems of Batik SMEs in Madura in achieving their performance are influenced by the variables of knowledge sharing and entrepreneurial leadership. This is very important to be studied in-depth considering the habits of employees at work that are often talking to one another. Likewise, business owners always see the market opportunities for their batik products to be known both locally and internationally. The owners of Batik SMEs generally have the capability to lead by motivating their employees in their work so that they are always oriented towards better-quality work results. In addition, employees are also given the freedom to work. They can perform batik production in their respective homes, not because of the Covid-19 pandemic, but this has been applied for a long time. The problem of Batik SMEs can be formulated as follows: (1) What are the performance conditions, knowledge sharing, and entrepreneurial leadership among Batik SMEs in Madura? (2) Does knowledge sharing and entrepreneurial leadership affect the performance of Batik Madura?

2. METHOD

2.1. Sample Technique

This research was conducted among Batik SMEs in Madura from the cities of Bangkalan, Pamekasan, and Sumenep which hire between 2 and 30 employees. The research population was all Batik SMEs in Madura. The number of registered Batik SMEs was not the same as the number that were actually operating. Therefore, the sampling of Batik SMEs and employees was determined purposively. This means that the number of Batik SMEs was determined by the availability of the SMEs with the number of employees between 2 and 30 people, and during the pandemic they were still operating.

To determine the research sample, the cities of Bangkalan, Pamekasan, and Sumenep served as the cities that have prominent Batik SME centre in Madura. The determination of Batik SMEs was determined purposively, namely choosing Batik SMEs that were still operating in the pandemic era and

have between 2 and 30 employees. The number of Batik SMEs used as samples was 136 SMEs.

2.2. Data Collection and Data Analyses

The data needed was primary data taken directly from Batik SMEs. Data was collected by using a list of questions (questionnaires) that was shared through Google Form. This questionnaire is a list of written questions about three research variables. Then it was sent to the leaders or employees, who were appointed to represent Batik SMEs. The questionnaire were distributed using mobile phone, WhatsApp, and e-mail (Sekaran, 2003) [8]. Data analyses used AMOS to find out the structural equation model (Hair, 2014) [9]. Structural equation model is used to estimate the effect of knowledge sharing and entrepreneurial leadership on business performance.

2.3. Operational Definition of Research Variables

In this study, three research variables were determined, namely firm performance as an endogenous variable, and then knowledge sharing and entrepreneurial leadership as the exogenous variables. Business Performance (firm performance) is the achievement of organization's business with all functional efforts which include operational performance and financial performance. Operational performance includes customer satisfaction, development quality, management costs, responsiveness, productivity. Meanwhile, financial performance includes the developments of Return on Investment, Return on Assets, Return on Sales, Average Profit, Profit Growth, and Sales Growth (Wang et al., 2016) [2]. Knowledge sharing is one of the methods or steps in management used to provide opportunities for members of a group, organization, agency or company to share the knowledge. Knowledge sharing indicators include organizational behaviour, individual behaviour, collaboration and togetherness (Oyemomi et al., 2016) [3]. Entrepreneurial leadership is the leadership that combines entrepreneurial skills and leadership skills, which include motivation, hard work, and networking (Bagheri, 2017) [10].

The variables, indicators, and instruments can be detailed as in the following table.

Table 1 Variables, Indicators, Instruments, and Sources

No	Variable	Indicator	Instruments	Source
1	Employee Performance (SME)	Operational Performance	Customer Satisfaction	(Wang et al., 2016) [2]
			Development Quality	
			Management Fee	
			Responsiveness	
			Productivity	(Oyemomi et al., 2016) [3]
Network				
2	Knowledge Sharing	Organizational Behavior/explicit knowledge sharing	share existing official reports and documents with organizational members	(Wang et al., 2016) [2]
			share self-prepared official reports and documents with organization members	(Wang et al., 2016) [2]
			collect official reports and documents from others	(Wang et al., 2016) [2]
			driven knowledge sharing mechanism	(Wang et al., 2016) [2]
			offered various training and development programs	(Wang et al., 2016) [2]
			facilitated by an Information Technology system that is invested in sharing knowledge	(Wang et al., 2016) [2]
		Individual behavior/ secret knowledge sharing	share knowledge based on their experiences	(Wang et al., 2016) [2]
			gather knowledge from others based on experience	
			share knowledge about anything with others.	
			gather knowledge about anything with other people.	
			share knowledge based on their expertise	
			gather knowledge from others based on expertise	
			share lessons from past failures	
3	Entrepreneurial Leadership	Business Competency	Competent to do practical business activities	(Harrison et al., 2018) [11]
		Personnel Management	Manage workers to work	
		Conceptual Competency	Competent to make business concept	
		Entrepreneurial Competency	Competent to have entrepreneurial Intention	

3. RESULTS AND DISCUSSIONS

Based on the data that has been collected, the tabulation and coding were prepared for data analysis purpose. The responses of 136 SMEs managers were then analyzed descriptively to determine the characteristics of Batik

SMEs. The respondents' responses to research variables were then analyzed by using multiple linear regression analysis. The results about the characteristics of Batik SMEs and the regression analysis are as follows.

