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JAVANESE CULTURAL BOUNDARIES TO USE ERP SOFTWARE: MSMEs PERSPECTIVE

Alexandra Adriani Widjaja¹, Agnes Advensia Christmastuti², Vena Purnamasari³, Stephana Dyah Ayu R.⁴, Robertus Setiawan Aji Nugroho⁵

¹ Department of Accounting, Soegijapranata Catholic University, Indonesia
Email: alexandra@unika.ac.id

² Department of Accounting, Soegijapranata Catholic University, Indonesia
Email: a_advensia@unika.ac.id

³ Department of Accounting, Soegijapranata Catholic University, Indonesia
Email: vena@unika.ac.id

⁴ Department of Accounting, Soegijapranata Catholic University, Indonesia
Email: stephana@unika.ac.id

⁵ Department of Informatics Engineering, Soegijapranata Catholic University, Indonesia
Email: nugroho@unika.ac.id

* Corresponding Author

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Abstract:

Micro, Small, and Medium Enterprises (MSMEs) have a major role in the resilience of the economy in Indonesia. Therefore, the development of MSMEs is the concern of many parties. One of them is to help MSMEs to get better at using information system technology. Covid-19 pandemic has encouraged the transformation of business management to increase information technology implementation. The use of ERP in business improvement is a must in the era of information digitization. By using an ethnographic approach to identified problems, this study examines factors that can be the key to successful ERP implementation in MSMEs. This study uses several MSMEs with various business sectors but joined in the same group. The group is a combination of MSMEs who are currently testing the implementation of a new ERP-based application. The process of acceptance of the application of the new ERP system turned out to be strongly influenced by the culture of the individual and the culture of the participant group. Our research focused on Javanese culture's impact on MSMEs. We found that Javanese as the most Indonesian-dominated

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culture has a great impact on MSMEs behaviour. Our result shows that common Javanese ethnic culture dominated their behaviour. Their behaviour tends refer to three concepts: madu basa, madu rasa, and madu brata (Sutarto, 2006). There are some characteristics in our sample. There are tend to avoid uncertainty, use a personal approach to avoid confrontation in their business, easily adapt to different conditions. They also tend to be cynical and pessimistic, including in addressing the information needs for their business. The results of the qualitative analysis carried out found that certain cultural elements have limited the success of ERP implementation in MSMEs.

Keywords:

ERP, MSMEs, Culture, Accounting

Introduction

Industrial development 4.0 requires business people change their business process. Unfortunately, most of SMEs do not consider the impact of Industrial 4.0 models, and they do not make substantial change changes (Amit & Zott, 2001; Mittal, Ahmad, Romero, & Wuest, 2018). The development of industry 4.0, demands an extensive network and digitalization in business process. The Covid-19 has changed the company's business model. It demands SMEs to increasing the level of internet-based digitization. The biggest challenge is integrated transaction, reporting and decision making. Numerous challenge of SME's financial reporting usage still need to solved (Ezeagba, 2017). Poor capability human resources its most important in SMEs and MSEM problem (Ezeagba, 2017). Accounting information system needed to make better decision making (Budiarto et al., 2018; Kim, Jang, & Yang, 2016). A good system increasing company's performance (Amit & Zott, 2001; Budiarto et al., 2018). SMEs must develop a system toward a digital transformation, a planned architecture needed for that purpose (Goerzig & Bauernhansl, 2018). A system that integrates all database needed. ERP provide comprehensive connected customer data, product data, cost data and some other data. It will help SMEs owner to make a better decision The other challenge is fitting software with their ecosystem (Valenc & Alves, 2017). Despite of numerous problems, digitalization leads cost efficiency and organization development (Vasiljeva, Shaikhulina, & Kreslins, 2017). Indonesian SMEs play a strategic role in its economics. It absorb 97% national work force. SMEs also contributes to 57% of Indonesia's GDP (Nainggolan, Edward, 2020). In Indonesia, micro enterprises also include at SMEs classification. We focused to micro, small and medium enterprises (MSMEs). Based on Indonesian Government Regulation No. 20/2008, Micro, Small and Medium Enterprises (UMKM) an define as micro business is productive business owned by individuals and / or individual business entities(Safitri, 2020). It must have several criteria such as a productive economic business that stands alone. It means that they aren't subsidiaries or non-branch companies that are owned, controlled, or become a part either directly or indirectly from medium or large business enterprises. This study used both quantitative and qualitative approach to describe MSME owner perception. In MSMEs owners plays important role in strategic decision. Owner perception will effect organization development. According previous research such as Chau & Hu (2002) ; Chin & Ahmad (2015) ; Davis, Bagozzi, & Warshaw (1992) ; Hamid, Razak, Bakar, & Abdullah (2016); Hussain, Mkpojiogu, & Yusof (2016) show evidence that user perception on ease-of-use will affect

