JURNAL ISLAM DAN MASYARAKAT KONTEMPORARI
© PENERBIT UNIVERSITI SULTAN ZAINAL ABIDIN
ISSN 1985-7667 • e-ISSN: 2289-6325
https://doi.org/10.37231/jimk.2021.22.2.597

PENERBIT
Universiti Sultan Zainal Abidin

Jurnal Islam dan Masyarakat Kontemporari JIMK
Journal of Islam and Contemporary Society

https: / / journal.unisza.edu.my / jimk

[IMPACT OF DIGITAL ADOPTION IN RURAL SME OF TAMAN NEGARA, MALAYSIA]

MUHAMMAD SYAHRUL DEEN AHMAD ROSLI[1]
MOHD AFANDI MAT RANI[1]
MOHD IZZAT AMSYAR MOHD ARIF[1]
HASIF YAHAYA[1]

[1] Academy of Contemporary Islamic Study
Universiti Teknologi MARA, 40450 Shah Alam, Selangor

*Corresponding Author: syahruldeen@uitm.edu.my

Received Date: 15 May 2021 • Accepted Date: 15 June 2021

Abstract

The issues and challenges of entrepreneurship especially after the 2019 pandemic saw a shift towards digital entrepreneurship. Whereas in such a transition, it requires a change approach that encompasses organizational changes, priorities, expertise, practices as well as business management values referred to as digital transformation. Yet digital transformation requires cost, role, understanding, awareness, and complex entrepreneurial experience. It also has a wide range of backgrounds and capabilities in the effective adoption of digital technology and business digitalization. This problem needs to be examined and studied because SME represent most business bodies in Malaysia. Highlights of previous studies found a lack of focus on the integration of digital platforms in the business digitalization, particularly SMEs. this study aims to look at the factors and patterns of desire for the use of digital platforms in the business digital adoption (DA) in SME entrepreneurship. Therefore, this study aims to bridge the gap and explore new fields in the digitization of the business digitalization of rural SME entrepreneurship (RE). This study uses a sampling technique through statistical power strength with G-Power application. The study found that RSME have started using internet platforms in their business operations. However, they do not yet have the preparedness in terms of costs and risks that may arise from the development of their infrastructure and digitalization upgrade management. This study suggests further research be done with a more comprehensive triangulation methodology, as well as broader study subjects, to see and evaluate the capabilities of entrepreneurs and their business digitization in more depth, as well as to assist them in a more effective digitalization strategy and development.

Keywords: Rural, SME, Digitalization, Technology Adoption, Taman Negara.

Cite as: Muhammad Syahrul Deen Ahmad Rosli, Mohd Afandi Mat Rani, Mohd Izzat Amsyar, Mohd Arif, Hasif Yahaya. 2021. [Impact of Digital Adoption in Rural Sme of Taman Negara, Malaysia]. *Jurnal Islam dan Masyarakat Kontemporari* 22(2): 163-172.

INTRODUCTION

Since the advent of the IR 4.0 industrial revolution, the demand for the use of internet platforms in Malaysia has been increasing, as they are inclusive and easily accessible. The adoption of technology can help entrepreneurs reach digital market segments. It can help to improve the efficiency of the back-end operating system, to carry out more efficient risk management. Digital systems can be a business platform for rural SMEs (RSME) that require essential marketing capabilities and infrastructure. Digital technology is also capable of enhancing business competitiveness and giving small traders the values of competition in large-scale industries. Among the many seen in previous studies is the impact of the use of digital technology on RSME. Taman Negara Pahang, Malaysia is one of the rural locations that have the prospects and opportunities for a sustainable economic generation with biodiversity and tourist destinations. However, since the beginning of the pandemic that hit in 2019 until now, the economic sector has slowed down and the most critical is the tourism and agriculture sectors, which include rural areas including Kuala Tahan, Taman Negara in Malaysia. This study will look at the impact of the use of digital technology by RSME and its impact on the development of a sustainable and capable business digitalization to be competitive post-pandemic.

BACKGROUND

This study focuses on the analysis of digital technology adoption factors in small and medium entrepreneurs in the interior through the synergy of digital business platforms that were given less attention in post-pandemic studies 2019. This is because, SME entrepreneurship is the majority of national business bodies covering 693,670 registered businesses in Malaysia (SME, 2020), with the high risks and challenges of the digital economy, SMEs need to be quick to adapt and be able to meet the challenges of the digital economy with the support of sustainable and effective technology and competitiveness. In the challenges of industry 4.0 that transform the conventional economic landscape to a digital economy, SMEs face challenges in competition and the instability of the entrepreneurial ecosystem occurs in obtaining capital, guidance, risk control, marketing, human resources, and other support systems. Their businesses also often face the problem of lack of capital, skills, capabilities, and resources to manage business finances with proper and systematic techniques.

