Analysis of Factors Improving Green Process Innovation Performance in Batik Lasem SME's

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ABSTRACT
Business continuity is an interesting phenomenon to study. Because businesses have very intense competition. Innovation is needed in order to continue to exist and develop, the application of strategies that have an impact on the environment is highly expected by consumers today with the rampant health issues that haunt society. The purpose of this study is to build Green Process Innovation Performance from Green Supply Chain Management based on Green Intellectual Capital which is described by Green Human Capital, Green Organizational Capital, Green Relational Capital. The population of this study were the actors of Batik Tulis Lasem SMEs in Rembang Regency. While the sampling technique used in this study is the Census Method. For the number of research samples is 100 samples from the total population of respondents. This research technique uses two approaches: 1). Confirmatory factor analysis, in Structural Equation Modeling (SEM); and 2). Regression Weight on Structural Equation Modeling (SEM). The model output in this study can provide a positive contribution for Batik Tulis Lasem business actors in an effort to be able to realize the continuity and sustainability of their business in environmental aspects, both in the form of managerial implication suggestions and the formulation of scientific articles and measurement instruments. Managerial advice is aimed at the local government in formulating program policies to maintain the existence of entrepreneurs.

Keywords: *Green Supply Chain Management, Green Human Capital, Green Organizational Capital, Green Relational Capital, Green Process Innovation Performance*

Analisis Faktor-Faktor yang Meningkatkan Kinerja Inovasi Proses Hijau pada UMKM Batik Lasem

Abstrak
Keberlangsungan usaha merupakan fenomena menarik untuk diteliti. Karena bisnis mempunyai persaingan yang sangat ketat. Inovasi diperlukan agar bisa terus eksis dan berkembang, penerapan strategi yang berdampak pada lingkungan sangat di harapkan oleh konsumen saat ini dengan maraknya isu kesehatan yang menghantui masyarakat. Tujuan dari penelitian ini yaitu membangun G*reen Process Innovation Performance* dari *Green Supply Chain Management* berlandaskan *Green Intellectual Capital* yang dijabarkan oleh *Green Human Capital, Green Organizational Capital, Green Relational Capital*. Populasi penelitian ini adalah para pelaku UKM Batik Tulis Lasem di Kab. Rembang. Sedangkan Teknik pengambilan sampel yang digunakan dalam penelitian ini adalah Metode Sensus. Untuk jumlah sampel penelitian adalah 100 sampel dari total populasi responden. Teknik penelitian ini mengunakan dua pendekatan: 1). Confirmatory factor analysis, pada Structural Equation Modeling (SEM); dan 2). Regression Weight pada Structural Equation Modeling (SEM). Luaran model pada penelitian ini dapat memberikan konstribusi positif bagi para pelaku usaha Batik Tulis Lasem dalam upaya untuk dapat mewujudkan continuity dan Sustainibility usaha mereka dalam aspek lingkungan, baik dalam bentuk saran implikasi manajerial dan rumusan artikel ilmiah serta instrumen pengukuran. Saran manajerial ditujukan bagi

Pemerintah setempat dalam merumuskan kebijakan program guna mempertahankan eksistensi para pengusaha.

***Kata Kunci**: Green Supply Chain Management, Green Human Capital, Green Organizational Capital, Green Relational Capital, Green Process Innovation Performance*

INTRODUCTION

The development of the business industry is currently getting tighter due to globalization and the rapid development of information technology. Competition between business actors is becoming increasingly tight business actors are expected to be able to increase their competitive advantage, including by increasing integration and information exchange between organizations and effective business processes along the supply chain using Supply Chain Management (SCM). According to (Antin Rakhmawati, et al., 2019), SCM is a method for managing the flow of products, information, and money involving various parties from upstream to downstream consisting of suppliers, factories, and distribution networks and logistics services.

According to (Zhu et al., 2008), environmental impacts occur at all stages of a product's life cycle from resource extraction to manufacture, reuse, recycling and disposal. Green Supply Chain Management practices which include green purchasing, green manufacturing, materials management, green distribution/ marketing and reverse logistics refer to the involvement of environmental thinking into supply chain management from raw material extraction to product design, manufacturing processes, final product delivery to consumers and end-of-life management.

