

Consumer Behavior Analysis of Generation Z in Using Batik in the Industrial Era 5.0

Hadita ^{1*}, Dovina Navanti ², Dewi Sri Woelandari Pantjolo Giningroem ³, Farhan Saputra ⁴

¹ Fakultas Ekonomi dan Bisnis Universitas Bhayangkara Jakarta Raya, Indonesia 1; e-mail : hadita@dsn.ubharajaya.ac.id

² Fakultas Ekonomi dan Bisnis Universitas Bhayangkara Jakarta Raya, Indonesia 1; e-mail : dovina.navanti@dsn.ubharajaya.ac.id

³ Fakultas Ekonomi dan Bisnis Universitas Bhayangkara Jakarta Raya, Indonesia 1; e-mail : dewi.sri@dsn.ubharajaya.ac.id

⁴ Fakultas Ekonomi dan Bisnis Universitas Bhayangkara Jakarta Raya, Indonesia 1; e-mail : farhansaputra121@gmail.com

*Corresponding Author : Hadita

Abstract: The purpose of this study is to determine the influence of consumer behavior on generation Z in Using Batik in the Industrial Era 5.0. The research method used is quantitative descriptive analysis using primary data in the form of respondent responses and other secondary data. The object of this study is undergraduate students of the Management Study Program, Faculty of Economics and Business, Bhayangkara University, Jakarta Raya, who according to the researcher's observations are students who often use Batik. The research stages are divided into 8 stages, namely introduction and identification of problems, formulating problems, preliminary studies, developing hypotheses, selecting research samples, collecting data, data analysis and interpretation, and concluding the results of the study. The number of samples used in this study was 100 samples. The analysis tool used is SmartPLS 4.1.1. The tests carried out in this study include Validity Reliability Tests, Inner Outer Models and Hypothesis Tests. The results of this study are that Consumer Behavior in Gen Z has a positive and significant effect on the Use of Batik in the Industrial Era 5.0.

Keywords: Batik; Consumer Behavior; Generation Z

1. Introduction

Indonesian Batik has been recognized by UNESCO on October 2, 2009 as a world heritage. This recognition has increased the batik industry. The increase in the batik industry is an opportunity as well as a challenge for batik industry business actors. In the era of industry 5.0, business opportunities in the technology sector are growing rapidly. In this case, batik works are also able to adapt and innovate in the era of industry 5.0. Along with the development of industry 5.0 and the development of generation Z are two things that go hand in hand. It is clear that the development of batik works or motifs has been able to vary and innovate, not stiff or formal.

Generation Z is a generation that relies on technology, trends and social media. They grew up in the midst of rapid technological developments, so they have different ways of interacting and communicating than previous generations. Currently, Generation Z has a large number in the population structure in Indonesia. The large number of Generation Z in Indonesia in general, or specifically in the environment of students of the management study program of the Faculty of Economics and Business, can be a threat if this generation cannot

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preserve domestic culture, but rather dominates using foreign or imported products. Therefore, it is important to measure consumer behavior for Generation Z in the industrial era 5.0 to be able to preserve and be proud of using Indonesian batik products.

In this study, the chief researcher holds a doctorate in marketing strategy and has several publications both nationally and internationally (reputable journals). In addition, as a feasibility study, this research is a development of previous research conducted by the Team Leader. In 2020-2022, the Team Leader has conducted research on Batik MSMEs in Central Java Province. And in 2022-2023, the chief researcher conducted an umbrella research in preparation for the Dikti Grant with the theme of Batik MSME Business Strategy.

The theme of this research still refers to RIP Ubahara Jaya with the Leading Theme "Development of Science, Security Technology and Sustainable Resilience". The main theme is Strategic Management and Strategic Marketing with the title Keywords maximum 5 words Research background no more than 500 words containing the background and problems to be studied, specific objectives and feasibility studies. In this section, it is necessary to explain the description of the specifications of the relationship between the scheme and the focus area or research plan of PT. research "Analysis of Consumer Behavior in Generation Z in Using Batik in the Industrial Era 5.0". The relationship between RIP and Theme can be seen in Figure 1 as follows:

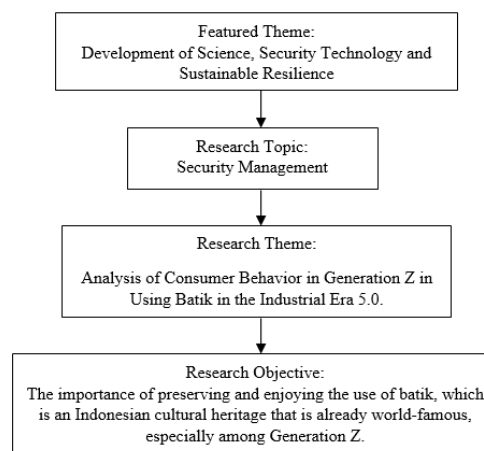


Figure 1 The Relationship between UBhara Jaya's Main Topics and Research Themes

1.1 Formulation of the problem

Based on the problem identification above, the problem to be studied is formulated as follows, "Does consumer behavior in generation Z have a significant influence on using Batik in the Industrial Era 5.0?"

