

## Human Capital Readiness and Market Orientation on Business Performance: The Mediating Role of Green Innovation in Batik Ecoprint MSMEs in Yogyakarta

Alya Nina Ghaisani Sabrina<sup>1\*</sup>,  
(alyanina.sabb@gmail.com)

Faculty of Economics and Business, Universitas Pembangunan Nasional Veteran  
Yogyakarta, Indonesia

Sabihaini<sup>2</sup>

(sabihaini@upnyk.ac.id)

Faculty of Economics and Business, Universitas Pembangunan Nasional Veteran  
Yogyakarta, Indonesia

(Submit: 3<sup>rd</sup> July 2025, Revised: 16<sup>th</sup> July 2025, Accepted: 7<sup>th</sup> August 2025)

### ABSTRACT

*This study investigates the influence of human capital readiness and market orientation on business performance, with green innovation serving as a mediating variable, in the context of Ecoprint batik MSMEs in Yogyakarta. A total of 81 MSME units were surveyed using a census sampling method, ensuring comprehensive representation of data. Quantitative analysis was conducted using Structural Equation Modeling - Partial Least Squares (SEM-PLS) with SmartPLS 4.1.1.2 as the analytical tool. The findings demonstrate that both human capital readiness and market orientation significantly enhance business performance, both directly and indirectly through green innovation. Green innovation is shown to partially mediate the relationship between the independent variables and business performance, indicating its strategic role in creating performance value. From a managerial perspective, the results underline the necessity for MSMEs to invest in capacity building through targeted training and skills development aligned with environmental awareness, while simultaneously strengthening their market-driven strategies. Practical implications suggest that fostering green innovation is not only an environmental imperative but also a critical lever to improve competitiveness, profitability, and customer loyalty. This study provides valuable insights for policymakers and MSME business owners who want to achieve performance growth through the integration of human capital, market orientation, and eco-innovation strategies.*

**Keywords:** *human capital readiness; market orientation; business performance; green innovation; MSMEs*

## 1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are one of the business sectors that have an important role in driving growth and improving the community's economy (Al Farisi et al., 2022). MSMEs in the Special Region of Yogyakarta can contribute 79% to job creation and 98.4% as a main pillar of the economic driver, so MSMEs are often considered to have a positive impact on community welfare (Tjahjadi et al., 2022). One of the leading MSMEs sectors in the Yogyakarta region is batik MSMEs (Yulianto et al., 2025). However, research by (Putra & Nuvriasari, 2024) revealed that many batik MSMEs players still focus on traditional products without analyzing changes in consumer preferences. Limitations in creating products in response to changing market trends cause MSMEs to experience difficulties in competing within market dynamics

(Artha & Putri, 2024). This causes a decrease in consumer attractiveness and becomes an obstacle for MSMEs to expand their market reach (Sari & Wijaya, 2020). One of the batik MSMEs in Yogyakarta City that has felt this impact is the Ecoprint batik MSME. This makes Ecoprint batik MSMEs even more underestimated. As a result, concerns arise to expand market opportunities to increase competitiveness (Nayasilana et al., 2022).

In the last two years, the business performance of batik MSMEs in Yogyakarta has decreased by around 18% (Aman Suparman, 2024). This is caused by both internal and external factors within the organization. Internal factors include the limitations of batik MSMEs in capturing markets and accessing digital technology (Kholifah et al., 2024), primarily due to a lack of management knowledge and inadequate human capital readiness (Widjajanti & Sugiyanto, 2024). In addition to market orientation, the average weakness of MSMEs lies in their human capital readiness, so that MSMEs are unable to compete in the market and leads to a decline in performance (Khusnah & Soewarno, 2024).

As many as 70-90% of organizations fail to execute their strategies due to low levels of human capital readiness (Kaplan & Norton, 2004). The practice of this problem often occurs during recruitment, where human capital is unable to work directly or lacks sufficient competence (Khusnah & Soewarno, 2024). Therefore, MSMEs must anticipate and emphasize human capital readiness to meet job demands, because human capital readiness is essential for an organization (Khusnah & Soewarno, 2024). Without adequate training, MSMEs will continue to experience difficulties in increasing market competitiveness. Limitations in training and human capital development lead to a lack of employee expertise in creating product innovation. In fact, human capital plays a crucial role in enabling organisations to generate differential advantages and meet customer needs, thereby creating knowledge (Tjahjadi et al., 2022), especially in the era of high environmental crisis issues today.

According to a report from the Yogyakarta Central Bureau of Statistics (2024), environmental pollution in the Special Region of Yogyakarta is dominated by water pollution, which affects 76 villages. Industries in Yogyakarta are the biggest contributors to domestic liquid waste that pollutes rivers without prior treatment. Environmental issues are increasingly becoming a serious topic of conversation and require special attention, as they affect economic development and company performance. Green innovation is a reliable alternative, considering that many companies ignore environmental quality and are major contributors to environmental damage. So that later green innovations will bridge human capital readiness and market orientation to improve business performance.

Business performance is a measure of the level of achievement that a company has achieved within a certain period (Sabihaini & Eko Prasetyo, 2020). Measuring business performance can be achieved through various dimensions or indicators, such as profitability, sales growth, level of competitiveness, and market share (Habib et al., 2023; Sabihaini et al., 2024; Doloan et al., 2024). To improve business performance, it must be supported by human capital readiness and market orientation (Khusnah & Soewarno, 2024). Human capital readiness influences the implementation of the company strategy to improve business performance (Khusnah & Soewarno, 2024). Competent and well-trained human capital can manage business operations efficiently, adapt to market changes, and implement the right strategies to achieve organizational goals. Not only that, but mature human capital readiness is also able to face business challenges more effectively, thereby increasing the competitiveness and performance of

MSMEs (Tjahjadi et al., 2020a). Therefore, training and development are needed for all levels of the organization to ensure comprehensive competency improvement.