3.1. The Characteristics of Batik SMEs

The characteristics of Batik SMEs include the characteristics of the company and the characteristics of

managers or employees. The batik SMEs studied were those from three cities in Madura, which are Bangkalan, Pamekasan, and Sumenep.

Table 2 City of Origin of Batik SMEs

City	Frequency	Percentage
Bangkalan	42	30.9
Sumenep	35	25.7
Pamekasan	59	43.4
Total	136	100.0

The number of SMEs from Pamekasan city was the largest. This was because Pamekasan is one of the Batik-centre areas in Madura. The number of Batik SMEs in these three cities having employees between 5 and 10 people was 53 SMEs (39%), between 11 and 20 people was 40 SMEs

(29.4%), between 21 and 30 people was 22 SMEs (16.2%). Meanwhile, the number of SMEs having less than 5 employees was 16 SMEs (11.8%). In detail, the results are presented in the following table.

Table 3 The Number of Batik SME Employees

Number of Employees	Frequency	Percentage
No Answer	5	3.7
2 - 4	16	11.8
5 - 10	53	39.0
11 - 20	40	29.4
21 - 30	22	16.2
Total	136	100.0

In running their business, Batik SMEs have an organizational structure that regulates the working relationship between employees and the owner who is usually the leader. Most Batik SMEs had a functional organizational structure of 89 or 65.4%, whereas in this structure apart from the owner as a leader, there were also trusted people who can represent the leadership and also

provide advice and take control of helping the leader. In addition, there were also SMEs that had a line and mixed organizational structure (30.1%). However, there were also batik businesses that did not mention an organizational structure that can clearly be identified as having a line organizational structure.

Table 4 The Organizational Structure of Batik SMEs

Organizational Structure	Frequency	Percentage
Line	1	0.7
Functional	89	65.4
Mixed	41	30.1
Other	5	3.6
	136	100.0

As business unit, most Batik SMEs already have a national marketing area (75.7%) and a small proportion of international marketing (16.22%).

Table 5 Batik SMEs' Marketing Areas

Marketing Area	Frequency	Percentage
Local / Regional (City / District)	11	8.1
National	103	75.7
International	22	16.2
Total	136	100.0

When being viewed from the production process, most of Batik SMEs having used modern machines was as many as 77 business units or 56.6%. There were 59 (or 43.3%)

business units that still used traditional machines. The information is shown in Table 6 below.

Table 6 Batik SMEs Production Process (X12)

Production Process	Frequency	Percentage
Traditional	59	43.3
Modern	77	56.6
Total	136	100.0

To carry out the operational role of Batik SME owners, they have social media, which was also used to communicate and serves as a media to market their products as well. Most

Batik SMEs use social media Instagram (50%), Facebook 35.3%, WhatsApp 13.2%, and Twitter 1.5%. These results can be seen in Table 7 as follow:

Table 7 Social Media (X13)

Social Media	Frequency	Percentage
WhatsApp	18	13.2
Twitter	2	1.5
Facebook	48	35.3
Others: Instagram	68	50.0
Total	136	100.0

3.2. Individual Characteristics

Batik SMEs had employees who work to produce various motifs of Batik cloth. The employees who work at Batik SMEs had individual characteristics, such as age, gender, education, and family dependents.

Among the three cities of origin of the Batik SMEs studied, there were 136 responses from Batik SMEs, both as employees and owners. There were 136 people, of which 76 people (55.9%) were male and the remaining 60 people (44.1%) were female as shown in Table 8 below.

Table 8. Gender (X2)

Gender	Frequency	Percentage
Male	76	55.9
Female	60	44.1
Total	136	100.0

Regarding the age of respondents, most of them between 41 and 50 years old were as many as 51 people (or 37.5%), those aged between 31 and 40 years old were 50 people (or

36.8%), and those aged between 21 and 30 years were 29 people (or 21.3%). In addition, there were 5 people who were more than 50 years old.