personal behaviour while accepting the new technology. There are many applications or software for MSMEs in Google play stores or Appstore. Every application development claim that their software can support MSME business processes in Indonesia. Mostly, they provide financial support applications. Some of them paid application and some of them are free application that can be downloaded on application provider platforms such as the Appstore or Google Play store. Although widely available, these applications are generally difficult to apply directly to MSMEs because of the uniqueness of each MSME in carrying out their business activities. Therefore, for an MSME, designing an appropriate system is a necessity (Goerzig & Bauernhansl, 2018). We focused how culture make a great impact for owner decision for using technology. Ketprapakorn & Kantabutra (2019) reveals that owner core value drive organizational culture development practices.

Literature Review

Individual Behaviour Framework

Individual behaviour framework theory explains how a person behave. There are 4 interrelated elements in this theory. They are individual factors, environmental factors, individual's behaviour and outcomes. This theory states that an individual will have differ behaviour one another. Their behaviour and outcomes influenced by interaction between the environment and individual factors (Gibson, 2010). Culture is one of individual factors that include both in individual and environmental element.

Previous Study

The results of previous studies show that ERP is able to increase the effectiveness of the performance of a business activity (Indarto, Ratnaningsih, & Endah, 2018). The application of ERP to assist inventory management has been widely used (Wiranto, Toha, & Supriyadi, 2020). More specifically, research (Nawawi & Yunia, 2021) proves that ERP is very helpful, especially in improving management control and improving company competitive management. The main advantage of ERP is in its ability to reduce costs and improve the quality of decisions that must be implemented. A previous meta-analysis study showed that developments in ERP research and practice have made this definition of ERP even more broad (Klaus, Rosemann, & Gable, 2000). ERP development to further assist business development is still being developed (Awad, 2014). ERP implementation is not only limited to large companies. The application of ERP in MSMEs can help develop these MSMEs (Vasiljeva et al., 2017).

Method

Participant

This study uses participant of MSMEs in Central Java, Indonesia. Participant are chosen using snowball sampling method. First, researcher mapped MSME's group coordinator existed in industrial centre city at Central Java, such as Pekalongan, Tegal, Brebes, and Semarang. Second, we conduct ERP training for them. According to Indonesian pandemic rules that limited 30 person each training, we divided them into eight training series. Among them, only 12 participant completed our research stage and used for further analysis.

Stages

After determining the participants who will take part in the study, the researcher conduct treatment for the participants. This research conducting three phases. At the first stage the researcher gives an ERP software application account to each MSME. Researchers help each MSME to enter the data needed as an initial configuration before the software can be used. At this stage the researchers used the services learning method. This method is a learning model where students carry out learning methods, as well as provide services to the community. Where about fifty students were involved in this initial research phase. In this stage students helps MSME owners to identify financial data in the organization. They assist MSME owner to provide all initial financial data which ERP needs such as initial balance sheets, cost standards and product specifications are entered into the system. Because the ERP system is an integrated system, linkages are made between consumer master data, product master data, and raw material master data. All of this data is needed to help with online recording.

