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ANALYSIS OF KEY FACTORS OF DIGITAL TRANSFORMATION IN SMALL AND MEDIUM ENTERPRISES IN SALAMAN DISTRICT OF MAGELANG REGENCY, INDONESIA

Sujatmika, **Hartati Anis Siti**
Faculty of Economics and Business, UPN 'Veteran" Yogyakarta, Indonesia

Budiarto
Faculty of Agriculture, UPN 'Veteran" Yogyakarta, Indonesia

Kussujaniatun Sri
Faculty of Economics and Business, UPN 'Veteran" Yogyakarta, Indonesia

*E-mail: sri.kussujaniatun@upnyk.ac.id

ABSTRACT
The purpose of this study is to identify and analyze key factors of digital transformation of MSMEs in Magelang Regency Province using a prospective structured analysis approach. This research design is quantitative descriptive research. The type of data in this research uses primary data. The data source was obtained from Focus Group Discussion (FGD). The analysis method used prospective structural analysis techniques. The structural analysis was arranged in three stages, the first two stages were carried out during FGD and the third stage used MICMAC software. The variables that influence/determine (key drivers) the digital transformation of MSMEs in Magelang Regency are the key variables or factors of digital infrastructure, digital customer preferences, leadership and management and capital allocation. Transition variables include the innovation environment, technological mastery, environmental conditions and requirements, and human resources. Meanwhile, organizational culture is the dependent variable and company digital culture is an excluded variable. The digital infrastructure, innovation environment, and mastery of technology are the most influential variables, both directly between variables and indirect interactions.

KEY WORDS
Digital transformation, infrastructure, transition, SME.

The National Movement Proudly Made in Indonesia (BBI) is a movement launched by the government that aims to encourage Indonesian people to love and use the work of the nation's children, especially local products. By using products made by the nation's children, tourism and creative economy actors can indirectly increase production and employment, which can improve the welfare of society and the Indonesian economy. The rapid development of the times means that tourism and creative economy actors must compete in order to survive in their industries. Exploring online trading is an effective way to achieve maximum sales. The government hopes that tourism and creative economy players, market places, and the community will be involved in making the national BBI movement a success. With digital transformation in marketing, it is hoped that the marketing of tourism and creative economy products can be optimized. The digital transformation carried out is by utilizing digital media for tourism and creative economy actors in the Borobudur Tourism Area, making it easier to sell their products and helping manage tourism and creative economy actors. By digitalizing marketing, it will make tourism and creative economy actors closer to consumers and also make it easier for consumers to buy products from tourism and creative economy actors. The potential for many domestic and foreign tourists to visit, as well as the large number of creative activities, would be a shame if sustainable development is not carried out. Many business sectors require change, and digital transformation is a process carried out by organizations or companies (Verhoef et al., 2021). Previous research from

Tarute et al. (2018) identified factors that influence the digital transformation of SMEs, divided into internal and external factors. Internal factors consist of capability fit, resource fit, and changes in the business model. Meanwhile, external factors consist of external capabilities and resource fit, governmental regulations, and industry-related factors. Even Bank Indonesia stated that SMEs actually gained multiple profits during the pandemic through online sales (Wihdan, 2021). SMEs need digital technology to improve their performance and productivity (Papadopoulus et al., 2020). The aim of this research is to identify and analyze key factors in the digital transformation of SMEs in Magelang Regency Province using a prospective structured analysis approach.

According to Verhof et al. (2021), digital transformation is a process carried out by organizations or companies in various business sectors in the presence of technology.

Research put forward by Tarute et al. (2018) argues that there are factors that influence the digital transformation of SMEs, which can be divided into internal and external factors. Internal factors consist of capability fit, resource fit, and changes in the business model. Meanwhile, external factors consist of external capabilities and resource fit, governmental regulations, and industry-related factors.