Research Objectives

This research stems from two problems, namely business phenomena and research gaps. Green supply chain management will be the concept approach of this research. The objectives of this research contribute to the following specific objectives:

1. First, the development of a conceptual integration model of Green supply chain management, Green Human, Organizational, Relational Capital, and Green Process Innovation Performance.
2. This research has a positive impact on the business world, especially UMKM Batik Lasem players and can be adopted by business actors in various regions;
3. This research can be a solution for the government to provide stimulus and assistance that can improve the performance of UMKM Batik Lasem.

RESEARCH METHODS

The study used quantitative methods by distributing research questionnaires regarding Green Human, Organizational, Relational Capital, Green Supply Chain Management and Green Process Innovation Performance at UMKM Batik Lasem in Rembang Regency. The population of this study were UMKM Batik Lasem that sell both offline and online. The sampling technique used in this study was purposive sampling method with the number of samples of this study referring to where the minimum sample was 100 for SEM analysis tools.

RESULTS AND DISCUSSION

The characteristics of respondents as subjects in this study can be seen in Table 1.

Table 1 Respondent Characteristics

Kriteria	Characteristics	Persentase
Gender	Female	66%
	Male	34%
Age	15-30 y.o.	30%
	31-40 y.o.	33%
	41-50 y.o.	24%
	> 50 y.o.	13%
Education	JHS	0%
	SHS	6%
	DIPLOMA	26%
	BACHELOR	68%
Age of UMKM	≥3 y.o.	36%
	4-5 y.o.	32%
	6-7 y.o.	20%
	≥8 y.o.	12%

Source: Primary data processed, 2024.

In this study, there were 100 respondents consisting of business actors of UMKM Batik Lasem in Rembang Regency as respondents. In the characteristics of the respondents, it can be seen that business actors are dominated by those who are at a productive age and understand technology so that it makes it easier for businesses to keep up with the times, and the relatively young age of the business makes business actors in the respondents of this study show the growth phase.

Evaluation of Data Normality

The conclusion of the Normality Test in the study is presented in

Table 2

Table 2 Assessment of Normality

Variable	min	max	skew	c.r.	kurtosis	c.r.
GOC3	1,000	5,000	,040	,163	-,501	-1,024
GOC4	1,000	5,000	-,006	-,026	-,487	-,994
GPIP3	1,000	5,000	-,163	-,666	-,280	-,571
GPIP2	1,000	5,000	,064	,260	-,266	-,542
GPIP1	1,000	5,000	-,049	-,201	-,339	-,693
GSCM3	1,000	5,000	,138	,564	-,573	-1,170
GSCM2	1,000	5,000	-,160	-,654	-,307	-,628
GSCM1	1,000	5,000	,080	,327	-,615	-1,254
GRC4	1,000	5,000	,009	,036	-,603	-1,230
GRC3	1,000	5,000	-,012	-,051	-,312	-,637
GRC2	1,000	5,000	-,083	-,338	-,308	-,628
GRC1	1,000	5,000	,024	,100	-,509	-1,040
GOC2	1,000	5,000	,072	,295	-,490	-1,001
GOC1	1,000	5,000	,008	,034	-,443	-,905
GHC4	1,000	5,000	-,125	-,511	-,465	-,949
GHC3	1,000	5,000	,065	,265	-,633	-1,293
GHC2	1,000	5,000	-,100	-,408	-,432	-,883
GHC1	1,000	5,000	,020	,081	-,259	-,529
Multivariate					10,001	1,864

Source: Primary data processed, 2024.

Based on the results of the normality test presented above in Table 2, it results that the data is normally distributed univariate and multivariate with univariate values none of which exceed the critical limit (c.r) of a variable ± 2.58 and multivariate presented at 1.864. The processed data can be said to be normal if it has a critical value (c.r) which is ± 2.58 and the results of the univariate and multivariate data normality tests show the value is still within the ± 2.58 value range (Ghozali, 2017).