2. Literature Review

2.1 Batik

Batik is an Indonesian art that is still preserved to this day and has been recognized by UNESCO (United Nations of Educational, Scientific, and Cultural Organization) on October 2, 2009, (Karina, 2022). Batik art is the art of drawing on cloth to be used as clothing. In the past, batik clothing was one of the family cultures in Indonesia, (Falahi and Hermawan, 2023), (Kurniasih, 2018). The word batik itself in Javanese means writing. Batik is a term used to refer to patterned fabrics made using a resist technique using wax material or also called malam. The term "batik" etymologically means making many cecek or dots. When viewed in detail, the realization of a line is a collection of dots. Therefore, making many dots or cecek will later form a line and in the term batik, the meaning of making a line is realized or in Javanese it is known as 'nyorek' (with a pencil or something similar), 'me-ngelowong' (drawing lines with liquid malam), 'me-nembok' (covering the filling with a large canting or jegul/bleber or with a brush), (Trixie, 2020).

Indicators or dimensions contained in the Batik variable include: 1) Sustainable Product Development: Industry 5.0 prioritizes sustainability. The use of environmentally friendly materials, such as natural dyes, as well as manufacturing practices that limit waste and emissions, will be very attractive to environmentally conscious Gen Z consumers; 2) Community and Social Interaction: Generation Z prioritizes connection and community. Batik companies can create online communities for customers to exchange experiences, design ideas, and batik style suggestions; 3) Integration of Technology and Tradition: The Industry 5.0 era encourages human-machine collaboration. Technology can be used to digitize the design and production process of batik, allowing for increased efficiency and personalization while maintaining the traditional characteristics of batik art; 4) Customized marketing: By integrating big data and artificial intelligence (AI), batik brands can create a more customized shopping experience for Generation Z; and 5) E-commerce and Digital Platforms: E-commerce is the primary way for Generation Z to shop. Batik brands must have a strong digital presence, which includes a responsive online store and active social media accounts, (Hadita and Navanti, 2024).

2.2 Generation Z

Generation Z has a very high level of education, diversity, culture and use of technology, (Trixie, 2020); (Triwidyati, E., Gustawan, D., & Astuti, 2023). Information technology and the internet have a big influence on Generation Z, because Generation Z is part of the technology generation and all the information boundaries on the internet are very wide open, (Widjanarko et al., 2023). Generation Z is the most imaginative generation and has a lifestyle that is inseparable from the internet (Santoso and Triwijayati, 2018). The characteristics and

personalities of generation Z are: tech-savvy, social, expressive, multitasking, easy to move from one thing to another, and like to share, (Triwibowo, 2020).

2.3 Consumer Behavior

Consumer behavior is dynamic, meaning that the behavior of a consumer, a group of consumers, or the wider community is always changing and moving over time. In the study of consumer behavior, one implication is that generalizations of consumer behavior are usually limited to a certain period of time, a product, and a certain individual or group, (Nugroho, 2003). The term consumer behavior is defined as the behavior that consumers observe in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs, (Sumarwan, 2011). From the definition that has been mentioned, it can be concluded that consumer behavior is all activities, actions, and psychological processes that drive these actions before purchasing, including decision-making activities (Permana, 2019). When consumers decide to buy a particular item or product, consumers will usually first consider the item to be purchased, both in terms of price, quality, function, and how consumers make purchases (Indrawati, 2022). When the market knows consumer behavior, they will easily create the best strategy to meet their market desires (Herlambang, E. S., Hubeis, M., S, N., 2011); (Triwidyati, E., Gustawan, D., & Astuti, 2023).

