THE ROLE OF DIGITAL READINESS IN THE RELATIONSHIP OF HRM PRACTICES AND MSMES PERFORMANCE

Lintang Ayuninggar[1], Diah Pramesti[2], Rosita Mei Damayanti[3], Endang Martini[4], Mehilda Rosdaliva[5]

[1,2,3]Universitas Sebelas Maret, Indonesia

Email: ayuninggarlintang@staff.uns.ac.id

Micro, small and medium enterprises in Indonesia run and managed mostly in traditional and conventional administration due to the limited digital literation and organizational management knowledge of the MSMEs. However, some of these MSMEs are scaling up by implementing management procedure and digital system.

They carry out human resource practice into their operation along with digital system into their routine. The development is driven mainly by the new environment brought by the COVID-19 pandemic which force business entities to be ready for digital operation. This study examines the effect of digital readiness in moderating the relationship of human resource management practice and MSME's performance.

We surveyed 357 MSMEs in various fields, including culinary, clothing, crafts, and services through questionnaire to collect the data. As predicted, digital readiness moderates the relationship between human resource management practice and MSME's organizational performance. However, the moderation effect is not as expected. Data suggests digital readiness negatively moderates the relationship of human resource management practice and MSME's organizational performance

INTRODUCTION

Indonesia has a large number of micro small and medium enterprises (MSMEs). Data from the Indonesia Statistic Bureau shows that more than 65 million units of MSMEs exist in Indonesia and contribute to more than 60% of the national gross domestic income. Further, more than 90% of business entities in Indonesia are MSMEs which absorb about 97% workforce.

MSMEs develop to be a sector with a great contribution to Indonesia economics system especially during crisis.

Indonesia MSMEs commonly applying traditional management system. Planning, book-keeping, hiring, paying, and evaluating are mostly done manually and conventionally. This might be imposed by lack of management knowledge, financial strength, and environmental support. However, COVID-19 pandemic forces this business entities to upgrade their operating system. The pandemic brought new challenges especially for MSMEs. Mobilization restriction policy disturb MSMEs traditional pattern in serving their customer. There were no face-to-face service and manual payment throughout the period. During the pandemic, digitalization is a solution for MSMEs to reach their buyers. The condition leads to a growing number of MSMEs using digital technology to communicate their product and received e-payment. Thus, the sector goes through digital transformation than ever before.

Digital transformation strategy is identified as the key factor affecting financial performance. Digital technologies, employee digital skills, and digital transformation strategies may drive digital transformation, which then improve the financial performance of SMEs (Teng, Wu, and Yang, 2022). Numerous studies also emphasize the importance of digitalization in moderating the relationship between different capabilities and SME performance (Supari & Anton, 2022). Considering the big challenges in the digital era, it is necessary to pay attention to how human resources can play an adaptive role in terms of digital business application.

LITERATURE REVIEW
Digital Readiness
Technology Maturity level/TRL (Pirola et al.,2019) which assess the implementation and adoption of technology digital readiness underline the importance of digital readiness in various contexts including education, health, manufacturing, and government. Digital readiness involves technological skills and a person's confidence in using technology in everyday life (Althubaiti et al.,2022). In addition, digital readiness can also be related to one's achievements, perceptions, and socio-emotional (Händel et al., 2020).

Company readiness to apply technology is crucial. Xie et al. (2022) emphasizes organizational readiness for digital innovation in influencing digital business model process in businesses. Therefore, organizational preparation is very important (Machado et al., 2019) to create organizational readiness (Montasser et al, 2023) in adopting digital innovation. Companies need to understand their maturity and readiness for digitalization to transform successfully (Machado et al., 2019). Swargiary (2024) suggests employee involvement, budget allocation, and integration of digital information systems are very important in increasing digital transformation readiness.