Meanwhile, in line with the development of industry 4.0, the digital platform is expected to provide high -prospect alternative financing to SME entrepreneurs who are the most important economic unit in the country. This is because transactions through the web have a significant impact on entrepreneurial growth in the US and China, this is because based on higher financial inclusion factors and more dynamic operating speed than bank loans (Pollari 2016; Philippon 2016; Bofondi 2017; Lee et al., 2018). Micro and small businesses have always played an important role in the economy. Ironically, traditional financial institutions are not easy to lend to them because the amount they need is small and their activities are inconsistent. the typical loan application process also requires a fairly complete list of documentation with structured administration, it requires high management costs, and micro-entrepreneurs are

relatively unable to obtain it (Greenbank, 2000). With such problems, Advances in technology have the potential to be an instrument for SMEs to obtain financial assistance and save business costs through business digitalization digitization. In addition, the development of critical business digitalizations especially RSME in Malaysia requires the development of competitive instruments through technology so as not to lag behind the masses (Roberts, 1968) and comprehensive financial access. This can be achieved with the application of financial technology (Lafuente et al, 2019) as the emergence of industry 4.0 which is the zeitgeist of economic development nowadays. Therefore, this study will explore how technology gives impact to specific RSME entrepreneurs in Taman Negara, Pahang as the locality of this study.

DIGITAL DISRUPTION AND RSME

The rapid development of the digital economy has been a major agenda in industrial development (Gierlich et al., 2019). Simultaneous advances in the Internet of Things (IoT), Big Data analytics, cloud computing, and artificial intelligence (AI) will fundamentally change economic activity in terms of operations and culture of users, governments, and societies facing these challenges, namely which is conducive to the deployment of network and infrastructure services for traders, especially for SMEs to compete through digital platforms (Sidorenko & Khisamova, 2020). While business owners and entrepreneurs also need to be mentally prepared, management, business operations, and their approach in business. The five cores are the catalysts of digitization, especially in the agricultural sector (Kosareva et al., 2019; Panetto et al., 2020; Ridha & Wahyu, 2017), namely, 1. Digitalization of technological and production processes related to multi-purpose internet platforms, robotization, and production automation, etc. This is the core to enhance the operational capabilities of businesses that can be in digital competition. But, the digitization of this process is a very difficult level to achieve without a central ecosystem that operates business platforms within the internet. Without a digital platform, it is very expensive and has risks, especially for SMEs (Guo et al., 2020). 2. Development of digital platforms that can complete transactions and operations between industry and agricultural production to enter the multidimensional space of digital ecosystems (Fuller & Moran, 2001; Hakim Ghazali, 2018), 3. Development of digital management systems in business operations and marketing to optimize the composition and information resource structure, provide open access, and develop tools that ensure the implementation of a series of tasks for production management systems (Peltoniemi & Vuori, 2004), 4. Develop information processing infrastructure, improve communication channel reliability and information transfer speed, information technology availability and communication (Qushem et al., 2017), and 5 Enhancing digital capabilities in information interaction with all business systems and services units, as well as the widespread use of e-commerce (Devasena, 2014; Yazdanifard & Li, 2014). Therefore, these five core competencies of digitalization will be used as predictors of RSME profit performance, as shown in Table 1.0 below:

No	Question	Theme	Code
1	Internet business platform can bring advantages to my business	Usefulness	**DA1**
2	I am used to utilizing internet platforms in various business operations.	Utilizing in business	**DA2**
3	I use internet platform as one of the important strategic management of business	Platform	**DA3**
4	I am willing to enhance digital capabilities to my business operation regardless of cost and risks.	Cost & risk	**DA4**
5	I interact with each market unit through a digital platform optimally.	Interaction	**DA5**
6	My business is thriving with the advent of the internet platform.	Performance	

Table 1.0: Coding of digital adoption predictors of RSME

With five predictors, this study can produce three hypotheses related to the adoption of technology (DA) in RSME, namely:

Ho1: Internet platforms have been used by RSME to improve their operational effectiveness and business performance- significant

Ho2: The readiness of RSME to develop digital business digitalization platforms in their business operations affects the business performance. – not significant

Ho3: The adoption of digital business digitalization RSME affects the performance of their business.- Significant.

