International Journal of Arts and Social Science www.ijassjournal.com
ISSN: 2581-7922,
Volume 8 Issue 5, May 2025

The Behavior of Batik SMEs in Utilizing Social Media to Expand Market Reach: A Case Study of Batik SMEs in Semarang City, Indonesia

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ABSTRACT: *Digital transformation has become an important need for Small and Medium Enterprises (SMEs), including batik SMEs engaged in the creative industry sector. One potential form of digitalization is the use of social media as a marketing tool. This study aims to analyze the behavior of Batik SMEs in Semarang City, Indonesia in adopting social media to expand market reach using the Technology Acceptance Model (TAM) approach. This study involved 100 active batik SMEs who were selected purposively and analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method. The results showed that Perceived Ease of Use (PEU) had a significant effect on Perceived Usefulness (PU), and PEU had a stronger effect on Attitude Toward Using (ATU) than PU on ATU. PEU and ATU had a significant effect on Behavioral Intention to Use (BIU), which ultimately had a real impact on Actual Usage (AU) of social media. These findings indicate that Ease of Use and Positive Attitudes towards social media are important keys in encouraging the actual use of social media by Batik SMEs. This study provides important implications for digital-based SME development strategies in the creative economy sector.*

KEYWORDS -*Batik SMEs, Social Media, Technology Acceptance Model (TAM), Digital Marketing*

I. INTRODUCTION

Small and Medium Enterprises (SMEs) are one of the important pillars of the Indonesian economy. In today's digital era, social media is one of the strategic means that can be utilized by SMEs to expand their market reach and increase the visibility of their products, including for batik SMEs in Semarang City. The use of social media such as Instagram, Facebook, and TikTok is an efficient and affordable alternative in reaching consumers widely without geographical limitations. In early 2025, the population of Indonesia was 285 million people. YouTube remains the number one online video platform in Indonesia, with 143 million users. YouTube's advertising reach is equivalent to 50.2% of Indonesia's population. Facebook maintains its position as a significant social media platform in Indonesia, with 122 million users (or 42.8% of the population). Instagram, with a focus on visual content, has 103 million users in Indonesia (or 36.2% of the population). Instagram's advertising reach reaches 36.3% of the population. TikTok, a phenomenal short video platform, has 108 million adult users (or 37.9% of the population). LinkedIn, a professional networking platform, has 33 million members in Indonesia (or LinkedIn's advertising reach of 11.6% of the population). Messenger: Instant Messaging App Messenger, an instant messaging app from Facebook, has 25.6 million users in Indonesia (or Messenger's advertising reach of 9% of the population). Snapchat, with its focus on ephemeral content and

visual interaction, has 1.69 million users in Indonesia. X (Twitter), a microblogging platform, has 25.2 million users in Indonesia (or 8.8% of the population) [1].

The adoption of digital technology by batik SMEs does not always run smoothly. Several psychological factors and user perceptions of technology also influence their decision to use social media as a marketing tool. In this context, the Technology Acceptance Model (TAM) is one of the relevant theoretical frameworks to explain the behavior of social media use by SMEs. TAM emphasizes that Perceived Ease of Use (PEU) and Perceived Usefulness (PU) are two main constructs that influence Attitude Toward Using (ATU), Behavioral Intention to Use (BIU), and finally Actual Usage (AU) [2], [3].

The results of a study conducted by Lenkakuro, et al. on the influence of social media on online learning in public universities in Nyeri County obtained results that 67% of respondents consisting of deans, heads of departments, and students agreed that use of social media for online learning has had a considerable impact on academic performance and 13% of respondents strongly agreed [4]. Similar research conducted by Bangura obtained research results that social media use can have a significant impact on students' academic performance depending on how they use and manage it [5].

This study aims to analyze how perceived ease of use and usefulness of social media contribute to attitudes and behaviors of social media use by Batik SMEs in Semarang City. The conceptual model used in this study adopts the TAM approach that has been adjusted to the context of SMEs and digital marketing. By understanding the factors that influence social media adoption, the results of this study are expected to provide practical contributions to policy makers and business actors in developing sustainable SME digitalization strategies.