In the face of increasing market competition, preparing tangible resource assets is not enough. Another important approach that can support business performance is market orientation. Market orientation plays an important role in helping companies to understand and respond to the market, thus enabling the development of product and service strategies that meet customer needs (Dedy & Soelaiman, 2023). Market orientation also contributes positively to competitive advantage, which in turn improves business performance (Taufik, 2020). In this context, market orientation helps MSMEs to understand customer needs and market trends better. Thus, market orientation can provide products and services according to customer preferences, ultimately increasing profitability and market competition.

Green innovation is the connecting solution between human capital readiness and market orientation in business performance. According to data from the (Ministry of Industry, 2023) demand for eco-friendly products derived from green processes has continued to increase in recent years. A harmonized market orientation helps MSMEs build a positive image in the eyes of consumers, as well as a competitive advantage to attract a wider market segment, and increase customer loyalty. Therefore, an effective green innovation policy must pay attention to developing human capital readiness with green skills to accelerate economic transformation. MSMEs supported by human capital readiness in green innovation have a competitive advantage when environmental crises are prevalent. Human capital readiness, which is superior and trained in green innovation, can face business challenges more effectively, thereby increasing the competitiveness and business performance of MSMEs (Tjahjadi et al., 2020a).

Batik Ecoprint is a batik MSME in Yogyakarta City that uses natural coloring techniques from plants without harmful chemicals, environmentally friendly, and prioritizes the principle of environmental sustainability (BPS DIY, 2023). The initiation of Ecoprint batik is expected to address the high consumer demand for green products and processes. In reality, winning market competition on a national scale still requires a lot of improvement, so MSMEs need to focus first on improving business within the national market scope. Some previous studies also show inconsistent results regarding the relationship between human capital readiness, market orientation, green innovation, and business performance. Although many studies state that human capital readiness and market orientation play an important role in improving business performance, there are findings that indicate this relationship is not always direct or significantly influential without a certain mediating role. Research by (Chen et al., 2023), for example, states that human capital readiness does not necessarily improve business performance unless it is supported by digitization and adaptive organizational strategies. Meanwhile, (Albort-Morant et al., 2019) highlighted that the impact of green innovation on business performance tends to appear in the long term, and can even become a cost burden in the short term, especially for MSMEs that have limited capital and technology. In addition, (Kohli & Jaworski, 1990) emphasize that an excessive focus on market orientation can actually hinder innovation and reduce long-term competitiveness. Therefore, this study positions green innovation as a mediating variable to fill the gap, explaining how human capital readiness and market orientation can contribute synergistically to business performance by looking at the phenomenon of the problem. The selection of these variables is based on their relevance to the dynamics of Batik Ecoprint MSMEs in Yogyakarta, which aim to optimize internal and external advantages by improving human capital competencies, market understanding, and the adoption of

environmentally friendly innovations in order to improve competitiveness and business performance in a sustainable manner.

The problem of market orientation among MSMEs remains a widespread issue that needs to be re-examined. Thus, researchers aim to conduct further research with the title “The Effect of Human Capital Readiness and Market Orientation on Business Performance with Green Innovation as a Mediating Variable in Batik Ecoprint MSMEs in Yogyakarta City”.

## **2. THEORETICAL FRAMEWORK AND HYPOTHESIS FORMULATION**

### **Resource-Based View (RBV)**

Resource-Based View (RBV) is a comprehensive theory that explains human capital readiness and the strategies to achieve it. This RBV method examines the company's assets, expertise, capabilities, and intangible assets, namely the company's internal resources, to determine its strategic advantage (Situmorang et al., 2023). Penrose's (1959) research states that RBV views the company as a collection of resources. It is said that RBV theory discusses how companies can utilize their resources to compete effectively with other companies. Resource-Based View (RBV) prioritizes the use of internal resources for business success (Linda Sutanto et al., 2023). Employees are one of the most important resources, so organizations must ensure and develop human capital readiness, which consists of knowledge, skills, and attitudes. It can be said that human capital readiness aligns with the focus of RBV theory, namely valuable employees to a company (Khusnah & Soewarno, 2024).

### **Knowledge-Based View (KBV)**

Knowledge-Based View (KBV) theory is based on corporate knowledge, which suggests that knowledge in its various forms is an important and attractive aspect of corporate resources (Khusnah & Soewarno, 2024). According to Ali (2018), KBV plays a role in developing human capital with the knowledge owned by the company so that it can facilitate the company to be more effective and efficient in decisions making (Khusnah & Soewarno, 2024). The knowledge generated by human capital readiness can maintain the company's competitiveness and improve the company's business performance. In addition, KBV is expected to make the company more adaptive to change, because in today's competitive era, companies can compete by developing new knowledge that is much faster than other competitors.

### **Human Capital Readiness**

Human capital readiness is the level of readiness of the workforce in terms of skills, knowledge, and values, to support the implementation of effective business strategies and drive economic progress (Tjahjadi et al., 2023). Human capital readiness refers to the extent to which an individual's ability to adapt to changes in a dynamic work environment. Human capital readiness is also considered an intangible asset, assessed based on employees' skills, talents, and expertise in implementing new approaches and positively supporting the organization's learning process (Hendarman et al., 2020). Therefore, human capital readiness is used as a framework that allows organizations to identify workforce needs, analyze the gap between employee needs and readiness, and design programs to bridge the gap to support strategy implementation (Kaplan & Norton, 2004). To prepare optimal human capital readiness, companies must conduct training, development, and increase the knowledge and skills of the workforce (Anshar, 2023). By analyzing employee knowledge needs, such as hard skills or soft skills, in accordance with the conditions and objectives of the company (Anshar, 2023). Later, it can produce superior human capital readiness and become one of the main

factors in the success of internal operations (Febriani & Febriansyah, 2024).