Human Resource Management (HRM) Practices
Human resource management practices significantly impact various aspects of an organization (Delaney and Huselid, 1996; Dousin et al, 2019), including employee satisfaction and performance (Dousin et al., 2019). HRM practices influence work engagement, safety, service quality, and overall organizational outcomes (Shantz et al. 2016) which later increase productivity and reduce employee turnover to retain employees with good performance over the long term (Dousin et al., 2019). It affects the work atmosphere, the spirit of work, and the company's productivity and efficiency. Satisfied employees will commit to maximum

contribution in achieving organizational goals.

Delaney & Huselid (1996) examined the impact of progressive HRM practices in company performance and outcome. Bello-Pintado (2015) found that HRM practices are related to manufacturing company performance. Implementing HRM practices increases production efficiency, product quality, and innovation. Further, Malik et al. (2017) show that employee involvement in HRM practices encourages the emergence of new ideas. Employees involved in decision-making and strategic planning have more motivation to provide creative ideas and solutions that benefit the company's success.

Micro, Small, and Medium Enterprises (MSMEs) Performance

Based on various studies, the performance of MSMEs is influenced by many factors. According to Much (2022), entrepreneurial competence has been identified as the main determining factor in MSME performance. Business owners' abilities, such as leadership style, entrepreneurial networks, and future performance measurement frameworks, are proven to moderate and improve their performance (Lie et al., 2023; Roxas, n.d.). Factors such as social capital, innovation, and capabilities contribute to the resilience and performance of MSMEs in facing economic challenges (Kussudyarsana et al., 2023). Further, the use of digitalization, information technology, and pandemic financial support becomes important in improving the performance of MSMEs during a crisis such as COVID-19 (Apriyanti & Yuvitasari, 2021; Gunartin et al., 2021; Nurcaya et al., 2022). A good firm performance represented by how the firm be able to generate profit, meet customer needs and desires, able to compete with competitors, and apply managerial system (Youndt et al.,1996).

METHODS

The dependent variable of this research is MSME's performance. Performance is normally evaluated by non-financial and financial aspects. While financial factor indicates performance that can be evaluate in the value of money, non-financial performance shows firm's performance which cannot be shown in the specific amount of money such as business reputation (Nguyen et al., 2021). However, micro, small and medium enterprises do not document their financial operation in standard and administrative method. Hence, we used perceived organizational performance in representing MSME's performance. Perceived organizational performance correlates positively with objective measure of organizational performance (Dollinger & Golden, 1992). To measure organizational performance of MSME, we adopted 6 items of Delaney & Huselid (1996).

The independent variable of this research is human resource management practice. Human resource management practice is a practice or system which convey the human resource management function (Agarwal et al., 2017). We employ 18 measurement items adopted from Youndt et al., (1996) to assess human resource management practice in the MSMEs. The questions address how MSMEs professionally recruit new workers, provide training, provide regulations for employees, provide salaries to employees with clear calculations, and assess employee performance.

We use digital readiness as the moderating variable of this study. Digital readiness describes a person's or organization's proficiency in implementing digital technology in accomplish particular target (Pirola et al., 2019; Soomro et al., 2020). We utilize 15 items of question which are combined from Parasuraman (2000) and Mahmud et al. (2023). The

measurement of this variable allows us to understand the level of digital readiness of MSMEs in using technology such as the use of smartphones, the MSME use of digital finance, the use of mobile banking, the MSME's use of online platforms to promote products, the use of peer-to-peer lending as a source of capital, and how MSME access financial institutions.

We employ the Partial Least Squares (PLS) Structural Equation Modelling (SEM) method using SmartPLS 3.0 to conduct hypothesis testing variables with dichotomous response (Yes/No). As research suggests that measurement model does not necessary in the case of variable with dichotomous response since it represents the real answer (Hair, 2012; Tomaken and Waller, 2005; Skrondal and Rabe-Hesketh, 2004), we execute the data analysis without measurement model assessment. The data for our analysis is collected through a questionnaire survey administered to 357 of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia.