II. LITERATUR REVIEW

2.1 Technology Acceptance Model (TAM)

The TAM model developed by Davis explains that technology acceptance is influenced by two main factors which are cognitive responses, namely Perceived Usefulness and Perceived Ease of Use [2]. Perceived Usefulness is the extent to which a person believes that using a particular technology will improve their performance, while Perceived Ease of Use is the extent to which a person believes that using the technology is free from heavy effort. TAM was then further developed by Venkatesh and Davis by adding the variables Attitude Toward Using and Behavioral Intention to Use which lead to Actual Usage [3]. Attitude Toward Using which is an affective response, namely an individual's positive or negative feelings about performing the target behavior. Intention to Use and Actual Usage are behavioral responses. Behavioral intention to use is a person's intention or desire to do or use a particular action, product, or technology. Actual usage is the real behavior in adopting or using a system, technology, or service.

2.2 Social Media in SME Marketing

Social media is a digital communication tool that allows users to share information, interact, and build relationships online. In the context of SMEs, social media can be used to promote products, interact with customers, and build brands. [6]. Batik SMEs as part of the creative industry have a great opportunity to utilize social media in expanding their market share. Research that examines the influence of eWOM (electronic Word of Mouth) information on the purchase intention of social media users using the Information Adoption Model (IAM) and Technology Acceptance Model (TAM) approaches shows that the quality, credibility, usefulness, and ease of use of eWOM information are important factors that influence consumer decisions in adopting the information and forming purchasing behavior on social media. The findings of this study provide insight for marketing managers regarding the importance of the role of eWOM information in influencing consumer purchase intentions online through social media. [7].

2.3Relationship between Construct Variables

2.3.1 The Influence of Perceived Ease of Use on Perceived Usefulness

The research entitled The Effect of Information Quality on Perceived Usefulness and Perceived Ease of Use, which tested the influence of information quality on perceived ease of use and Perceived Usefulness, obtained research results that perceived ease of use has a positive influence on Perceived Usefulness in the context of using accounting software. [8] .A study conducted by Raksadigiri and Wahyuni showed that Perceived Ease of Use has a significant effect on Perceived Usefulness and attitudes towards use, which in turn influences behavioral intentions to use technology. [9]. The study entitled Empirical Evaluation of Technology Acceptance Model for Predicting Actual Usage of Mobile Payment Apps evaluated the technology acceptance model to predict the use of mobile payment apps and found that Perceived Ease has a positive effect on Perceived Usefulness [10]. The perceived simplicity of using health-focused short video advertisements significantly enhances users' perception of their usefulness [11]. The study conducted by Mahardika and Suharifound that ease of use has a positive impact on perceived usefulness of e-ticketing [12]. Perceived Ease of Use has a positive effect on Perceived Usefulness [13].
Based on the research results above, the research hypothesis is formulated as follows::

H1: Perceived Ease of Use has a positive effect on Perceived Usefulness.

2.3.2 The Influence of Perceived Ease of Use on Attitude Toward Using

Ease of use of the system is a consumer consideration in using the system. The results of the study showed that Users' perceived ease of use of health-related short video ads positively affects their attitudes toward ads [11]. The results of other studies also show that Perceived Ease of Use has a positive effect on attitude [13].
Based on the research results above, the research hypothesis is formulated as follows:
H2: Perceived Ease of Use has a positive effect on Attitude Toward Using.

2.3.3 The Influence of Perceived Usefulness on Attitude Toward Using

Usability is one of the considerations for consumers in choosing to use a system. Consumers tend to choose a system that is easier to use. The results of the study showed that Users' perceived usefulness of health-related short video ads positively affects their attitudes toward ads [11]. Similar research results also show that Perceived Usefulness has a positive effect on attitude [13].
Based on the research results above, the research hypothesis is formulated as follows:

H3: Perceived Usefulness has a positive effect on Attitude Toward Using.