According to Wihdan (2021), Bank Indonesia stated that SMEs would actually gain multiple profits through online sales during the pandemic. In their research, Papadopoulus et al. (2020) stated that SMEs really need the role of digital technology in increasing their performance and productivity. Farhani and Chaniago (2021) stated in their research that a leader's behavior and formality are determining factors in the digital transformation of SMEs, especially in the use of digital media. Osmundsen et al. (2018) revealed that the drivers and objectives of digital transformation are customer behavior and expectations, regulations, ensuring digital readiness, and improvements in digital channels.

METHODS OF RESEARCH

The research design was used to explain and interpret quantitative results by collecting and analyzing follow-up qualitative data (Creswell, 2009). The data in this research consists of primary data obtained through focus group discussions (FGD). The FGD was conducted with experts in the fields of economics and management, especially regarding SMEs in Magelang Regency. The results of the FGD were used as the basis for conducting data analysis. The analysis in this study uses prospective structural analysis techniques. The structural analysis method is very useful as a support for decision-making, operational planning, determining the impact of a strategy, and evaluating alternatives for the future. It is operated in matrix form (Ariyani et al., 2019). Structural analysis is structured in three stages. The first two stages were carried out during the FGD, and the third stage was carried out using MICMAC software (Serrano et al., 2015).

In general, structural analysis consists of three stages: the first is compiling or identifying variables, as well as the relationships between variables, and then analysis is carried out to identify key variables (Fauzi, 2019).

Analysis with MICMAC is basically an analysis of a variable system based on direct classification, where the relationship between variables is identified and assessed by experts or stakeholders through FGD (Wijaya et al., 2020). In MICMAC, variables are grouped into four quadrants based on dependence and influence categories, as in Influence variables in quadrant I describe variables that are very influential with little dependence, so they are very crucial variables in the system and act as a key variable. Meanwhile, variables in quadrant II are relay variables, namely variables that are very influential but also very dependent, so they are often seen as variables that reflect instability in a system. In quadrant III, there are the dependent variables, which are outcome variables because they are characterized by high dependency. This variable is also quite sensitive to changes in influence and relay variables. Meanwhile, quadrant IV describes excluded variables, or what are often called autonomous variables, because of their small influence and dependency. This variable is called excluded because it will not stop a system from working or make use of the system itself (Fauzi, 2019).

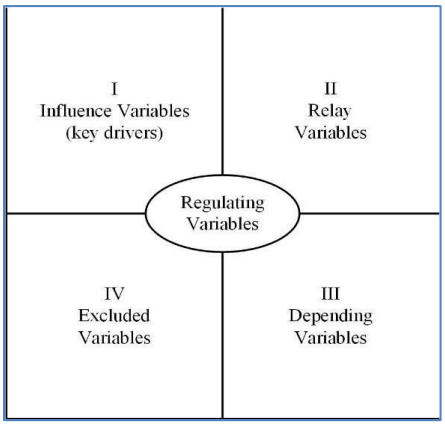

Figure 1 – Variable Mapping in MICMAC (Source: Fauzi, 2019)

RESULTS AND DISCUSSION

Based on the results of the FGD, factors for the digital transformation of MSMEs in Magelang Regency can be formulated and categorized into internal factors and external factors, as detailed in Table 1.

Table 1 – Identification of Factors and Variables for the Digital Transformation of SMEs

Theme/category	Factors/Variables	Code
Internal	1. Organizational culture	bud.org
	2. Technology assignment	peng.tek
	3. Human resources	hm.res
	4. Leadership and management	kep.man
	5. Innovation climate	ik.inov
	6. Capital allocation	al.modal
External	7. Environmental conditions and demands	kon.lingk
	8. Government regulations	reg.pem
	9. Digital literacy of society	lit.dig
	10. Digital infrastructure	infr.dig
	11. Consumer digital preferences	pref.cus

As previously explained MICMAC analysis provides classification or grouping output for variables. Figure 2 shows the direct influence/dependence map, which is the result of MICMAC analysis based on MDI (Matrix of Direct Influence) input.