RESULTS

Table 1 describes the characteristic of the respondents. Data shows the MSME's owners' personal profiles in the aspect of gender, age, and educational level. The sample is dominated by women MSME owners aged 31 – 40 years old and most of the respondents of this study is in the senior high school education level.

Table 1. Descriptive Statistic of Micro Small and Medium Enterprise

Descriptive		Frequency	Percentage
GENDER	MEN	140	39.22%
	WOMEN	217	60.78%
AGE	<20 y.o	11	3.08%
	20-30 y.o.	60	16.81%
	31-40 y.o.	129	36.13%
	41-50 y.o.	110	30.81%
	More than 50 y.o.	47	13.17%
EDU	not going to school	2	0.56%
	elementary	43	12.04%
	Junior HS	57	15.97%
	Senior HS	215	60.22%
	3-year diploma	25	7.00%
	Bachelor	13	3.64%
	Master and Doctoral	2	0.56%
GOODS CATEGORY	Craft	10	2.80%
	Fashion	44	12.32%
	Service	35	9.80%
	Food and Beverages	171	47.90%
	Trade	64	17.93%
	Others	33	9.24%
MSME CATEGORY	Micro Enterprises	356	99.72%
	Small Enterprises	1	0.28%

	Medium Enterprises	0	0.00%
REVENUE	Less than 2 million rupiah	142	39.78%
	2-5 million rupiah	176	49.30%
	5-10 million Rupiah	33	9.24%
	10-20 million rupiah	3	0.84%
	More than 20 million rupiah	3	0.84%

Further, most of the respondents are micro business operates in the food and beverages category reaching the number of 99.2% and 47.9% respectively with revenue range from two to five million rupiahs.

Table. 2 Digital Readiness Item Descriptive

No	Digital Readiness Item	Yes	No
1	We accept QRIS (online payment)	22.41%	77.59%
2	We use mobile/internet banking for our business	35.57%	64.43%
3	We accept wire payment	38.94%	61.06%
4	We employ online marketing	34.45%	65.55%
5	We sell our product through marketplace	23.81%	76.19%
6	We have banking loan account	27.73%	72.27%
7	We use peer-to-peer lending	8.12%	91.88%
8	Our business is closed to financial institution	26.33%	73.67%
9	We easily access business lending	28.01%	71.99%
10	We have bank account	76.47%	23.53%

11	We are familiar with smartphone	78.71%	21.29%
12	Our business is supported by good internet connection	81.79%	18.21%
13	We implement book-keeping application	25.77%	74.23%
14	Digital technology application enhances our revenue	47.34%	52.66%
15	Digital technology implementation increases our costumer number	47.06%	52.94%
	Average	**40.17%**	**59.83%**

Table 2 presents response by the MSMEs toward digital readiness observed variables. Data shows that almost 60% of the respondents do not implement digital technology into their business. Particularly on the items capturing direct implementation of digital technology in MSME such as "we accept QRIS (online payment)", "we apply online marketing", and "we sell our product through marketplace", most of the respondent give "no" answer as much as 77.59%, 65.55%, and 76.19% respectively.

Table 3. Reliability

	Cronbach's Alpha	Composite Reliability
Digital Readiness	0.895	0.909
HRM Practices	0.982	0.984
MSME Performance	0.896	0.920

The construct reliability assessed through Cronbach Alpha (CA) and composite reliability (CR). Table 3 presented CA and CR value of digital readiness (0.895, 0.909), HRM practices (0.982, 0.984), and MSME's performance (0.896, 0.920) respectively. The value of CA and CR are higher than 0.70 which considered to be in the acceptable range according to Hair (2012). Fornell Larcker test shows value greater than the correlations among the variables as presented in Table 4.