In this second stage, MSME owners are given training using ERP software. They are given the opportunity to record their transactions to the existing ERP. This second stage is carried out based on the TAM concept because of the ease of use of the system and the usefulness of the system carried out. Participants will have difficulty making decisions to use when they do not understand the ERP software used. After trained, they should be used to operate this software. We expected them to get a better understand how to use ERP software. Thus, it is hoped that they will realize the benefits of this ERP software for their development.

In this third stage, researchers measure their acceptance of the existing system. By using an ethnography approach, the researcher describes how the perceptions of participants in terms of business management and the use of financial technology are described. Detailed facts will be described after the process of observing and listening to group discussion participants while maintaining the objectivity of the researcher. The analysis of the results of the discussion with the participants will be related to the elements of Javanese culture as a whole, then poured into themes according to the focus and subfocus of the research. The results of this third stage are discussed as a result of this research. By using an ethnographic approach to identified problems, this study examines factors that can be the key to successful or downfall ERP implementation in MSMEs.

Result and Discussion

Participant Description

The participants were MSMEs with diverse businesses in Semarang. We identify and classify their business sectors into three namely production, services and trade. FGD participants dominated by MSMEs in the manufacturing sector (89%). The manufacturing sector is indeed a sector with a high level of complexity in the use of accounting software. The complexity of the manufacturing sector occurs because of the production and trade processes. During the production process there is a change in inventory from raw materials processed by direct labor and support from manufacturing overhead. Most MSMEs in Indonesia are in the manufacturing sector, especially the food industry. The food processing industry into ready-to-eat food is an

industry that is currently booming. This industry is considered the easiest and most profitable for some MSME entrepreneurs.

Even during this pandemic, many entrepreneurs have shifted their business from other sectors (services/trade) to the food industry. The food industry sector is considered the most profitable sector because even during the pandemic, food remains a priority for goods sought by consumers. Most MSMEs currently choose to use online media to sell their products. More than 70 percent of entrepreneurs who participated in FGDs also did the same method. This method is considered the most effective during a pandemic.

More than 85 percent of SMEs who use online marketing think that accounting software is very important more than SMEs whose offline marketing methods are only 50 percent. The experience of using online media makes SMEs better utilize information technology. This background experience makes these SMEs more consider important accounting software. They feel that utilizing information technology will facilitate the management of the business they run. SMEs who are experienced in using technology will feel that accounting software is easier to use. These entrepreneurs will feel that their infrastructure also supports the implementation of accounting software. Because of that, they are more enthusiastic about using accounting software than those who are unfamiliar with information technology. People in Indonesia who have a Restraint culture, often tend to be cynical and pessimistic, when they have to use something new. New things such as ERP for business management are also considered not a necessity, but sometimes they become a burden because it is inconvenient to simply record daily economic transactions. SMEs still feel more comfortable when implementation is accompanied. Their existing business culture makes them feel less confident about using something new and learning independently. Its including awareness of the importance of ERP.

Javanese Culture Affects

Data shows that almost all of our participant were Javanese. Even, Indonesia is widely known as a multicultural country, Javanese is the most dominant ethnic. Indonesia have approximately 364 ethnicities. Among of these ethnicities, the Javanese have come to be recognized over time as the most culturally and politically dominant in Indonesia. Javanese is the most Indonesian dominated culture and affected their behaviour. Due that characteristic, this study analysis focused in how Javanese culture affects owner using technology. Using an ethnographic method, we try to determine their Javanese culture effect. Observation and in-dept interview conduct to get information needed. Not only MSME owner, we also involve their employee and internship student as our informant.

Our result consistent with individual behaviour framework theory. This theory states that behaviour of an individual will differ from one another because it is influenced by the interaction between the environment and individual factors (Gibson, 2010). This person's intention will affect the outcome resulting from that person. Culture is one of the shapers of individuals both in individual factors and in environmental factors. A person with a certain ethnicity has brought certain basic characteristics that are characteristic of that culture. After summarizing the data, we found that even they have different characteristic, they tend to have inline behaviour. All of them seems to have common Javanese ethnic culture. The common

Javanese ethnic culture refer to three concepts: *madu basa*, *madu rasa*, and *madu brata* (Sutarto, 2006).