### **Market Orientation**

Market orientation is defined as the company's ability to gather information about customers, competitors, and current and future market conditions, to support company decision making and innovation (Nurpratama et al., 2024). Market orientation is said to be an intangible resource that can increase management knowledge for business people regarding market demand for a product (Habib et al., 2023). In implementing market orientation, it is emphasized to business people regarding the importance of analyzing and understanding the market and customer needs (Nurpratama et al., 2024). The relevance of a market-oriented approach for MSMEs lies in its ability to improve business performance by adjusting the products or services they sell to meet market demand (Ramadhani et al., 2024). In this context, the application of market orientation in a business can be considered critical because it helps companies improve their business performance through better value creation and customer orientation (Nurpratama et al., 2024). Market orientation consists of 3 (three) cultural elements or so-called indicators (Narver & Slater, 1995), stating that they are customer orientation, competitor orientation, and inter-functional coordination (Puspaningrum, 2020).

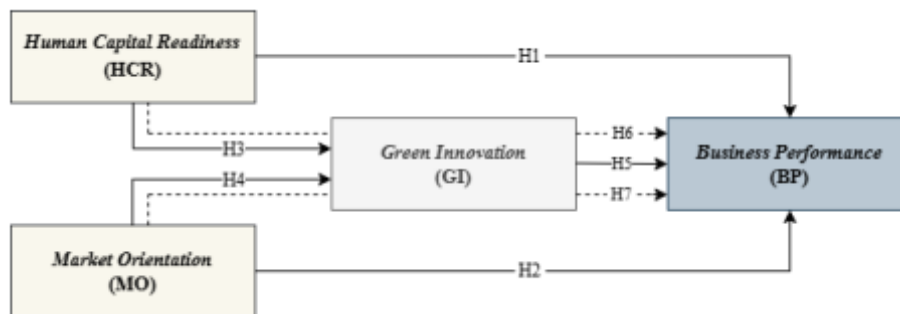
### **Green Innovation**

Green innovation is a theoretical framework based on fundamental assumptions that provides a comprehensive framework for companies to achieve sustainability through more environmentally friendly innovation. Green innovation is the ability of companies to create and implement environmentally friendly practices, production, and processes. Specifically, green innovation includes not only more environmentally friendly end products but also more efficient and sustainable production processes, driven by new processes (Zheng et al., 2023). For example, hardware or software innovations related to green products or processes, including innovations in the use of technologies that involve energy saving, pollution prevention, waste recycling, green product design, or corporate environmental management, are also forms of implementing green innovation (Chen et al., 2023). Green product innovation focuses on changing the design of currently available goods or creating new products that can save energy, use non-toxic materials, and prevent pollution (Singh et al., 2020), while green process innovation focuses on improving production methods, material use, and delivery processes so that adverse impacts on the environment can be reduced (Singh et al., 2020).

### **Business Performance**

Business performance is a key parameter used by companies to determine the success of the results of their business activities in obtaining profits (Wahyuni, 2023). Business performance refers to the level of achievement attained by a company within a certain period (Sabihaini & Eko Prasetyo, 2020). Business performance is very important and must be achieved by all companies, because performance shows the company's ability to manage its resources and allocate them (Wahyuni et al., 2023). Business performance is a form of organizational ability to improve its multidimensional capabilities, by creating the concept of effectiveness, and combining various dimensions of performance to achieve success (Setiawan & Praswati, 2023). Operationally, business performance is measured by dimensions or indicators such as profitability, sales growth, level of competitiveness, and market share (Sabihaini, 2023). However, another perspective says that an organization's performance is measured not only by growth but also by profitability (Karnowati & Handayani, 2022).

## FRAMEWORK



**Figure 1: Conceptual Framework**

*Source: processed by Author (2025)*

## HYPOTHESIS

Human capital plays an important role in the operation of a business because it is often referred to as the engine that drives the business's operational process. This human capital can later lead to more optimal product market activities, the development of more economical products, and increased satisfaction regarding the needs of consumers (Najam et al., 2020). Therefore, an organization needs to prepare and develop human capital readiness in every business. Human capital readiness must be built, managed, and optimized to be converted into financial benefits. Later, through increased sales and spending efficiency, human capital readiness can be said to drive the success of internal business processes, and the results can improve company performance. Thus, the higher the level of human capital readiness, the faster intangible assets contribute to creating cash flow and improving business performance. This has been proven by Tjahjadi et al., (2022) through their research.

### **H<sub>1</sub>: Human Capital Readiness has a Positive and Significant Effect on Business Performance**

Companies that focus on market orientation always utilize market information to meet current customer needs while predicting or anticipating future needs (Hamel & Wijaya, 2020). Market orientation also provides companies with a deeper understanding of their competitors and customers, which allows companies to create superior value (Hamel & Wijaya, 2020). In addition, market orientation allows companies to build and develop market-based assets to support the achievement of their business performance. Organizations must identify their market-based assets, evaluate and understand the value of these assets, and utilize them optimally, so that an understanding of market orientation can help companies create superior business performance.

### **H<sub>2</sub>: Market Orientation has a Positive and Significant Effect on Business Performance**

Green innovation as a new process, technique, system or practice that is significantly improved and designed to avoid or reduce environmental damage is expected to improve organizational performance by optimizing employee capabilities and existing resources (Fazal-e-Hasan et al., 2023). Therefore, when organizations adopt green initiatives and engage in green practices, it is necessary to have mature human capital readiness by providing human capital with the knowledge, skills, ethical practices, innovations, initiatives, and green projects necessary for green innovation and pro-environmental corporate goals (Fazal-e-Hasan et al., 2023). This is supported by

research from Khusnah & Soewarno (2024), which shows that the higher the level of competence in human capital readiness, the faster green innovation will develop to meet standard customer needs.

### **H3: Human Capital Readiness has a Positive and Significant Effect on Green Innovation**

The market orientation approach makes organizations to gather more useful information, according to current trends and customer desires. Rational organizations can naturally ensure that consumer desires are taken into consideration in business activities that remain profitable for the environment and society (Akhtar et al., 2021). People's concerns about the environment are now common among businesses that focus on green innovation, due to its increasing importance in the global production industry (Akhtar et al., 2021). This has led to an increase in the public demand for market orientation based on environmentally friendly and green innovation (Akhtar et al., 2021). Environmental pressure and high public interest in ecological products make companies increase green innovation. Based on the results of research conducted by Akhtar et al., (2021) market orientation exists as an important trigger in green innovation.