Table 4. Fornell Larcker

	Digital Readiness	HRM Practices	Moderating Effect	Organizational Performance
Digital Readiness	0.645			
HRM Practices	0.540	0.878		
Moderating Effect	0.351	0.436	1,000	
MSME Performance	0.569	0.590	0.086	0.811

Table 5. Structural Model

Construct	R2	Adj R2	Q2	f2
MSMEs Performance	0.494	0.490	0.299	0.216
				0.306

Table 6. Hypothesis Testing

	Beta	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)
Digital Readiness -> MSME Performance	0.397	0.403	0.044	8.985*
HRM Practices -> MSME Performance	0.493	0.494	0.035	14.180*
Moderating Effect -> MSME Performance	-0.267	-0.269	0.031	8.551*

* Sig. 0.000

Data suggest hypotheses support in the proposed model of the study. Table 6 presents significance value of 0.000 for every path. Result suggests that both HRM practice and digital readiness are positively related to MSMEs performance. As predicted, digital readiness moderates the relationship between HRM practice and MSME performance. However, unexpectedly digital readiness negatively moderates the relationship.

DISCUSSION AND ANALYSIS

Digital readiness describes the alacrity of an entity to implement digital technology, which involves digital competence, digital autonomy, and innovative work behavior. The determinants of the MSMEs' readiness include budget constraints, organizational capacity, the MSMEs' leadership, and MSMEs' atmosphere (Mahmoodi et al., 2022). Digital readiness is critical to improve customer experiences, simplifying operating systems, and creating new business models (Warner & Wäger, 2019).

Most of the respondents in this study are in the micro-enterprise category in the revenue range of two to five million rupiahs. In terms of education, most respondent education background is senior high school with range age between 31-40 years old. By the time they were in school, digital learning and resources might not be as prominent as today. This may influence the level of technology acceptance. Moreover, available infrastructure supporting digital technology is relatively limited in developing countries. Unfortunately, government tends not to support SMEs financially (Shafi., et al., 2022). Even though digital technology is benefitting, such as saving time, reducing transaction costs, and enhancing efficiency (Abdennebi, 2022), the adoption rates are still low due to many challenges occur (Alalwan et al, 2017). MSMEs financial constraints affect their decision to invest in digital-related devices and employee competency training. As MSMEs suffer from various constraints, such as

financial strength and supporting means, many factors hinder employee digital readiness to meet the expected level.

CONCLUSION

In conclusion, HRM practice and digital readiness influence MSMEs performance. HRM practices allows organization manage operation in more effective and efficient procedure. Managing people in the organization (Pfefer, 1994) in the activities of maintaining member participation, empowering employee, training, and compensating (Pfefer and Cohen, 1984) will improve organization performance.

Human capital development, innovation and technology adoption, access of financing, competitiveness, infrastructure, and regulation are challenges for small and medium enterprise in enhancing performance (Wan Hooi and Sing Ngui, 2014). Further, while digital readiness is important to MSMEs, there are many factors contribute to readiness level of digital enactment in the organization, namely digital skill and digital infrastructure. Lack of skill and infrastructure tend to hinder digital technology implementation optimally. Hence it is crucial for MSMEs to be able to address challenge occur in digital technology related issue so that they can improve their performance. Future research may include digital competence and also digital training and support for explaining digital readiness in the MSMEs context.

REFERENCE

Abdennebi, H. Ben. (2023). M-banking adoption from the developing countries perspective: A mediated model. *Digital Business*, *3*(2). https://doi.org/10.1016/j.digbus.2023.100065

Agarwal, S., Chawla, G., & Singh, R. (2017). Innovations in human resource practices: Measurement development and validation. International Journal of Innovation Sci- ence, 9(4), 396–416. doi:10.1108/IJIS-05-2017-0046.

Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of M-banking by Jordanian bank customers: Extending UTAUT2 with trust. International Journal of Information Management, 37(3), 99–110. https://doi.org/10.1016/j.ijinfomgt.2017.01.002

Althubaiti, A., Tirksstani, J., Alsehaibany, A., Aljedani, R., Mutairii, A., & Alghamdi, N. (2022). Digital transformation in medical education: factors that influence readiness. Health Informatics Journal, 28(1), 146045822210755. https://doi.org/10.1177/14604582221075554

Apriyanti, H. and Yuvitasari, E. (2021). The role of digital utilization in accounting to enhance msmes' performance during covid-19 pandemic: case study in semarang, central java, indonesia., 495-504. https://doi.org/10.1007/978-3-030-79725-6_49

Bello-Pintado, A. (2015). Bundles of hrm practices and performance: empirical evidence from a latin american context. Human Resource Management Journal, 25(3), 311-330. https://doi.org/10.1111/1748-8583.12067

Delaney, J. T., & Huselid, M. A. (1996). The Impact of Human Resource Management Practices on Perceptions of Organizational. In *Source: The Academy of Management Journal* (Vol. 39, Issue 4).

Dollinger, M. J., & Golden, P.A. 1992. Interorganizational and collective strategies in small firms: Environmental effects and performance. Journal of Management, 18:695-715.

Dousin, O., Collins, N., & Kler, B. (2019). Work-life balance, employee job performance and satisfaction among doctors and nurses in malaysia. International Journal of Human

Resource Studies, 9(4), 306. https://doi.org/10.5296/ijhrs.v9i4.15697

Gunartin, G., Pratikto, H., & Sopiah, S. (2021). Financial support on smes impact of the covid 19 pandemic. Kontigensi Jurnal Ilmiah Manajemen, 9(2), 682-689.

Hair, J.F.; Sarstedt, M.; Ringle, C.M.; Mena, J.A. An assessment of the use of partial least squares structural equation modeling in marketing research. *J. Acad. Mark. Sci.* **2012**, *40*, 414–433.Pirola, F., Cimini, C., & Pinto, R. (2019). Digital readiness assessment of Italian SMEs: A case-study research. *Journal of Manufacturing Technology Management, 31*(5), 1045–1083.

Kussudyarsana, K., Maulana, H., Maimun, M., Santoso, B., & Nugroho, M. (2023). The role of social capital, innovation, and capabilities on msmes' resilience in economic hard times. Jurnal Manajemen Bisnis, 14(1), 72-89. https://doi.org/10.18196/mb.v14i1.15887

Lie, D., Sofyan, S., Tanjung, S., Chandra, E., & Silitonga, H. (2023). The role of entrepreneur networking in moderating the relationship of leadership style to msme performance. International Journal of Science Technology & Management, 4(1), 61-68. https://doi.org/10.46729/ijstm.v4i1.713

Machado, C., Winroth, M., Carlsson, D., Almström, P., Centerholt, V., V., & Hallin, M. (2019). Industry 4.0 readiness in manufacturing companies: challenges and enablers toward increased digitalization. Procedia Cirp, 81, 1113-1118. https://doi.org/10.1016/j.procir.2019.03.262.

Mahmoodi, A., Hashemi, L., Tahan, M., Jasemi, M., & Millar, R. (2022). Design a technology acceptance model by applying system dynamics: an analysis based on key dimensions of employee behavior. Journal of Modelling in Management, 18(5), 1454-1475. https://doi.org/10.1108/jm2-12-2021-0306

Mahmud, K., Joarder, M. M. A., & Sakib, K. (2023). Customer Fintech Readiness (CFR): Assessing customer readiness for fintech in Bangladesh. *Journal of Open Innovation: Technology, Market, and Complexity*, *9*(2), 100032.

Malik, A., Boyle, B., & Mitchell, R. (2017). Contextual ambidexterity and innovation in healthcare in india: the role of hrm. Personnel Review, 46(7), 1358-1380. https://doi.org/10.1108/pr-06-2017-0194.