Indicators or dimensions contained in the Consumer Behavior variable include: 1) Social Media Influence: Social media has a significant impact on Generation Z's tastes and purchasing decisions. They often follow trends set by influencers and content creators; 2) Gen Z prioritizes authenticity and transparency from brands. They like to support batik brands that are transparent about their manufacturing methods, the origin of the materials, and their environmental impact; 3) Environmental and Social Concern: Environmental and social issues are very important to Generation Z. They also support programs that promote cultural sustainability and the growth of local batik communities; 4) Customization and Personalization: Gen Z prefers items that can be customized; and 5) Price and Value: Gen Z is very concerned about the value of their money. They hunt for high-quality products at economical prices. They are more likely to buy anything that represents the best value, whether in terms of quality, design, or the story behind the product (Fitriani, Hadita and Faeni, 2022).

3. Method

This study uses primary data taken directly from the field using a research instrument in the form of a questionnaire. The unit of analysis in this study is undergraduate students of the Management Study Program, Faculty of Economics and Business, Bhayangkara University, Jakarta Raya. In addition to primary data, researchers also use secondary data as supporting references for the development of theories and literature from journals, books and other research results to strengthen arguments and relevance to the development of

theories and conclude research results. The number of samples in this study was 100 respondents, with the sampling technique being random sampling. The analysis tool used is SEM SmartPLS 4.1.1 version. The tests conducted in this study include Validity Reliability Test, Inner Model, Outer Model and Hypothesis Test. As for Figure 3, the stages of the study are as follows:

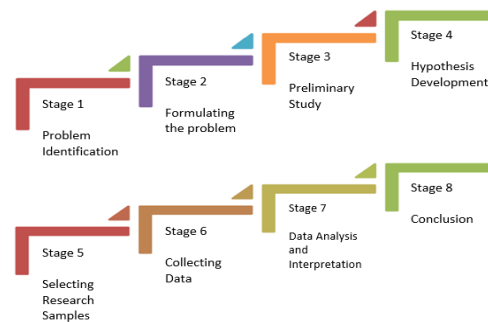


Figure 2 Research Flow Stages

4. Result

4.1 Convergent Validity Test

If the correlation coefficient > 1 or $= 1$, then the validity measure is considered high. In table 1, below are the results of the outer model convergent validity test.

Table 1. Convergent Validity Analysis (Outer Loadings)

Indicator	Gen Z Consumer Behavior	Using Batik in the Industry 5.0 Era
CB1	0.715	
CB2	0.787	
CB3	0.710	
CB4	0.794	
CB5	0.779	
UB1		0.718
UB2		0.805
UB3		0.799
UB4		0.724
UB5		0.759

Based on the output in table 1 above, the two variables used in this study can be declared valid, because each indicator in each variable obtained a loading factor value > 0.7 , so it can be stated that the indicators for each variable meet the requirements for research.

4.2 AVE Test (Average Variance Extracted)

Latent variables can explain on average more than half of the variance of their indicators.

Table 2. Outer Model Analysis (AVE)

Variable	Average Variance Extracted (AVE)
Gen Z Consumer Behavior	0.585
Using Batik in the Industry 5.0 Era	0.580

Based on table 2 above, the AVE value of the Gen Z Consumer Behavior variable is 0.585 and Using Batik in the Industry 5.0 Era is 0.580. This shows that all variables in this

study obtained a value of more than ($>$) 0.5, meaning that each variable has good discriminant validity.

4.3 Composite Reliability Test

This reliability test is intended to measure how relevant and consistent a respondent is in answering or filling out the questionnaire, related to the questionnaire given.

Table 3. Construct Reliability and Validity Analysis

Variable	Composite Reliability
Gen Z Consumer Behavior	0.831
Using Batik in the Industry 5.0 Era	0.826

Based on the test results in table 3 above, the composite reliability value of the Gen Z Consumer Behavior variable was 0.831 and the composite reliability value of Using Batik in the Industry 5.0 Era was 0.826, which shows that the values of both variables are greater ($>$) than 0.7, meaning that all variables are declared reliable.

4.4 Structural Model Analysis (Inner Model)

This structural model test aims to see the relationship or influence between constructs, significant values and R Square.

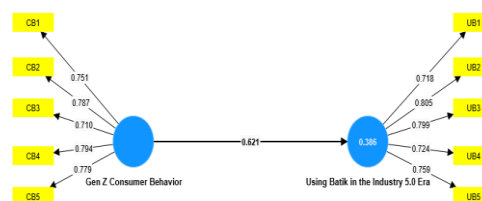


Figure 3 Output Inner Model

In this structural model analysis, the aim is to determine the magnitude of the influence or relationship of the independent variable and the dependent variable. The measurement standards used are 0.67 which is stated as a strong influence, 0.33 which is stated as a moderate influence, and 0.19 which is stated as a weak influence. The following are the results of R-Square SmartPLS 4.0:

Table 4. Structural Model Analysis Output (R-Square)

Variable	R-Square	R-Square Adjusted
Using Batik in the Industry 5.0 Era	0.386	0.380

Based on the R-square data in table 4 above, the R Square value is 0.386 and with the Adjusted R Square value of 0.380, the entire exogenous construct (Gen Z Consumer Behavior) influences Using Batik in the Industry 5.0 Era by 0.380 (38.0%) (moderate influence).