### **H4: Market Orientation has a Positive and Significant Effect on Green Innovation**

Green innovation is the creation of new products and processes as well as improvements to products, processes, marketing methods, and business practices in a company in terms of environmental orientation and sustainability (Heny et al., 2023). Companies that adopt green innovation utilize environmentally friendly materials and refer to the company's efforts to minimize negative impacts on the environment in all production activities, as well as efficiently utilize resources to avoid waste (Heny et al., 2023). This has attracted public attention because the business world is increasingly concerned about the environment. High consumer interest in environmentally friendly products has a positive impact on increasing profits and company performance, because MSMEs that implement high green innovation can increase the number of sales in the company (Ula et al., 2023), so it can be said that the better the green innovation, the higher the business performance of a company (Tjahjadi et al., 2020).

### **H5: Green Innovation has a Positive and Significant Effect on Business Performance**

Recently, consumers have switched to products labelled as environmentally friendly, so some companies focus on green innovation in the production process (Khusnah & Soewarno, 2024). Therefore, it is essential to have good human capital readiness with support so that companies can produce products effectively which can reduce environmental pollution (Ula et al., 2023). Human capital readiness determines the success of the strategy implemented by the company, as the higher the level of human capital readiness, the greater the possibility of the company to successfully implement green innovation (Khusnah & Soewarno, 2024). This provides added value for consumers, which can have a positive impact on improving business performance through operational efficiency, greater market control, or higher profits due to increased public enthusiasm (Ula et al., 2023).

### **H6: Green Innovation Mediates the Effect of Human Capital Readiness on Business Performance**

Customers indirectly have a positive relationship in influencing a company's innovation. Market-oriented companies play an important role in the successful creation and sale of new products and improve company performance (Wahyuni & Sara, 2020). The creation of product differentiation is an opportunity for companies to produce new features that are different from competitors and meet the needs that match customer desires. The emergence of environmental problems associated with products and the process of a business is a consideration for consumers when choosing and buying goods. Products and processes that are made from recycled raw materials with low pollution levels are attractive to consumers. That way, companies that can implement market orientation to produce green products according to customer preferences through green innovation can better achieve and maintain their competitive advantage (Anita, 2019).

### **H7: Green Innovation Mediates the Effect of Human Market Orientation on Business Performance**

## **3. RESEARCH METHOD**

### **Research Design**

This study uses a quantitative approach technique, namely a research method used to research a certain population or sample, with data collection conducted using research instruments (Sekaran & Bougie, 2019). Data analysis typically takes the form of numbers or statistics, which are generally obtained through structured questions designed to test the established hypothesis (Sekaran & Bougie, 2019). This type of research employs descriptive analysis, which is a statistical analysis method with the aim of describing or depicting the data that has been collected as it is regarding the characteristics of the population or phenomenon being studied (Sekaran & Bougie, 2016). The method used in this research is the survey method, where researchers distribute research questionnaires to respondents for data collection, using Likert scale instruments that generally have a range from 1 (strongly disagree) to 5 (strongly agree). The survey questions are also closed and structured, based on indicators of each research variable. This means that respondents choose answers based on the statements that have been provided, rather than answering freely. By using the survey method, researchers can obtain data more easily, which is then processed to determine the effect of human capital readiness and market orientation on business performance, mediated by green innovation, in Ecoprint Batik MSMEs in Yogyakarta City.

### **Population and Sample**

The population to be studied in this study is the Ecoprint batik UMKM in Yogyakarta City. According to the data obtained from the Cooperative and UMKM Office of the Special Region of Yogyakarta in 2025, there were 81 Ecoprint batik UMKM units in Yogyakarta City. The sample in this study consisted of all members of the population of Ecoprint batik UMKM in Yogyakarta City, and the sampling technique used was non-probability sampling, using a census (total sampling). Although census sampling covers the entire population, the results cannot be generalized to other types of MSMEs or regions because market conditions, environment, and government support may differ. In addition, the relatively small number of respondents limits further analysis and the variety of data obtained. The focus is on a single sector, making the results highly contextualized and not representative of the entire MSME sector in general.

**Variable Definition**

**Table 1: Descriptive Statistics Test**

Variable	Definition	Indicator
<b>Human Capital Readiness (HCR)</b>	The level of workforce readiness in terms of skills, knowledge, and attitudes possessed, to support the implementation of effective business strategies and drive economic progress. (Tjahjadi et al., 2024; Hendarman et al., 2020)	1. Knowledge 2. Skills 3. Attitude
<b>Market Orientation (MO)</b>	The company's ability to gather information about customers, competitors, and market conditions to support the company's decision-making and innovation. (Nurpratama et al., 2024; Puspaningrum, 2020)	1. Customer orientation 2. Competitor orientation 3. Inter-functional coordination
<b>Green Innovation (GI)</b>	Corporate innovation in creating and implementing new environmentally friendly products or processes. (Rehman et al., 2021; Tjahjadi et al., 2020)	1. Green product innovation 2. Green process innovation
<b>Business Performance (BP)</b>	The level of achievement or results obtained by MSMEs in a certain period. (Habib et al., 2020; Sabihaini & Eko Prasetyo, 2020; Ratulian et al., 2024)	1. Level of productivity of MSMEs 2. Return on Assets (ROA) 3. Profit growth 4. Sales growth 5. Market share growth 6. Customer satisfaction level

*Source: Processed by Author (2025)*

**4. RESULTS AND DISCUSSION**

**Outer Model**

**a. Convergent Validity**

**Table 2: Loading Factor Value**

Variable	Measurement Items	Outer Loading	Rule of Thumb
<i>Human Capital Readiness</i>	HCR.1	0.840	0.70
	HCR.2	0.840	0.70
	HCR.3	0.845	0.70
	HCR.4	0.818	0.70
	HCR.5	0.858	0.70
	HCR.6	0.783	0.70
<i>Market Orientation</i>	MO.1	0.796	0.70
	MO.2	0.884	0.70
	MO.3	0.837	0.70
	MO.4	0.801	0.70
	MO.5	0.806	0.70
	MO.6	0.773	0.70