Montasser, D., Prijadi, R., & Balqiah, T. (2023). The mediating effect of it-enabled dynamic capabilities and organizational readiness on the relationship between transformational leadership and digital business model innovation: evidence from indonesia incumbent firms. Sage Open, 13(2). https://doi.org/10.1177/21582440231181588

Much, M. (2022). Entrepreneurship competence as a determinant of msme performance: literature study. Business and Entrepreneurial Review (Ber), 22(1), 47-62. https://doi.org/10.25105/ber.v22i1.13155

Nguyen, P. V., Huynh, H. T. N., Lam, L. N. H., Le, T. B., & Nguyen, N. H. X. (2021). The impact of entrepreneurial leadership on SMEs' performance: The mediating effects of organizational factors. Heliyon, 7(6), e07326. doi:10.1016/j.heliyon.2021. e07326.

Nurcaya, I., Rahyuda, I., Giantari, G., & Ekawati, N. (2022). The effect of information technology on the performance of msmes during the covid-19 pandemic. International Journal of Social Science and Business, 6(2), 262-267. https://doi.org/10.23887/ijssb.v6i2.44260

Parasuraman, A., 2000. Technology readiness index (Tri): a multiple-item scale to mea- sure readiness to embrace new technologies. J. Serv. Res. 2 (4), 307–320. https://doi. org/10.1177/109467050024001 Soomro, M. A., Hizam-Hanafiah, M., & Abdullah, N. L.

(2020). Digital readiness models: A systematic literature review. *Compusoft, 9*(3), 3596–3605.

Pfefer, J, 1994. Competitive advantage through people. Boston: Harvard Business School Press

Pfefer, J., & Cohen, Y. 1984. Determinants of internal labor markets in organizations. Administrative Science Quarterly, 29: 550-572

Roxas, H. Institutions, strategic posture and performance of micro, small and medum enterprises.. https://doi.org/10.26686/wgtn.16968253.v1

Shafi, M., Liu, J., & Ren, W. (2020). Impact of covid-19 pandemic on micro, small, and medium-sized enterprises operating in pakistan. Research in Globalization, 2, 100018. https://doi.org/10.1016/j.resglo.2020.100018

Shantz, A., Alfes, K., & Arevshatian, L. (2016). Hrm in healthcare: the role of work engagement. Personnel Review, 45(2), 274-295. https://doi.org/10.1108/pr-09-2014-0203.

Skrondal, A., & Rabe-Hesketh, S. (2004). Generalized latent variable modeling: Multilevel, longitudinal, and structural equation models. CRC Press.

Supari, S. and Anton, H. (2022). The impact of the national economic recovery program and digitalization on msme resilience during the covid-19 pandemic: a case study of bank rakyat indonesia. Economies, 10(7), 160. https://doi.org/10.3390/economies10070160

Swargiary, K. (2024). Digital transformation and economic growth in post-pandemic india: a comprehensive study.. https://doi.org/10.21203/rs.3.rs-3464759/v2

Teng, X., Wu, Z., & Yang, F. (2022). Research on the relationship between digital transformation and performance of SMEs. *Sustainability*, *14*(10), 6012.

Tomarken, A. J., & Waller, N. G. (2005). Structural equation modeling: Strengths, limitations, and misconceptions. Annual Review of Clinical Psychology, 1, 31-65.

Wan Hooi, L., & Sing Ngui, K. (2014). Enhancing organizational performance of Malaysian SMEs: The role of HRM and organizational learning capability. International Journal of Manpower, 35 (7), 973-995. Doi: 10.1108/ijm-04-2012-0059

Warner, K. S. R., & Wager, M. (2019). Building Dynamic Capabili-ties for Digital Transformation: An Ongoing Process of Strategic Re-newal. Long Range Planning, 52(3), 326–349.

Xie, X., Zhang, H., & González-Tejero, C. (2022). How organizational readiness for digital innovation shapes digital business model innovation in family businesses. International Journal of Entrepreneurial Behaviour & Research, 29(1), 49-79. https://doi.org/10.1108/ijebr-03-2022-0243.

Youndt, M. A., Snell, S. A., Dean, J. W., & Lepak, D. P. (1996). Human Resource Management, Manufacturing Strategy, and Firm Performance. In *Source: The Academy of Management Journal* (Vol. 39, Issue 4).

hp/ubmj/article/ view/2791