Univariate & Multivariate Outlier Evaluation

Mahalanobis Distance to measure whether or not there is data that is an outlier (destructive data), namely by looking at the observation score which is very different from the centroid score for 100 cases. Table 3 shows that the minimum mahalanobis distance listed is 9.346 and the maximum distance is 34.988. Data outliers are perceived from the mahalanobis value that exceeds the chi-square value. In this study, the chi-square of the degree of freedom of 22 (number of variable indicators) at the 0.01 significance level is 37.382, so it is stated that there are no outliers, (Ghozali, 2017). As presented in Table 3.

Table 3 Mahalanobis distance

Observation number	Mahalanobis d-squared	p1	p2
16	34,998	,009	,613
63	33,841	,013	,380
75	30,711	,031	,604
68	30,098	,037	,498
59	30,036	,037	,314
11	28,995	,048	,356
26	27,489	,070	,560
61	26,577	,087	,653
81	26,302	,093	,592
62	26,262	,094	,466
28	25,931	,101	,435
36	25,884	,102	,326
67	25,774	,105	,249
31	25,674	,107	,184

Source: Primary data processed, 2024.

Multicollinearity Evaluation

According to (Hair et al, 2010) multicollinearity symptoms can be seen through matrix sample correlations, if the resulting value of each indicator is smaller than (<) 0.90, it can be stated that there are no multicollinearity symptoms. In this study, the results of data processing showed that there were no multicollinearity symptoms in the matrix sample correlations of 18 indicators spread across the six variables tested, as presented in the .

Table 4.

Table 4 Matrix Sample Correlations

	GOC3	GOC4	GPIP3	GPIP2	GPIP1	GSCM3	GSCM2	GSCM1	GRC4	GRC3	GRC2	GRC1	GOC2	GOC1	GHC4	GHC3	GHC2	GHC1
GOC3	1,000																	
GOC4	,619	1,000																
GPIP3	,563	,616	1,000															
GPIP2	,623	,662	,550	1,000														
GPIP1	,650	,622	,488	,526	1,000													
GSCM3	,777	,630	,584	,606	,591	1,000												
GSCM2	,535	,598	,721	,551	,555	,546	1,000											
GSCM1	,628	,545	,564	,672	,649	,640	,470	1,000										
GRC4	,730	,672	,519	,632	,554	,732	,493	,664	1,000									
GRC3	,610	,623	,518	,675	,549	,466	,570	,613	,523	1,000								
GRC2	,542	,638	,691	,560	,574	,554	,731	,554	,589	,441	1,000							
GRC1	,565	,607	,570	,575	,586	,530	,524	,637	,571	,564	,542	1,000						
GOC2	,660	,647	,719	,588	,627	,615	,661	,604	,564	,629	,623	,620	1,000					
GOC1	,579	,683	,590	,494	,551	,582	,589	,563	,608	,675	,579	,572	,567	1,000				
GHC4	,602	,516	,524	,595	,512	,456	,564	,594	,527	,591	,572	,640	,542	,507	1,000			
GHC3	,727	,628	,631	,654	,695	,676	,631	,673	,628	,607	,585	,566	,622	,495	,533	1,000		
GHC2	,601	,716	,660	,643	,565	,651	,640	,611	,599	,601	,629	,572	,700	,589	,545	,538	1,000	
GHC1	,633	,612	,559	,508	,439	,517	,519	,517	,563	,557	,495	,624	,568	,581	,524	,540	,540	1,000

Source: Primary data processed, 2024.

Measurement Model Test

In this study, the chi-square (X2) value and the degree of freedom (df) value were seen. Based on the results of the writing model test, it can be seen that the chi- square (X2) has a value of 176.975 and the degree of freedom (df) has a value of 181 as presented in the .

Table 5.

Table 5 Evaluation Result Cut Value Criteria

Goodness-of-fit indek	*Cut of Value*	Analysis Result	Model Evaluation
Chi-Square	(Kecil) ≤ 191.306	176.975	Good
Probability	≥ 0.05	0.102	Good
GFI	≥ 0.90	0.848	Marginal
IFI	≥ 0.90	0.961	Good
TLI	≥ 0.90	0.946	Good
CFI	≥ 0.90	0.960	Good
DF/CMIN	≤ 2.00	1.475	Good
RMSEA	≤ 0.08	0.069	Good

Source: Primary data processed, 2024.

The model test results presented in .