<i>Green Innovation</i>	GI.1	0.758	0.70
	GI.2	0.892	0.70
	GI.3	0.856	0.70
	GI.4	0.869	0.70
	GI.5	0.867	0.70
	GI.6	0.847	0.70
<i>Business Performance</i>	BP.1	0.859	0.70
	BP.2	0.843	0.70
	BP.3	0.818	0.70
	BP.4	0.842	0.70
	BP.5	0.793	0.70
	BP.6	0.754	0.70

Source: data processed (2025)

Based on Table 2, it can be concluded that at this testing stage, all indicator items from the research variables have met the convergent validity criteria. This is evidenced by the loading factor value of each indicator exceeding 0.70, so that all indicators are declared valid.

#### b. Discriminant Validity

**Table 3: Validity of Discrimination**

Measurement Items	HCR	MO	GI	BP
HCR				
MO	0.581			
BP	0.776	0.767		
GI	0.774	0.616	0.668	

Source: data processed (2025)

Based on Table 3, all heterotrait-monotrait ratio values between each construct are  $< 0.90$ . This indicates that each construct in the model has clear empirical differences from the others. Thus, it can be concluded that this model has met the discriminant validity criteria based on the HTMT approach. This means that there are no multicollinearity issues between constructs, and each variable is able to represent statistically distinct concepts.

#### c. Average Variance Extracted (AVE)

**Table 4: Average Variance Extracted**

Variable	AVE	Criteria
HCR	0.691	$> 0.5$
MO	0.667	$> 0.5$
GI	0.721	$> 0.5$
BP	0.670	$> 0.5$

Source: data processed (2025)

Based on Table 4, it is shown that the AVE values of human capital readiness, market orientation, green innovation, and business performance have AVE values  $> 0.5$ . These results indicate that the variables have met the AVE value requirements and have good convergent validity.

**d. Composite Reliability and Cronbach's Alpha**

**Table 5: Value of Composite and Cronbach's**

Variable	Composite Reliability	Cronbach's Alpha	Criteria
HCR	0.930	0.910	> 0.7
MO	0.923	0.900	> 0.7
GI	0.939	0.922	> 0.7
BP	0.924	0.901	> 0.7

Source: data processed (2025)

Based on Table 5, all variables have composite reliability and cronbach's alpha values > 0.70. This condition indicates that each variable in the study has met the minimum value limit, so that all variables can be stated to have high reliability.

**Inner Model**

**a. R-Square (R<sup>2</sup>)**

**Table 6: R-Square Test Results**

Variable	R-Square	R-Square Adjusted
<i>Business Performance</i>	0.720	0.708
<i>Green Innovation</i>	0.645	0.635

Source: data processed (2025)

Based on Table 6, it shows that the test results of the business performance variable have an R-Square value of 0.720. This means that the independent variable can explain the business performance variable by 72% and the remaining 28% is explained by other variables. While the test results of the R-Square value on the green innovation variable have a value of 0.645. This means that the independent variable can explain the green innovation variable by 64.5% and the remaining 35.5% is explained by other variables.

**b. Q-Square (Q<sup>2</sup>)**

**Table 7: Q-Square Test Results**

Variable	Q-Square
<i>Business Performance</i>	0.551
<i>Green Innovation</i>	0.613

Source: data processed (2025)

Based on Table 7, the Q-Square value shows results > 0. Therefore, it can be concluded that the variables in this study have predictive relevance, which means that the observation values and parameter estimates produced by the variables are classified as good.

**Hypothesis Test**

**Table 8: Hypothesis Test**

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P-Values	Description
HCR → BP	0.405	0.399	0.125	3.247	0.001	Accepted
MO → BP	0.400	0.406	0.101	3.951	0.000	Accepted
HCR → GI	0.237	0.236	0.115	2.070	0.019	Accepted

MO → GI	0.606	0.609	0.099	6.094	0.000	Accepted
GI → BP	0.641	0.647	0.113	5.664	0.000	Accepted
HCR → GI → BP	0.152	0.149	0.072	2.106	0.018	Accepted
MO → GI → BP	0.388	0.398	0.110	3.537	0.000	Accepted

Source: data processed (2025)

Hypothesis testing aims to determine the relationship between each hypothesized variable through the significance level results and the path parameters between latent variables. The results of the hypothesis test using bootstrapping with a sample of 75 produced significant results for most hypotheses. These hypotheses are supported and accepted with a p-value  $< 0.05$  or a significance level of 5% and a t-statistic  $> t$ -table, t-statistic  $> 1.67$ . This can be said to be significant, especially in one-sided tests. Conversely, if the t-statistic  $< 1.67$ , it is not considered significant.

Based on the results of the hypothesis test in Table 8, H1: Human Capital Readiness has a positive and significant effect on Business Performance, as indicated by a p-value of  $0.001 < 0.05$  and a t-statistic value of  $3.247 > 1.67$  (hypothesis accepted). H2: Market Orientation has a positive and significant effect on Business Performance, as indicated by a p-value of  $0.000 < 0.05$  and a t-statistic value of  $3.951 > 1.67$  (hypothesis accepted). H3: Human Capital Readiness has a positive and significant effect on Green Innovation, as indicated by a p-value of  $0.019 < 0.05$  and a t-statistic value of  $2.070 > 1.67$  (hypothesis accepted). H4: Market Orientation has a positive and significant effect on Green Innovation, as indicated by a p-value of  $0.000 < 0.05$  and a t-statistic value of  $6.094 > 1.67$  (hypothesis accepted). H5: Green Innovation has a positive and significant effect on Business Performance, as indicated by a p-value of  $0.000 < 0.05$  and a t-statistic value of  $5.664 > 1.67$  (hypothesis accepted).