2.3.4 The Influence of Perceived Ease of Use on Behavioral Intention to Use

Ease of use also affects the intention to use. This is in accordance with the results of the study that The Perceived Ease of Use was positively and significantly correlated with behavioral intent to use social media, thus indicating the positive and significant relationship [14]. Other studies also show that perceived simplicity of use does have a favorable effect on behavioral intention. [15].
Based on the research results above, the research hypothesis is formulated as follows:
H4: Perceived Ease of Use has a positive effect on Behavioral Intention to Use

2.3.5 The Influence of Attitude Toward Using on Behavioral Intention to Use

An investigation grounded in the Extended Technology Acceptance Model revealed that users' attitudes toward health-related short video advertisements have a significant positive influence on their intentions to make a purchase [11]. Similar research also found that Attitude has a positive effect on Behavioral Intention [13].
Based on the research results above, the research hypothesis is formulated as follows:
H5: Attitude Toward Using has a positive effect on Behavioral Intention to Use.

2.3.6 The Influence of Behavioral Intention to Use on Actual Usage

One of the research results conducted by Al-Rahmi, et al. is there is a relationship between behavioral intention to utilize social media and actual social media use on social network platforms [16]. Behavioral intention has positive effect on Actual usage [13].

Based on the research results above, the research hypothesis is formulated as follows:

H6: Behavioral Intention to Use has a positive effect on Actual Usage.

2.4 Empirical Research Model

The empirical research model in this study is built based on the hypothesis and refers to the TAM model that has been modified for the context of social media utilization in Batik SMEs. This model consists of six main constructs, namely:

- Perceived Ease of Use (PEU)
- Perceived Usefulness (PU)
- Attitude Toward Using (ATU)
- Behavioral Intention to Use (BIU)
- Actual Usage (AU)

The research model is as shown in Fig. 1 below:

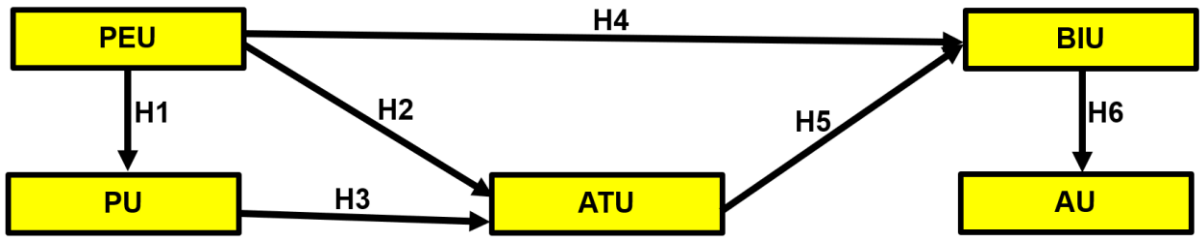

Figure 1: Empirical Research Model

III. RESEARCH METHODS

3.1 Type of Research

This study employs a quantitative research design with an explanatory approach, aiming to examine the causal relationships among variables within the proposed model, particularly in the context of social media usage behavior among Small and Medium Enterprises (SMEs) in the batik industry.

3.2 Population and Sample

The population of this study comprises all batik SMEs located in Semarang City that actively utilize social media. The sampling technique employed is purposive sampling, based on the following criteria:

- Owners or managers of batik SMEs,
- Have been using social media for at least the past six months,
- Actively engage in online product marketing.

The sample size is determined using the PLS-SEM method, with a minimum requirement of ten times the highest number of indicators in any construct (i.e., 10 × 3 indicators = a minimum of 30 respondents). However, a sample size of 50–100 respondents is recommended to ensure greater model stability. This study utilizes a total of 100 respondents.

3.3Data Collection Techniques

Data were collected through a questionnaire utilizing a 5-point Likert scale (ranging from strongly disagree to strongly agree). The questionnaire items were developed based on the indicators derived from the research model, which include:

PEU1, PEU2, PEU3 : Perceived ease of understanding, learning, and using social media
PU1, PU2, PU3 : Perceived usefulness of social media in enhancing sales and operational efficiency
ATU1, ATU1, ATU3 : Positive attitudes toward the use of social media
BIU1, BIU1, BIU3 : Behavioral intention to continue using social media
AU1, AU1, AU3 : Actual usage frequency and intensity of social media

Each construct was measured through three indicators to ensure construct validity and reliability within the context of the study.

3.4Data Analysis Technique

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the aid of software such as SmartPLS. The analytical procedure involved the following stages:

1) Assessment of indicator validity and reliability,
2) Evaluation of the structural model (inner model),
3) Testing of path coefficients and their statistical significance,
4) Determination of the coefficient of determination (R^2) for endogenous variables.