Table 5 shows the goodness of fit criteria in the AMOS 24 program, indicating that the structural equation modeling analysis in this study can be accepted in accordance with the fit model with a Chi-square value = 176.975, Probability = 0.102 DF / CMIN = 1.475, GFI = 0.848, CFI = 0.960, TLI = 0.949 and RSMEA = 0.069. Based on this model fit, it can be concluded that the model fulfils the goodness of fit criteria. Therefore, the strutural equation model in this study is suitable and feasible to use so that it can be interpreted for further discussion (Ghozali, 2017).

The picture of the analysis results in this study which includes several variables, can be seen in the following table. Figure 1.

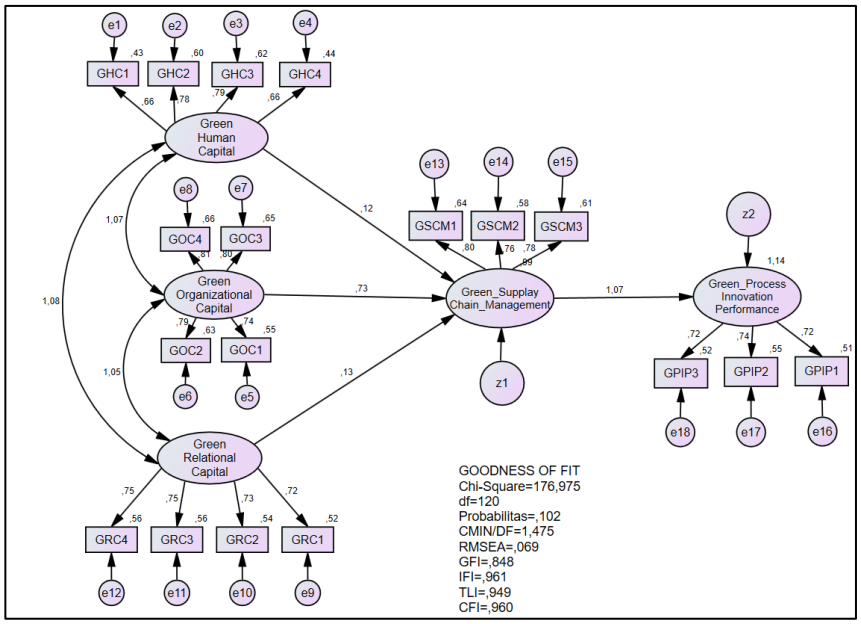

Figure 1 Research Structural Model Analysis Results

Source: Primary data processed, 2024.

Hypothesis Testing

At the stage of testing the hypothesis of a significant causal relationship, the critical ratio (c.r) value has a critical T value of ≥ 1.966. In making decision making easier, the author can see from the probability (P) number where (P) ≤ 0.05. If the value of P≤0.05 then H_0 is accepted, and if on the contrary if the value of P≥0.05 then H_0 is rejected, in the SEM package with the Amos 24 application the results of hypothesis testing can be seen through the regression weights output. (Ghozali, 2017). Hypothesis test results are presented in Table 6.

Table 6 Hypothesis Test Results (Regression Weights)

			Estimate	S.E.	C.R.	P
Green Supplay Chain Management	<---	Green Human Capital	,761	,218	7,739	,040
Green Supplay Chain Management	<---	Green Relational Capital	,749	,242	7,615	,039
Green Supplay Chain Management	<---	Green Organizational Capital	,808	,302	2,679	,007
Green Process Innovation Performance	<---	Green Supplay Chain Management	,867	,100	8,703	***

Source: Primary data processed, 2024.

The output results on Regression Weights present that each indicator or manifest variable that reflects the latent variable has a critical ratio (CR) value greater (>) than 1.96 equal to the t value in regression (>) 1.96 and P (probability of significance) with P < 0.05, it can be concluded that the six hypotheses are accepted.