For the indirect effect on H6, the results show that Human Capital Readiness has a positive and significant effect on Business Performance through Green Innovation, with a p-value of  $0.018 < 0.05$  and a t-statistic value of  $2.106 > 1.67$  (hypothesis accepted). Finally, H7 shows that Market Orientation has a positive and significant effect on Business Performance through Green Innovation, with a p-value of  $0.000 < 0.05$  and a t-statistic value of  $3.537 > 1.67$  (hypothesis accepted).

## Discussion

### a. The Influence of Human Capital Readiness on Business Performance

Based on the results of the hypothesis test, it shows that the variable of human resource readiness has a positive and significant effect on business performance in Ecoprint batik MSMEs in Yogyakarta City. This states that the higher the readiness of human resources, the higher the business performance. High business performance in Ecoprint batik MSMEs in Yogyakarta City is measured by increasing sales growth, profitability, competitiveness, and market share. Moreover, high human resource readiness is determined by increasing internal operational productivity. MSMEs need to invest in human capital and prepare maximum human capital readiness by holding training, development, and improving the knowledge and skills of the workforce which can later support increased business performance (Anshar et al., 2023). This is supported by the statement of (Febriani & Febriansyah, 2024) in the results of their research which states that the development provided to the workforce will enable MSMEs to produce superior human resource readiness

and have the potential to increase the success of internal business operations. Therefore, the form of implication that can be applied is to start continuous training and development to enhance employee readiness in facing market challenges.

**b. The Influence of Market Orientation on Business Performance**

Based on the results of the hypothesis test, it shows that the market orientation variable has a positive and significant effect on business performance in Ecoprint batik MSMEs in Yogyakarta. This states that the higher the market orientation, the higher the business performance of Ecoprint batik MSMEs in Yogyakarta. So, by analyzing and understanding market needs and customer needs, Ecoprint batik MSMEs in Yogyakarta can increase their competitive advantage. Such as offering customization that suits the needs, desires, and current consumer trends. As stated in the study (Sari et al., 2023; Pratiwi & Al Rosyid, 2022) that market-oriented businesses are more noticeable and in demand by consumers and are able to compete in the market to improve business performance. One simple implication that SMEs can implement is being attuned to changes in consumer preferences and creating more relevant products to enhance customer loyalty, thereby generating profits and superior performance.

**c. The Influence of Human Capital Readiness on Green Innovation**

Based on the results of the hypothesis test, it shows that the human capital readiness variable has a positive and significant effect on green innovation in Ecoprint batik MSMEs in Yogyakarta. This states that the higher the human capital readiness, the higher the green innovation in Ecoprint batik MSMEs in Yogyakarta. Human capital readiness, owned and built by MSMEs in the form of competent and talented skills, can increase a company's productivity and profits, to achieve a competitive advantage through the form of ideas and innovations produced, such as green innovation. (Khusnah & Soewarno, 2024) state that the higher the competence in human capital readiness, the faster green innovation will develop to meet customer needs standards. Therefore, the implications that can be applied are to conduct training so that the competencies possessed by employees can align with the green innovation being implemented.

**d. The Influence of Market Orientation on Green Innovation**

Based on the results of the hypothesis test, it shows that the market orientation variable has a positive and significant effect on green innovation in Ecoprint batik MSMEs in Yogyakarta. This states that the higher the market orientation, the higher the green innovation in Ecoprint batik MSMEs in Yogyakarta. Given the high public concern about the environment today, MSMEs are more focused on green innovation, especially Ecoprint batik MSMEs in Yogyakarta. Not only that, but the increasing number of consumers who prefer and look for green processes and products has made the production industry compete to create green innovation. The implication for Ecoprint batik SMEs in Yogyakarta is to be sensitive to market demands and produce products that align with current public interests, namely environmentally friendly products. According to a study by (Akhtar et al., 2021), environmental pressure and high public interest in ecological and eco-friendly products directly make a business have to create green innovation in order to attract more consumers.

**e. The Influence of Green Innovation on Business Performance**

Based on the results of the hypothesis test, it shows that the green innovation variable has a positive and significant effect on business performance in Ecoprint batik MSMEs in Yogyakarta. This states that the higher the green innovation, the higher the business performance of Ecoprint batik MSMEs in Yogyakarta. Green innovation comes from the demands of the environment and society so that newer product, technique, and management system developments emerge than before to reduce negative impacts on the surrounding environment and create products that are more attractive to the public. This is an achievement for MSMEs in producing products that have more value and are different from competitors. The increase in the number of buyers of green products makes MSME sales experience profitability and increase business performance. The implications are similar to those of Ecoprint Batik MSMEs in Yogyakarta, which attempt to market environmentally friendly products while preserving elements of their cultural heritage, thus having their own value to attract customers and improve company performance. In their study, (Dai & Xue, 2022) stated that the application of green innovation in business can create competitive advantages, increase the ability to develop a sustainable business, and reduce constraints on company funding.

**f. The Influence of Human Capital Readiness on Business Performance Mediated by Green Innovation**

Based on the results of the hypothesis test, it shows that the human capital readiness variable has a positive and significant effect on business performance through green innovation in Ecoprint batik MSMEs in Yogyakarta. This states that the greater the human capital readiness, the more green innovation increases, so that business performance in MSMEs also increases. Human capital readiness greatly determines the success of the company's strategy, as the higher the level of human capital readiness, the greater the possibility of the company to successfully implement green innovation and produce superior business performance (Khusnah & Soewarno, 2024). Therefore, the implication is to prepare the human capital employed in the company to produce superior quality in developing green product innovations. This way, the product will be widely viewed by consumers because the resulting product innovation is attractive and improves performance.