Table 9 Age (X3)

Age	Frequency	Percentage
Less than 20 Years	1	0.7
21 - 30 Years	29	21.3
31 - 40 Years	50	36.8
41 - 50 Years	51	37.5
Over 50 Years	5	3.7
Total	136	100.0

The managers of Batik SMEs have a minimum education of elementary-school graduation and the highest education was a Bachelor Degree. However, there were 28 people (or 20.6%) who had skills such as courses and training. A total

of 53 people (or 39%) have a high-school education, 36 people (or 26.5%) have a Bachelor Degree, and 12 people (or 8.8%) have a junior-high-school education.

Table 10 The Education of Batik SMEs Manager

Education	Frequency	Percentage
Primary School	3	2.2
Junior High School	12	8.8
High School (Including Vocational School)	53	39.0
Bachelor Degree	36	26.5
Others: Courses, Training, etc.	30	23.5
Total	136	100.0

Most of the respondents in this study were married and had family dependents as shown in Table 11 and Table 12.

Table 11 Marital Status (X6)

Marital Status	Frequency	Percentage
Marry	110	80.9
Not married yet	25	18.4
Total	135	99.3
No answer	1	0.7
Total	136	100.0

For those who were married, there were 45 people (or 33.1%). Others had one child dependent as many as 23

people (or 16.9%) and the remaining 41 people (or 30.1%) had a family dependent of two children.

Table 12 Family Dependents (X7)

Family Dependent	Frequency	Percentage
One Child	23	16.9
Two Children	41	30.1
More Than Two Children	45	33.1
Other	25	18.4
Total	134	98.5
No answer	2	1.5
Total	136	100.0

3.3. Regression-Analysis Results

Based on statistical analysis of data from 136 Batik SMEs in Madura, it shows that the results that meet the fit model were only 133 SMEs. The results of the regression analysis on the effect of knowledge sharing and entrepreneurial leadership on business performance indicate that these two variables

have an influence on business performance. Knowledge sharing has an effect of 15.7% on business performance, while entrepreneurial leadership has an effect of 50.5% on business performance.

The estimation results can be seen Table 13 as follow:

Table 13 Standardized Regression Weights

Variables and Indicators	Estimate
Business_Performance <--- Knowledge_Sharing	.157
Business_Performance <--- Entrepreneurial_Leadership	.505
KS2 <--- Knowledge_Sharing	.717
KS3 <--- Knowledge_Sharing	.986
KS4 <--- Knowledge_Sharing	.753
KS5 <--- Knowledge_Sharing	.717
KS7 <--- Knowledge_Sharing	.972
EL4 <--- Entrepreneurial_Leadership	.902
EL3 <--- Entrepreneurial_Leadership	.949

Variables and Indicators			Estimate
EL2	<---	Entrepreneurial_Leadership	.832
EL1	<---	Entrepreneurial_Leadership	.785
Y2	<---	Business_Performance	.921
Y4	<---	Business_Performance	.520
KS8	<---	Knowledge_Sharing	.825
Y5	<---	Business_Performance	.871

Based on the table above, it could be estimated that the business performance variable was manifested by the quality of development (Y2) as much as 92.1%, responsiveness (Y4) as much as 52%, and productivity (Y5) as much as 87.1%. The variable of knowledge sharing was manifested by Explicit Knowledge Sharing as much as 71.7% (KS2), and 98.6% (KS3), Implicit Knowledge Sharing as much as 75.3% (KS4) and 71.7% (KS5), Collaborative Knowledge Sharing as much as 97.2% (KS7), and Togetherness Knowledge Sharing (KS8) as much as 82.5%. Meanwhile, entrepreneurial leadership was manifested by Business Competency (EL1) as much as 78.5%. Personal Management (EL2) as much as 83.2%, Conceptual Competency (EL3) as much as 94.9%, and Entrepreneurial Competency (EL4) as much as 90.2%.

collaborative knowledge-sharing, shared knowledge-sharing and implicit knowledge-sharing.

Business performance could also be increased by the entrepreneurial leadership carried out by the leaders among Batik SMEs in Madura. Entrepreneurial leadership were mostly reflected from the ability of making business concepts (94.9%) and then from entrepreneurial abilities (90.2%). Next, entrepreneurial leadership was seen from personal management (83.2%) and ability to lead a business (78.5%).

The effect of knowledge sharing and entrepreneurial leadership on business performance in this study as a whole was 50.5% and the remaining 49.5% was influenced by other variables not examined in this study. Therefore, it is interesting to conduct further research. However, this study supports the research conducted by Wang mentioning that organizational performance was influenced by knowledge sharing (Wang et al., 2016) [2]. The difference from Wang's research is that knowledge sharing affects business performance through innovation, human capital, capital structure, and capital relations.