The explanation of the output results on Regression Weights is as follows Green Human Capital variable has a positive and significant influence on Green Supplay Chain Management variable with an estimated value of 0.761, Green Relational Capital variable has a positive and significant influence on Green Supplay Chain Management variable with an estimated value of 0.746, Green Organizational Capital variable has a positive and significant influence on Green Supplay Chain Management variable with an estimated value of 0.808. In this case it can be explained as follows There is a significant positive

relationship between There is a significant positive relationship between the Green Human Capital variable and Green Supplay Chain Management with a correlation coefficient of 0.761 or 76%, which means that when the Green Human Capital variable is increased by one time, the Green Supplay Chain Management variable will also decrease by 76%. There is a significant positive relationship between the Green Relational Capital variable and Green Supplay Chain Management with a correlation coefficient of 0.749 or 74%, which means that when the Green Relational Capital variable is increased by one time, the Green Supplay Chain Management variable will also increase by 74%. There is a significant positive relationship between the Green Organizational Capital variable and Green Supplay Chain Management with a correlation coefficient of 0.808 or 80%, which means that when the Green Organizational Capital variable is increased by one time, the Green Supplay Chain Management variable will also increase by 80%.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the analysis conducted in this study, it can be concluded as follows:

This study analyzes the factors that can improve green process innovation performance in Lasem batik MSMEs by considering four main variables, namely Green Supply Chain Management (GSCM), Green Human Capital (GHC), Green Organizational Capital (GOC), and Green Relational Capital (GRC). Based on the research results, it can be concluded that:

Green Supply Chain Management (GSCM) has an important role in encouraging the implementation of green innovation, by optimizing the use of environmentally friendly raw materials and sustainable supply chain management.

Green Human Capital (GHC), which involves the knowledge and skills of human resources related to sustainability, also supports the development of green innovation, where employees who have an understanding of the environment can contribute to more efficient and environmentally friendly production practices.

Green Organizational Capital (GOC), which includes organizational culture, policies, and managerial structures that support sustainability, shows a significant contribution in facilitating green innovation in the batik production process.

Green Relational Capital (GRC), through partnerships with external parties that support sustainability, also plays an important role in creating green innovation. Good relationships with suppliers and customers who share the same environmental values can strengthen the implementation of green innovation in MSMEs.

Overall, these factors support each other in improving the performance of green process innovation in Lasem batik MSMEs. The application of sustainability principles in all aspects of MSME operations has proven to have great potential in improving the competitiveness and sustainability of the Lasem batik industry.

Suggestions for Future Research:

Exploration of Resources and Challenges: Future research could focus on more in-depth identification of the challenges faced by MSMEs in implementing Green Supply Chain Management, especially related to the limited resources and infrastructure that support environmentally friendly practices.

Variable Expansion: Future research could develop more variables related to sustainability and green innovation, such as green technology or related government policies, to enrich the analysis of the factors that influence green innovation.

Longitudinal Approach: Use a longitudinal research approach to monitor changes in green innovation performance over time and to see how these factors affect Lasem batik MSMEs in the long run.

Comparative Analysis with Other Industries: Future research could conduct a

comparison between Lasem batik MSMEs and MSMEs from other industrial sectors that also apply green innovation principles, to gain a broader perspective on best practices in green innovation.

Policy and External Support: Further research can examine how government policies and support from financial institutions or non-governmental organizations affect the adoption of green innovation in batik MSMEs, as well as identify policy models that can encourage MSMEs to innovate more environmentally friendly.

REFERENCES

Albort-Morant, G., Henseler, J., Cepeda-Carri´on, G. and Leal-Rodr´ıguez, A.L. (2018), "Potential and realized absorptive capacity as complementary drivers of green product and process innovation performance", *Sustainability*, Vol. 10 No. 2, p. 381.

Barney, J., Wright, M. and Ketchen, D.J. Jr (2001), "The resource-based view of the firm: ten years after 1991", *Journal of Management*, Vol. 27 No. 6, pp. 625-641.

Dost, M. and Badir, Y.F. (2019), "Generation or adoption? The role of social capital", *Management Decision*, Vol. 57 No. 7, pp. 1457-1471.

Dost, M., Badir, Y.F., Ali, Z. and Tariq, A. (2016), "The impact of intellectual capital on innovation generation and adoption", *Journal of Intellectual Capital*, Vol. 17 No. 4, pp. 675-695.

Dumay, J. and Garanina, T. (2013), "Intellectual capital research: a critical examination of the third stage", *Journal of Intellectual Capital*, Vol. 14 No. 1, pp. 10-25.