Madu Basa

Madu basa refers to how Javanese people should use good language and respectfulness each other, and more important to elder. Our finding in this research is that they prefer maintaining harmonization in their business and eliminating confrontation than looking for accounting and financial information. So, their intention to use ERP system as their tools tend to be low. Even ERP will provide financial data to help them make a better decision, they prefer maintain relationship to develop their business. This is practice consistent with the concept of *madu basa* which is held by the Javanese people.

Madu Rasa

Madu rasa refers to obligation of good feeling consideration. The good relationship is the priority in Javanese culture according to *madu rasa*. *Madu rasa* also leads our participant to have pragmatic culture. People in Indonesia tend to be oriented that the truth really depends on the situation, context, and time. Therefore, people tend to easily adapt to changing conditions. During COVID-19 pandemic, MSMEs quickly adjusted their business by switching to industrial sectors. Decisions to change the industrial sector are more influenced by observations of the needs of the surrounding community, not based on accounting and financial information on the real conditions of their businesses.

Madu Brata

Madu brata means a Javanese people must have a good restraint and contemplation. Using focus group discussion model, we try to picture Javanese culture which effects MSMEs decision to use ERP. There are several findings in this study. First finding is that our participant tends to have low preferences to avoid uncertainty. People try to avoid uncertainty in the business world. This action consistent with *madu brata* concept. They have a good restraint. So, they would avoid risk from uncertainty. Our participant also representation most people in Indonesia which have restraint culture. They tend to be cynical and pessimistic, including in addressing the information needs for their business. New things such as ERP for business management are also considered not a necessity, but sometimes they become a burden because it is inconvenient to simply record daily economic transactions.

Conclusion

We found that MSMEs needs for the existence of a financial recording and reporting system. But our research shows that their level of intention to utilize the system is still very low even its non-paid application or software. This condition is triggered by the existing culture in society that hinders their acceptance of the new system or technology. Therefore, it is better in the next research to focus more on the factors that can increase the desire of MSMEs in utilizing technology. Our findings shows that our participant tends to follow *madu basa*, *madu rasa*, and *madu brata* as consideration when they use ERP software. Similar research can also be carried out using other cultural points of view.