4.5 Hypothesis Testing Results (Significance Test)

4.5.1 Hypothesis testing uses output path coefficients and indirect effects.

Table 5. Bootstrapping Analysis (Path Coefficients)

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T Statistics (O/STDEV)	P values
Gen Z Consumer Behavior → Using Batik in the Industry 5.0 Era	0.621	0.632	0.064	9.759	0.000

The purpose of this bootstrapping test is to minimize the abnormality in the research data. Here are the results of the bootstrapping test:

4.5.2 The Influence of Gen Z Consumer Behavior in Using Batik in the Industry 5.0 Era

The results of the first hypothesis test show the influence of Gen Z consumer behavior in using batik in the era of society 5.0, as seen in table 5. The results of the hypothesis test analysis obtained a value (O) where the path coefficient was 0.621 with a T statistic value of 9.759 and a P Values value of 0.000. This value is greater ($>$) than the t table value (1.983) and the P Values value is smaller ($<$) 0.05, meaning it has a significant effect.

So, Gen Z consumer behavior has a positive and significant influence on using Batik in the Industry 5.0 era (H1 Accepted).

5. Discussion

5.1 The Influence of Gen Z Consumer Behavior in Using Batik in the Industrial Era 5.0

Social media has a significant impact on Gen Z consumer behavior, as it is the primary place to discover and evaluate products such as batik. Gen Z makes purchasing decisions based on influencer recommendations and social media user reviews. In the context of batik, social media is an important medium for brands to promote new designs and lifestyles that incorporate batik in a contemporary way. Brand authenticity and transparency are also important considerations for Gen Z. They tend to support batik brands that are open about their manufacturing process, the origin of their materials, and their environmental impact. This transparency fosters a sense of confidence and commitment among Gen Z consumers.

Environmental and social considerations greatly influence Gen Z's preferences. They want batik that is sustainably produced, uses environmentally friendly materials, and benefits the local community. To attract Generation Z in the Industry 5.0 era, which focuses on sustainability and technology, batik brands must implement ecologically sustainable methods and demonstrate social commitment. Furthermore, Gen Z values customization and

individuality, preferring distinctive items that reflect their personal personalities. Batik that allows customization in both design and color will appeal to this generation.

Price and value are also crucial issues for Generation Z, who are very conscious about the value of their money. They are looking for high-quality batik products at reasonable prices. Discounts, promotions, and loyalty programs are successful techniques to attract customers. In the era of Industry 5.0, creating sustainable products is very important. Batik brands must use environmentally friendly materials and sustainable production practices to attract customers who care about the environmental impact of their purchases.

Community and social engagement also play a significant role. Gen Z prioritizes relationships and connections, both in real life and online. Batik brands that create a community around their products and promote social interaction through digital platforms are more likely to appeal to Gen Z. The combination of technology and tradition allows batik brands to blend traditional characteristics with cutting-edge innovation, resulting in products that are relevant and appealing to Gen Z. Augmented reality (AR) and virtual reality (VR) technologies can be used to enhance the shopping experience, while blockchain can increase transparency and trust in the supply chain.

Marketing tailored to Gen Z's specific interests, leveraging big data and artificial intelligence (AI), ensures that product messages and promotions reach their intended target audience in the most effective way. Gen Z is increasingly discovering and purchasing batik through digital venues such as e-commerce and social media. A solid digital presence, including a responsive website and active social media profiles, allows batik brands to better reach and engage with Gen Z consumers. With the right strategy that combines Gen Z consumer behavior with Industry 5.0 era innovation, batik can continue to grow and be appreciated by this young generation.

6. Conclusion

Based on the formulation of the problem, the results and the discussion above, the conclusion of this study is that Gen Z Consumer Behavior has a positive and significant influence on using Batik in the Industrial Era 5.0.

7. Suggestion

Understanding these aspects enables batik brands to create more successful strategies to attract and retain Gen Z consumers, ensuring their relevance and sustainability in the Industry 5.0 era.

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