This approach enables simultaneous examination of both measurement and structural models, making it suitable for predictive and exploratory research involving complex relationships between latent variables.

IV. RESULTS AND DISCUSSION

4.1 Convergent Validity

Based on the results of the SEM analysis, all indicators demonstrated outer loading values greater than 0.70 and p-values less than 0.05, and Average Variance Extracted (AVE) > 0.5 indicating that each indicator meets the criteria for convergent validity. The following are detailed results for each indicator:

1) PEU1, PEU2, PEU3 has the smallest loading factor 0.707 and the highest 0.921 (p = 0.000)
2) PU1, PU2, PU3 has the smallest loading factor 0.824 and the highest 0.849 (p = 0.000)
3) ATU1, ATU2, ATU3 has the smallest loading factor 0.892 and the highest 0.981 (p = 0.000)
4) BIU1, BIU2, BIU3 has the smallest loading factor 0.873 and the highest 0.983 (p = 0.000)
5) AU1, AU2, AU3 has the smallest loading factor 0.892 and the highest 0.981 (p = 0.000)

The R^2 values for the endogenous variables indicate that the structural model possesses a satisfactory level of predictive power, with the lowest R^2 recorded at 0.562. This suggests that a substantial proportion of variance in the endogenous constructs can be explained by the exogenous variables. Detailed R^2 values for each endogenous variable are presented in Table 1 below:

Table 1: R2 Value of Endogenous Variables

Construct	R^2	Classification
Perceived Usefulness	0.702	Substantial
Attitude Toward Using	0.562	Moderate
Behavioral Intention to Use	0.644	Moderate
Actual Usage	0.640	Substantial

4.2The Results of The Structural Equation Modeling (SEM) Analysis

The results of the analysis using the Smart PLS software tool obtained the following results:

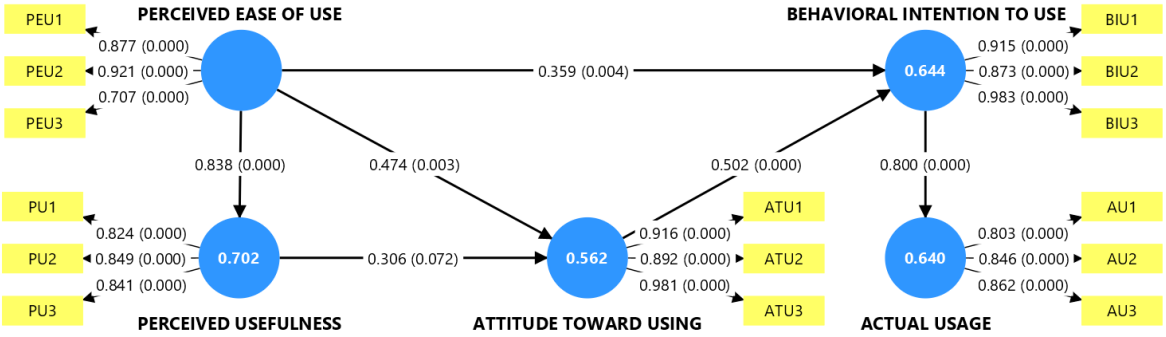

Figure 2: SEM Analysis Results

The analysis of path coefficients between latent constructs is presented in greater detail in Table 2, providing insights into the strength and direction of the relationships within the structural model:

Tabel 2: Path Coefficient Between Latent Variables

Path From-To	Coefficient	Direction	p-Value	Significance
PEU → PU	0.838	Positive	0.000	Significant
PU → ATU	0.306	Positive	0.072	Not Significant (p > 0.05)
PEU → ATU	0.472	Positive	0.003	Significant
PEU → BIU	0.359	Positive	0.004	Significant
ATU → BIU	0.502	Positive	0.000	Significant
BIU → AU	0.800	Positive	0.000	Significant

4.3 Hypothesis Testing and Its Interpretation

Based on Table 2 above, the following results were obtained:

1) Hypothesis 1:

Perceived Ease of Use (PEU) has a positive and significant influence on Perceived Usefulness (PU), thereby supporting Hypothesis 1. This finding indicates that the easier social media is to use for SMEs, the more they perceive its usefulness in supporting their business activities.