Famiyeh, S., Adaku, E., Amoako-Gyampah, K., Asante-Darko, D. and Amoatey, C.T. (2018), "Environmental management practices, operational competitiveness and environmental performance: empirical evidence from a developing country", *Journal of Manufacturing Technology Management*, Vol. 29 No. 3, pp. 588-607.

Frank, B. (2018), "Consumer perceptions of the social and environmental sustainability of robotic vehicles", *Global Environmental Studies*, Vol. 13, pp. 113-117.

Frank, B. (2021), "Artificial intelligence-enabled environmental sustainability of products: marketing benefits and their variation by consumer, location, and product types", *Journal of Cleaner Production*, Vol. 285, 125242.

Galbreath, J. (2015), "To cooperate or compete? Looking at the climate change issue in the wine industry", *International Journal of Wine Business Research*, Vol. 27 No. 3, pp. 220-238.

Greeno, J.L. and Robinson, S.N. (1992), "Rethinking corporate environmental management", *Columbia Journal of World Business*, Vol. 27 Nos 3/4, pp. 222-232.

Herbas Torrico, B., Frank, B. and Arandia Tavera, C.A. (2018), "Corporate social responsibility in Bolivia: meanings and consequences", *International Journal of Corporate Social Responsibility*, Vol. 3 No. 7, pp. 1-13.

Herremans, I.M., Nazari, J.A. and Mahmoudian, F. (2016), "Stakeholder relationships, engagement, and sustainability reporting", *Journal of Business Ethics*, Vol. 138 No. 3, pp. 417-435.

Hong, P., Jagani, S., Kim, J. and Youn, S.H. (2019), "Managing sustainability orientation: an empirical investigation of manufacturing firms", *International Journal of Production Economics*, Vol. 211, pp. 71-81.

Hsu, Y.H. and Fang, W. (2009), "Intellectual capital and new product development performance: the mediating role of organizational learning capability", *Technological Forecasting and Social Change*, Vol. 76 No. 5, pp. 664-677.

Huang, C.L. and Kung, F.H. (2011), "Environmental consciousness and intellectual capital management: evidence from Taiwan's manufacturing industry", *Management Decision*, Vol. 49 No. 9, pp. 1405-1425.

Huang, J.W. and Li, Y.H. (2018), "How resource alignment moderates the relationship between environmental innovation strategy and green innovation performance", *Journal of Business and Industrial Marketing*, Vol. 33 No. 3, pp. 316-324.

Inkinen, H. (2015), "Review of empirical research on intellectual capital and firm performance", *Journal of Intellectual Capital*, Vol. 16 No. 3, pp. 518-565.

Kamasak, R. (2017), "The contribution of tangible and intangible resources, and capabilities to a firm's profitability and market performance", *European Journal of Management and Business Economics*, Vol. 26 No. 2, pp. 252-275.

Kunapatarawong, R. and Mart´ınez-Ros, E. (2016), "Towards green growth: how does green innovation affect employment?", *Research Policy*, Vol. 45 No. 6, pp. 1218-1232.

Lee, K.H. and Min, B. (2015), "Green R&D for eco-innovation and its impact on carbon emissions and firm performance", *Journal of Cleaner Production*, Vol. 108, pp. 534-542.

Leonidou, L.C., Christodoulides, P., Kyrgidou, L.P. and Palihawadana, D. (2017), "Internal drivers and performance consequences of small firm green business strategy: the moderating role of external forces", *Journal of Business Ethics*, Vol. 140 No. 3, pp. 585-606.

Lin, C.Y.Y., Edvinsson, L. and Consunji, M.A. (2019), *National Intellectual Capital Yearbook 2019*, Taiwan Intellectual Capital Research Center, Taipei.

L´opez-Nicol´as, C. and Meron~o-Cerd´an, A´.L. (2011), "Strategic knowledge management, innovation and performance", *International Journal of Information Management*, Vol. 31 No. 6, pp. 502-509.

Mariadoss, B.J., Johnson, J.L. and Martin, K.D. (2014), "Strategic intent and performance: the role of resource allocation decisions", *Journal of Business Research*, Vol. 67 No. 11, pp. 2393-2402.