References

- Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic Management Journal*, 22(6–7), 493–520.
- Awad, H. A. H. (2014). Cloud computing as an operational model for ERP services : Definitions and challenges. *International Journal of Innovation and Applied Studies*, 8(2), 499–502.
- Budiarto, D. S., Rahmawati, Prabowo, M. A. P., Bandi, Djanjanto, L., Widodo, K. P., & Herawan, T. (2018). Accounting Information System (AIS) Alignment and Non- financial Performance in Small Firm : A Contingency Perspective. *ICCSA*, 1, 382–394. <https://doi.org/10.1007/978-3-319-95165-2>
- Chau, P. Y. K., & Hu, P. J. (2002). Examining a Model of Information Technology Acceptance by Individual Professionals: An Exploratory Study. *Journal of Management Information Systems*, 18(4), 191–229. <https://doi.org/10.1080/07421222.2002.11045699>
- Chin, L. P., & Ahmad, Z. A. (2015). Perceived Enjoyment and Malaysian Consumers' Intention to Use a Single Platform E-Payment. *SHS Web of Conferences*, 18, 9–18. <https://doi.org/10.1051/shsconf/20151801009>
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and Intrinsic Motivation to Use Computers in the Workplace. *Journal of Applied Social Psychology*, 22(14), 1111–1132. <https://doi.org/10.1111/j.1559-1816.1992.tb00945>
- Nainggolan, Edward, (2020). UMKM Bangkit, Ekonomi Indonesia Terungkit. <https://www.djkn.kemenkeu.go.id/artikel/baca/13317/UMKM-Bangkit-Ekonomi-Indonesia-Terungkit.html>.
- Ezeagba, C. (2017). *Financial Reporting in Small and Medium Enterprises (SMEs) in Nigeria . Challenges and Options*. (October). <https://doi.org/10.6007/IJARAFMS/v7-i1/2534>
- Goerzig, D., & Bauernhansl, T. (2018). Enterprise architectures for the digital transformation in small and medium-sized enterprises. *Procedia CIRP*, 67, 540–545. <https://doi.org/10.1016/j.procir.2017.12.257>
- Hamid, A. A., Razak, F. Z. A., Bakar, A. A., & Abdullah, W. S. W. (2016). The Effects of Perceived Usefulness and Perceived Ease of Use on Continuance Intention to Use E-Government. *Procedia Economics and Finance*, 35(October 2015), 644–649. [https://doi.org/10.1016/S2212-5671\(16\)00079-4](https://doi.org/10.1016/S2212-5671(16)00079-4)
- Hussain, A., Mkpojiogu, E. O. C., & Yusof, M. M. (2016). Perceived usefulness, perceived ease of use, and perceived enjoyment as drivers for the user acceptance of interactive mobile maps. *AIP Conference Proceedings*, 1761. <https://doi.org/10.1063/1.4960891>
- Indarto, S. L., Ratnaningsih, S. D. A., & Endah, S. M. D. (2018). *Efektivitas Kinerja Melalui Pemanfaatan Enterprise Resource Planning (ERP) dan Customer Relationship Management (CRM)*. Yogyakarta: Amara Books.
- Ketprapakorn, N., & Kantabutra, S. (2019). Culture development for sustainable SMEs: Toward a behavioral theory. *Sustainability (Switzerland)*, 11(9). <https://doi.org/10.3390/su11092629>
- Kim, H., Jang, S. Y., & Yang, K. H. (2016). *Analysis of the Determinants of Software-as-a-Service Adoption in Small Businesses : Risks , Benefits , and Organizational and Environmental Factors*. 00(00), 1–23. <https://doi.org/10.1111/jsbm.12304>
- Klaus, H., Rosemann, M., & Gable, G. G. (2000). What is ERP? *Information Systems Frontiers*, 2(August), 141–162.

- Mittal, S., Ahmad, M., Romero, D., & Wuest, T. (2018). A critical review of smart manufacturing & Industry 4 . 0 maturity models : Implications for small and medium-sized enterprises (SMEs). *Journal of Manufacturing Systems*, 49(June), 194–214. <https://doi.org/10.1016/j.jmsy.2018.10.005>
- Nawawi, M., & Yunia, D. (2021). Model Proses Bisnis ERP, Pengendalian Manajemen dan Keunggulan Kompetitif. *JURNAL AKUNTANSI DAN BISNIS : Jurnal Program Studi Akuntansi*, 7(1), 11–22. <https://doi.org/10.31289/jab.v7i1.4282>
- Safitri, T. A. (2020). *The Development of Fintech in Indonesia*. 436, 666–670. <https://doi.org/10.2991/assehr.k.200529.139>
- Sutarto, A. (2006). Becoming a true Javanese: A Javanese view of attempts at Javanisation. *Indonesia and the Malay World*, 34(98), 39–53. <https://doi.org/10.1080/13639810600650893>
- Valenc, G., & Alves, C. (2017). a Theroy of Power in Emerging Software Ecosystems Formed by Small-to-Medium Endterprises. *The Journal of Systems and Software*. <https://doi.org/10.1016/j.jss.2017.08.044>
- Vasiljeva, T., Shaikhulina, S., & Kreslins, K. (2017). Cloud Computing : Business Perspectives , Benefits and Challenges for Small and Medium Enterprises (Case of Latvia). *Procedia Engineering*, 178, 443–451. <https://doi.org/10.1016/j.proeng.2017.01.087>
- Wiranto, A., Toha, M., & Supriyadi, D. (2020). Prediksi Persediaan Minimum Dan Maximum. *Kolano: Journal of Multidisciplinary Sciences*, 1(01), 55–67.