2) Hypothesis 2:

Perceived Ease of Use (PEU) has a positive and significant effect on Attitude Toward Using (ATU), thereby supporting the acceptance of Hypothesis 2. The ease experienced by Batik SME actors in using social media influences their favorable attitude toward utilizing social media as a marketing tool for Batik products.

3) Hypothesis 3:

The influence of perceived usefulness on Attitude Toward Using (ATU) was found to be statistically insignificant, as indicated by a significance value of 0.072, which exceeds the threshold of 0.05. Consequently, Hypothesis 3 is rejected. Instead, Perceived Ease of Use (PEU) appears to have a stronger impact on shaping the attitude of batik SME (Small and Medium Enterprises) actors toward using social media. This may be attributed

to the generally low educational background of batik SME owners, for whom the ease of using social media is a more critical consideration than its perceived usefulness.

4) Hypothesis 4:

Perceived Ease of Use (PEU) has a positive and significant effect on Behavioral Intention to Use (BIU), thereby supporting Hypothesis 4. The greater the perceived ease of using social media, the stronger the intention to use it for marketing batik products.

5) Hypothesis 5:

The findings demonstrate that Attitude Toward Using (ATU) has a positive and significant influence on Behavioral Intention to Use (BIU), indicating that a more favorable attitude of SMEs toward social media leads to a stronger intention to continue its use. Moreover, the effect of ATU on BIU is greater than that of Perceived Ease of Use (PEU), suggesting that BIU is more substantially driven by attitudinal factors than by perceptions of ease of use.

6) Hypothesis 6:

The analysis confirms that Behavioral Intention to Use (BIU) exerts a positive and statistically significant influence on Actual Usage (AU), suggesting that strong user intentions are effectively manifested in concrete social media usage behaviors.

V. RESEARCH IMPLICATIONS

This study implies that to promote active social media use among batik SMEs, interventions should go beyond merely providing technical training related to Perceived Ease of Use (PEU). It is also essential to enhance users' understanding of the tangible benefits (Perceived Usefulness – PU) and to cultivate a positive attitude (Attitude Toward Using – ATU) toward social media platforms. Local governments or SME communities can design mentoring programs that incorporate success stories, content marketing strategies, and education on digital market potential to foster motivation and strengthen SMEs' perceived value of social media use.

VI. CONCLUSION AND RECOMMENDATIONS

7.1 CONCLUSION

Based on the results of this researched, the following conclusions were obtained:

1. Perceived Ease of Use has a positive and significant influence on Perceived Usefulness. This suggests that the easier social media is to use, the more useful it is perceived to be by batik SMEs.
2. Perceived Ease of Use positively affects Attitude Toward Using. However, the influence of Perceived Usefulness on Attitude Toward Using was found to be statistically nonsignificant.
3. Both Perceived Ease of Use and Attitude Toward Using have a positive impact on Behavioral Intention to Use.
4. The effect of Attitude Toward Using on Behavioral Intention to Use is stronger than effect of Perceived Ease of Use on Behavioral Intention to Use, indicating that the intention to use social media is more strongly driven by users' attitudes than by perceived ease of use.
5. Behavioral Intention to Use significantly affects Actual Usage, meaning that the intention to use social media is effectively manifested in the actual behavior of batik SMEs in utilizing social media platforms.

7.8 RECOMENDATIONS

Based on the results of this researched, the following are recommended:

1. For Batik SME Practitioners
   Batik SMEs are encouraged not only to acquire technical skills in using social media but also to understand

its strategic potential in marketing. Entrepreneurs should be empowered through training in visual content creation, digital storytelling, and algorithm-based promotional strategies on social media platforms.

2. For Local Governments and SME Communities
   There is a need to develop digital marketing mentoring programs tailored to local needs, particularly for creative SMEs such as those in the batik industry. Practical approaches grounded in real success stories are likely to be more effective in shaping perceived usefulness and fostering positive attitudes toward social media.
3. For Future Researchers
   It is recommended that future studies expand the research scope to include other SME sectors and incorporate additional variables such as digital trust, perceived risk, or digital literacy to enrich the research model and generate deeper insights.

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