**g. The Influence of Market Orientation on Business Performance Mediated by Green Innovation**

Based on the results of hypothesis testing, it shows that the market orientation variable has a positive and significant effect on business performance through green innovation in Ecoprint batik MSMEs in Yogyakarta. This states that the more guided by market orientation, the greater the increase in green innovation, which in turn enhances business performance in MSMEs. The creation of differentiated products in green innovation presents an opportunity for companies to develop new features that are different from competitors and meet customer needs, thereby enhance their competitive advantage and business performance (Anita, 2019). Thus, the form of MSME implications applied is to focus on the following current market trends and see the tendency of consumer interest in a product, namely green products, so that MSMEs can create green products to produce differentiated and unique products, so that consumers are more interested and ultimately able to improve company performance.

## **5. CONCLUSIONS, IMPLICATIONS, SUGGESTIONS AND LIMITATION OF THE RESEARCH**

### **Conclusion**

This study investigates the effect of human capital readiness and market orientation on business performance, with green innovation as a mediating variable, in the context of Ecoprint batik MSME members in Yogyakarta. The findings of this study reveal several key insights. First, both human capital readiness and market orientation show positive and significant direct impacts on business performance in this MSME. This highlights the importance of human capital readiness and market orientation. Furthermore, this study finds that both human capital readiness and market orientation positively and significantly influence green innovation in MSMEs. Green innovation, in turn, also shows a positive and significant effect on business performance. Interestingly, the mediating effect of green innovation is also significant in the relationship between human capital readiness and business performance as well as market orientation and business performance. Meanwhile, human capital readiness and market orientation positively influence green innovation and business performance independently. This suggests that the benefits of human capital readiness and market orientation for environmental performance may be realized more directly or through other mediating mechanisms not explored in this study.

### **Theoretical and Practical Implication**

These findings contribute to the growing literature on human resource management and the sustainability of business performance in the context of small and medium-sized enterprises (SMEs). Specifically, these findings highlight the importance of considering both direct and indirect pathways to determine which human capital readiness and market orientation factors can influence business performance. This study also provides practical insights for SME practitioners, particularly those participating in the SME batik Ecoprint program in Yogyakarta City. The study suggests that while efforts to improve business performance are valuable, they must be accompanied by initiatives to develop human capital readiness and market orientation, as well as support for green innovation. Organizations must have superior human capital readiness to maximize internal operational implementation and also apply market orientation while considering consumer preferences and needs. With the implementation of green innovation, high consumer awareness of green products and processes will help improve the business performance of MSMEs. Not only for MSME players, but this also requires support from stakeholders, namely the government, regarding the implementation of human capital readiness, market orientation, and green innovation to improve business performance. One way to achieve this is by providing facilities in the form of training and development on green skills, as well as fiscal incentives for environmentally friendly MSMEs. Continuous support for SMEs is also necessary to ensure that employees keep pace with changing consumer preferences toward green products. In the future, public interest in such products is expected to increase significantly, and with government-supported green market access facilities—including digital and physical platforms to promote Ecoprint products to national and international markets—SMEs are likely to see improved business performance.

## 6. REFERENCES

- Akhtar, S., Martins, J. M., Mata, P. N., Tian, H., Naz, S., Dâmaso, M., & Santos, R. S. (2021). Assessing the Relationship between Market Orientation and Green Product Innovation: The Intervening Role of Green Self-Efficacy and Moderating Role of Resource Bricolage. *Sustainability*, 13(20), 11494. <https://doi.org/10.3390/su132011494>
- Al Farisi, S., Iqbal Fasa, M., & Suharto. (2022). Peran UMKM (Usaha Mikro Kecil Menengah) Dalam Meningkatkan Kesejahteraan Masyarakat. *Jurnal Dinamika Ekonomi Syariah*, 9(1), 73–84. <https://doi.org/10.53429/jdes.v9iNo.1.307>
- Albort-Morant, G., et al. (2019). Potential and Realized Absorptive Capacity as Complementary Drivers of Green Product and Process Innovation Performance. *Sustainability*, 10, 381. <https://doi.org/10.3390/su11010223>
- Aman Suparman. (2024). Orientation entrepreneurship and neighborhood industry to formation strategy commerce on performance commerce textile in java west, Indonesia. *International Journal of Science and Research Archive*, 12(2), 1663–1689. <https://doi.org/10.30574/ijrsra.2024.12.2.1303>
- Anshar, C., & Ros Bangun, M. Y. (2023). Identifying Human Capital Readiness and Digital Culture toward Employee Performance in Facing Industry 4.0: Case of Pt Perusahaan Listrik Negara Province X. *International Journal of Current Science Research and Review*, 06(07). <https://doi.org/10.47191/ijcsrr/V6-i7-57>
- Artha, B., & Putri, A. (2024). Impact of Market and Entrepreneurial Orientation on Batik MSMEs' Performance in Yogyakarta. *Journal of Business and Management Review*, 5(11), 1004–1029. <https://doi.org/10.47153/jbmr.v5i11.1191>
- Chen, A., Lin, Y., Mariani, M., Shou, Y., & Zhang, Y. (2023). Entrepreneurial growth in digital business ecosystems: an integrated framework blending the knowledge-based view of the firm and business ecosystems. *The Journal of Technology Transfer*, 48(5), 1628–1653. <https://doi.org/10.1007/s10961-023-10027-9>
- Dai, D., & Xue, Y. (2022). The Impact of Green Innovation on a Firm's Value from the Perspective of Enterprise Life Cycles. *Sustainability*, 14(3), 1226. <https://doi.org/10.3390/su14031226>
- Dedy, N. M. (2023). Pengaruh Orientasi Pasar dan Bauran Pemasaran Terhadap Keunggulan Bersaing Usaha Olahan Pala di Kota Ternate. *Jurnal Ekonomi Pertanian Dan Agribisnis (JEPA)*, 7(4), 14.
- Febriani, N. E., & Febriansyah, H. (2024). Analysis of Human Capital Readiness and Digital Culture on Employee Performance in Facing Industry 4.0: Case Study of Perum DAMRI. *Perpustakaan ITB*, 7(4), 597–615.
- Habib, Y., Effendi, M. I., & Sabihaini, S. (2023). Pengaruh orientasi kewirausahaan terhadap kinerja UKM Batik Giriloyo yang dimediasi oleh orientasi belajar dan strategi diferensiasi. *Journal of Business & Banking*, 13(1), 19. <https://doi.org/10.14414/jbb.v13i1.3685>
- Kaplan, R. S., & Norton, D. P. (2004). Measuring the Strategic Readiness of Intangible Assets. *Harvard Business Review*, 82(2).
- Kholifah, S., & Utami, R. (2024). PENINGKATAN PENGETAHUAN DAN SELF EFFICACY REMAJA PADA SITUASI KESIAPSIAGAAN BENCANA SOSIAL MELALUI EDUKASI KESEHATAN REPRODUKSI DENGAN METODE TEACH BACK: Increasing Knowledge and Self-Efficacy of Adolescents in Social Disaster Preparedness Situations Through Reproductive Health Education Using the Teach Back Method. *Jurnal Ilmiah Keperawatan (Scientific Journal of Nursing)*, 10(2), 276–283.