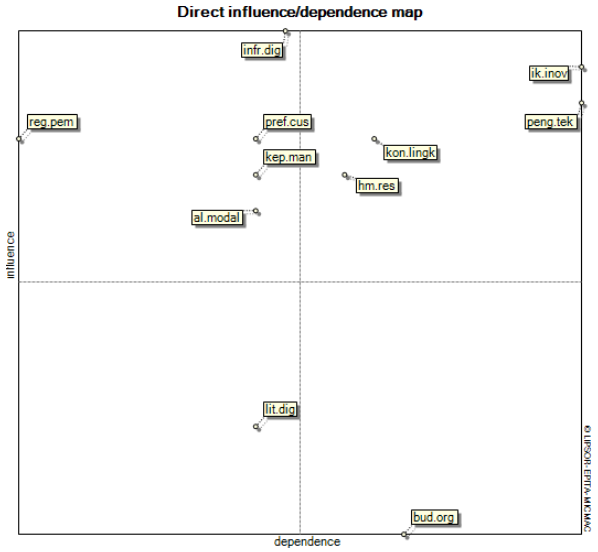

Figure 2 – Direct Influence/Dependence Map Key Factors the Digital Transformation of SMEs in Magelang Regency

Influence and determinant variables (key drivers) consist of government regulations, digital infrastructure, digital customer preferences, leadership and management, and capital allocation. Government regulations are clearly an important factor that will greatly determine the decisions and sustainability of SMEs. In digital transformation, of course, it begins with the availability of digital infrastructure, which will be utilized by SMEs to carry out digital transformation. SMEs' decisions to carry out digital transformation are, of course, also influenced by customer digital preferences. If customers choose or have an interest in digital use (such as e-commerce) in purchasing SME products, of course this will have a big influence. Apart from that, internal factors in the form of leadership and management, as well as capital allocation, also influence the digital transformation process. The research results of Farhani and Chaniago (2021) found that leadership behavior and formality are determining factors in the digital transformation of SMEs, especially in the use of digital media.

The results of the analysis by Osmundsen et al. (2018) in various articles regarding digital transformation show that the drivers and objectives of digital transformation are customer behavior and expectations, regulations, ensuring digital readiness, and increasing digital channels.

Relay variables consist of innovation climate, technological mastery, environmental conditions and demands, and human resources. These variables also influence SMEs' decisions to carry out digital transformation, but the innovation climate is also influenced by other variables. Just as human resources influence and determine the transformation process, they are also influenced by other variables such as the availability of facilities as well as leadership and management.

The dependent variable from the results of the MICMAC analysis is organizational culture, remembering that organizational culture is not given or determined unilaterally but is very dependent and in the process of being formed by various other factors.

The excluded variable consists of people's digital literacy, where in general, people's digital literacy does not have a significant influence on digital transformation decisions, and apart from that, digital transformation factors also do not significantly shape people's digital literacy. Furthermore, the pattern of relationships between variables in MICMAC can occur directly between variables.

CONCLUSION

The variables that influence or determine (key drivers) the digital transformation of SMEs in Magelang Regency are the key variables or factors of digital infrastructure, digital customer preferences, leadership and management, and capital allocation. Transition variables include the innovation environment, technological mastery, environmental conditions and requirements, and human resources. Meanwhile, organizational culture is the dependent variable, and company digital culture is an excluded variable.

The variables digital infrastructure, innovation environment, and mastery of technology are the most influential variables, both directly between variables and following indirect interactions. In the dependency ranking, there are differences before and after the interaction with an indirect effect, where the previous superior technology mastery variable is replaced by the innovation climate variable.

Considering the important role of digital infrastructure elements, the government can develop regulations and digital infrastructure development programs and activities that can have a positive impact on other important factors. SMEs in Magelang Regency must also foster an environment of innovation and mastery of technology, especially regarding digital transformation such as the use of e- commerce.

Further research could target a more in-depth prospective analysis, such as analyzing the relationship between factors and drivers of the digital transformation of SMEs using MACTOR analysis, as well as examining books in various situations using MULTIPOL analysis.

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