In addition, this study also supports the research conducted by Sandybayev [5] and Leitch and Volery [6], which stated that entrepreneurial leadership can affect organizational performance. The difference from Leitch's research is that entrepreneurial leadership is expressed by individual entrepreneurial leadership in the organizational and cultural context. Therefore, this becomes an interesting topic to conduct further research.

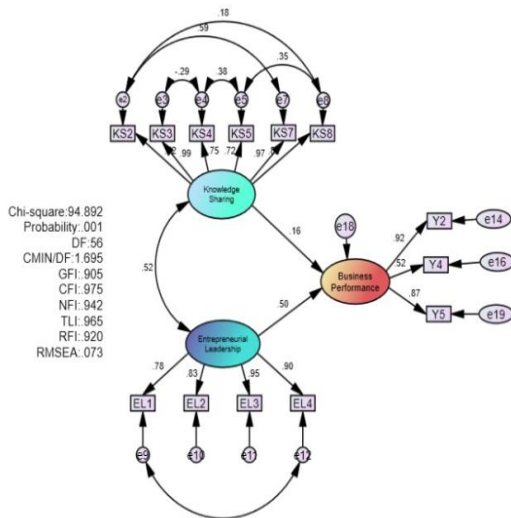


Figure 1. Knowledge Sharing and Entrepreneurial Leadership Influence on Business Performance Model

3.4. Discussion

When being compared with previous research, this study stated that business performance could be increased by the existence of knowledge sharing that was carried out by employees, both explicitly and implicitly, collaboratively, and together. The most reflective knowledge-sharing was explicit knowledge-sharing. Furthermore, it is followed by

4. CONCLUSIONS AND SUGGESTIONS

The business performance of Batik SMEs during the pandemic era, which has changed compared to before, turns out to have a habit of sharing knowledge among the employees and has the entrepreneurial leadership. Knowledge sharing and entrepreneurial leadership in Batik SMEs in Madura have significant influence on business performance. The habit of knowledge sharing in pandemic era was usually done with the limited place and distance among the employees. They should have the awareness of applying health protocols.

REFERENCES

- [1] Diamantidis, A. D., & Chatzoglou, P. (2019). Factors affecting employee performance: An empirical approach. *International Journal of Productivity and Performance Management*, 68(1), 171–193.
<https://doi.org/10.1108/IJPPM-01-2018-0012>
- [2] Wang, Z., Sharma, P. N., & Cao, J. (2016). From knowledge sharing to firm performance: A predictive model comparison. *Journal of Business Research*, 69(10), 4650–4658.
<https://doi.org/10.1016/j.jbusres.2016.03.055>
- [3] Oyemomi, O., Liu, S., Neaga, I., & Alkhurairji, A. (2016). How knowledge sharing and business process contribute to organizational performance: Using the fsQCA approach. *Journal of Business Research*, 69(11), 5222–5227.
<https://doi.org/10.1016/j.jbusres.2016.04.116>
- [4] Henttonen, K., Kianto, A., & Ritala, P. (2016). Knowledge sharing and individual work performance: An empirical study of a public sector organisation. *Journal of Knowledge Management*, 20(4), 749–768.
<https://doi.org/10.1108/JKM-10-2015-0414>
- [5] Sandybayev, D. A. (2019). *Impact of Effective Entrepreneurial Leadership Style on Organizational Performance: Critical Review*. 1, 9.
- [6] Leitch, C. M., & Volery, T. (2017). Entrepreneurial leadership: Insights and directions. *International Small Business Journal: Researching Entrepreneurship*, 35(2), 147–156.
<https://doi.org/10.1177/0266242616681397>
- [7] Imran, R., & Aldaas, R. E. (2020). Entrepreneurial leadership: A missing link between perceived organizational support and organizational performance. *World Journal of Entrepreneurship, Management and Sustainable Development*, 16(4), 377–388.
<https://doi.org/10.1108/WJEMSD-10-2019-0077>
- [8] Sekaran, U. (2003). *Research methods for business: A skill-building approach* (4th ed). John Wiley & Sons.
- [9] Hair, J. F. (Ed.). (2014). *Multivariate data analysis*, 7th Edition, Pearson New International Edition. New Jersey: Pearson Education Inc.
- [10] Bagheri, A. (2017). The impact of entrepreneurial leadership on innovation work behavior and opportunity recognition in high-technology SMEs. *The Journal of High Technology Management Research*, 28(2), 159–166.
<https://doi.org/10.1016/j.hitech.2017.10.003>
- [11] Harrison, C., Burnard, K., & Paul, S. (2018). Entrepreneurial leadership in a developing economy: A skill-based analysis. *Journal of Small Business and Enterprise Development*, 25(3), 521–548.
<https://doi.org/10.1108/JSBED-05-2017-0160>