- Khusnah, H., & Soewarno, N. (2023). Human capital readiness and global market orientation to business performance: The mediation role of green innovation. *Contaduría y Administración*, 69(4). <https://doi.org/10.22201/fca.24488410e.2024.4950>
- Kohli, A. K., & Jaworski, B. J. (1990). Market Orientation: The Construct, Research Propositions, and Managerial Implications. *Journal of Marketing*, 54(2), 1. <https://doi.org/10.2307/1251866>
- Linda Sutanto, Bambang Tjahjadi, & Fiona Niska Dinda Nadia. (2023). The Impact of Human Capital Readiness on Business Performance: The Mediating Role of Innovation Capability. *Journal of Accounting Science*, 7(2). <https://doi.org/10.21070/jas.v7i2.1725>
- Nayasilana, I. N., Agustina, A., Pertiwi, Y. A. B., Apriyanto, D., Rahmadwiati, R., & Wicaksono, R. L. (2022). Pelatihan Penyusunan AD/ART pada Kelompok Tani Hutan Green Lawu sebagai Upaya Penguatan Kelembagaan. *Prosiding Seminar Nasional Pengabdian Masyarakat & CSR Fakultas Pertanian UNS*, 2(1), 162–169.
- Nurpratama, M., Sonjaya, N. S., Yudianto, A., & Agung, I. (2024). Studi Orientasi Pasar dan Inovasi Produk Terhadap Kinerja Pemasaran UMKM di Kabupaten Indramayu. *Jurnal EMT KITA*, 8(3), 822–831. <https://doi.org/10.35870/emt.v8i3.2406>
- Puspaningrum, A. (2020). Market Orientation, Competitive Advantage and Marketing Performance of Small Medium Enterprises (SMEs). *Journal of Economics, Business, & Accountancy Ventura*, 23(1), 19–27. <https://doi.org/10.14414/jebav.v23i1.1847>
- Putra, A. W., & Nuvriasari. (2024). The Effect of Market and Entrepreneurial Orientation, Product Quality on the Competitive Advantage of Batik MSMEs in Yogyakarta. *Research Horizon*, 4(3), 223–232.
- Sari, A., & Wahyudi, D. (2023). Human Capital Mapping for Industry 4.0: Gap and Index. *International Journal of Advanced Science and Technology*, 112-119.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: a skill building approach*. John Wiley & Sons.
- Sekaran, U., & Bougie, R. (2019). *Research methods for business: a skill building approach*. John Wiley & Sons.
- Setiawan, H., & Praswati, A. (2023). The Influence of Market Orientation on Sales Performance Mediated by Innovation. *Proceedings of the 6th International Conference of Economics, Business, and Entrepreneurship, ICEBE 2023, 13-14 September 2023, Bandar Lampung, Indonesia*. <https://doi.org/10.4108/eai.13-9-2023.2341166>
- Singh, S. K., Giudice, M. Del, Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological Forecasting and Social Change*, 150, 119762. <https://doi.org/10.1016/j.techfore.2019.119762>
- Situmorang, J., Sembiring, R., & Sianturi, J. A. T. P. (2023). Jurnal Ilmu Manajemen METHONOMIX (Maret 2023 – Agustus 2023). *Jurnal Ilmu Manajemen METHONOMIX*, 6.
- Tjahjadi, B., Soewarno, N., & Gunawan, G. M. (2020). Effect of Information Capital Readiness on Business Performance in Indonesian MSMEs: Does Online Market Orientation Matter? *The Journal of Asian Finance, Economics and Business*, 7(12), 267–274. <https://doi.org/10.13106/jafeb.2020.vol7.no12.267>
- Tjahjadi, B., Soewarno, N., Nadyaningrum, V., & Aminy, A. (2022). Human capital readiness and global market orientation in Indonesian Micro-, Small- and-Medium-

sized Enterprises business performance. *International Journal of Productivity and Performance Management*, 71(1), 79–99. <https://doi.org/10.1108/IJPPM-04-2020-0181>

Wahyuni, S. (2023). *Riset Kualitatif: Strategi dan Contoh Praktis* (R. A. Nugroho (ed.)). Penerbit Buku Kompas.

Widjajanti, K., & Sugiyanto, E. K. (2024). Competitiveness Improvement Strategies of Msme Blora Batik: Analytic Network Process Approach. *International Journal of Professional Business Review*, 9(1), e03381. <https://doi.org/10.26668/businessreview/2024.v9i1.3381>

Yulianto, W., Nuvriasari, A., Manajemen, P. S., Ekonomi, F., Mercu, U., Yogyakarta, B., Sleman, K., Daerah, P., & Yogyakarta, I. (2025). Pengaruh Kapabilitas Pemasaran, Orientasi Pasar, dan Networking Terhadap Kinerja Pemasaran UMKM Batik di Yogyakarta. *Journal of Humanities Education Management Accounting and Transportation*. 2(1), 311–32