Massaro, M., Dumay, J., Garlatti, A. and Dal Mas, F. (2018), "Practitioners' views on intellectual capital and sustainability", *Journal of Intellectual Capital*, Vol. 19 No. 2, pp. 367-386.

Matus, K.J., Xiao, X. and Zimmerman, J.B. (2012), "Green chemistry and green engineering in China: drivers, policies and barriers to innovation", *Journal of Cleaner Production*, Vol. 32, pp. 193-203.

Morgan, N.A., Vorhies, D.W. and Mason, C.H. (2009), "Market orientation, marketing capabilities, and firm performance", *Strategic Management Journal*, Vol. 30 No. 8, pp. 909-920.

Paill´e, P., Chen, Y., Boiral, O. and Jin, J. (2014), "The impact of human resource management on environmental performance: an employee-level study", *Journal of Business Ethics*, Vol. 121 No. 3, pp. 451-466.

Reyes-Rodr´ıguez, J.F., Ulhøi, J.P. and Madsen, H. (2016), "Corporate environmental sustainability in Danish SMEs: a longitudinal study of motivators, initiatives, and strategic effects", *Corporate Social Responsibility and Environmental Management*, Vol. 23 No. 4, pp. 193-212.

Secundo, G., Massaro, M., Dumay, J. and Bagnoli, C. (2018), "Intellectual capital management in the fourth stage of IC research", *Journal of Intellectual Capital*, Vol. 19 No. 1, pp. 157-177.

Setyawan, N. A., Wibowo, B. Y., Ayuwardani, M., Kartika, V. S., & Eviyanti, N. (2023). The Impact of Big Data Analytics Capabilities on Sustainable Performance: an Application to Culinary and Fashion

SME's. Asian Journal of Management, Entrepreneurship and Social Science, 3(04), 731-746.

Setyawan, N. A. (2021). The existence of Lasem Batik entrepreneurs during the COVID-19 pandemic. Admisi dan Bisnis, 22(1), 61-72.

Shih, K., Chang, C. and Lin, B. (2010), "Assessing knowledge creation and intellectual capital in banking industry", *Journal of Intellectual Capital*, Vol. 11 No. 1, pp. 74-89.

Song, W. and Yu, H. (2018), "Green innovation strategy and green innovation: the roles of green creativity and green organizational identity", *Corporate Social Responsibility and Environmental Management*, Vol. 25 No. 2, pp. 135-150.

Weng, H.H.R., Chen, J.S. and Chen, P.C. (2015), "Effects of green innovation on environmental and corporate performance: a stakeholder perspective", *Sustainability*, Vol. 7 No. 5, pp. 4997-5026.

Wibowo, B. Y., Luthfia, I. M., Pratiwi, M. I., Wiedayanti, D. F., & Setyawan, N. A. (2024). Penerapan Green Supply Chain Management Guna Meningkatkan Kinerja Bisnis UMKM Batik Semarang. Jurnal Ekuilnomi, 6(3), 694-702.

Wibowo, B. Y., & Setyawan, N. A. (2024). The Sustainability of Lasem Batik in Terms of Green Marketing and Brand Quality. Calitatea, 25(198), 284-291.

Will, M. and Mertins, K. (2013), "Strategy development based on intangibles in SMEs–an integrated approach", *Knowledge Management Research and Practice*, Vol. 11 No. 2, pp. 175-183.

Wimalachandra, D.C., Frank, B. and Enkawa, T. (2014), "Leveraging customer orientation to build customer value in industrial relationships", *Journal of Japanese Operations Management and Strategy*, Vol. 4 No. 2, pp. 46-61.

Wu, G.C. (2013), "The influence of green supply chain integration and environmental uncertainty on green innovation in Taiwan's IT industry", *Supply Chain Management: International Journal*, Vol. 18 No. 5, pp. 539-552.

Yong, J.Y., Yusliza, M.Y., Jabbour, C.J.C. and Ahmad, N.H. (2019a), "Exploratory cases on the interplay between green human resource management and advanced green manufacturing in light of the ability-motivation-opportunity theory", *Journal of Management Development*, Vol. 39 No. 1, pp. 31-49.