METHODOLOGY AND SAMPLING

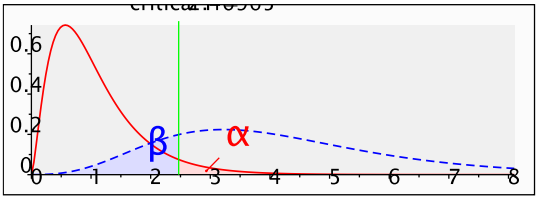
This study is in the form of exploratory factor analysis. This study is descriptive statistical with a quantitative approach through factor validation analysis. This method of analysis allows the researcher to generally study the initial model in a series of interrelated factors whose dependence relationships in a set of constructs, represented by several variables while considering measurement errors (Hill, 1998). The data collection method was made through a questionnaire with seven-point Likert scale closed-ended questions. This type of question is easy to analyze and pleasant for the respondent to answer respondents are only required to choose one of several answers given. Questionnaire type research is a popular form of research used among researchers because questionnaires can cover a wide range of fields and can be easily designed (Etikan & Babatope, 2019). Through questionnaires information relating to respondents can be kept confidential. This allows the respondent to answer the question comfortably without feeling worried or anxious (Glasow, 2005).

The sampling of this study was determined by a simple random sampling method, using a survey form through hardcopy copies distributed to RSME identified in several rural and sub-urban areas in Selangor covering the districts of Kuala Selangor, Sabak Bernam, and Hulu Selangor. Only these three areas are targeted in the research because of two factors, it meets the

characteristics of the locality and type of industry required, as well as time and budget constraints by the researcher. While setting the sampling amount, the statistical strength method will be used with G*Power software version 3.1.9.4. Survey forms are distributed via google forms, emails, and phone calls.

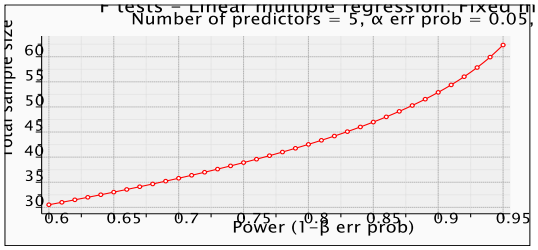
A Priori Power Analysis

The statistical strength of hypothesis testing is the probability of detecting an effect if there is a true effect and correlation (Erdfelder et al., 1996). Strength analysis can be calculated and reported for survey statistical research to gain as much confidence as possible, against the conclusions drawn from the study results. It can also be used as a tool to estimate the number of observations or sample sizes needed to detect effects in surveys and experiments (Erdfelder et al., 2009). It provides accurate sampling values with estimates of the co-effect size of the obtained power, the strength of the correlation relationship between one variable with another variable, as well as obtaining significant sampling results. The generally accepted minimum power level is 0.80 (Cohen, 1988).



Graph 1.0: Curve of power analysis by G* Power 3.1.

In graph 1.0 above is the result of power analysis by G* Power 3.1.9.4, with setting mode to F test, "*Linear Multiple Regression Fixed Model, R^2 deviation from zero*", an alpha = .05 and minimal suggested power = 0.80. With the critical F stated at value F= 2.46965, this analysis using a Cohen's d parameter (1988), effect size calculation stated for large value in multiple regression (0.35) as conclusions based on the level of consistency of R-Square values studies found that the impact size for entrepreneurship areas was relatively having a higher than expected (Connelly et al., 2010). The projected sample size needed with this effect size is a minimum of approximately n=43 for the study's sampling within-group comparison, as shown in graph 1.2 below:



Graph 1.2: Range value plots power with total sample size.

As shown in graph 1.2 above, Power (1-b err prob) was set at 0.8 as suggested by Cohen (1988) and the minimum sampling set was at the sum of n = 43 par with power achieved 0.8. Thus, our proposed sample size (n=105) will be more than adequate for the main objective of this study and should also allow for expected attrition (Erdfelder et al., 1996).

COEFFICIENT ANALYSIS

In obtaining the data, this study used simple random sampling. This type of sampling is ideally used to identify phenomena that occur in a group of people (Groves et al., 2011). The method of exploring this factor is made through multiple linear regression. Survey forms are distributed via google forms, emails, and phone calls, from 2020 to January 2021. Before the coefficient analysis of each variable was made, this study validated the study questionnaire instrument with Cronbach's Alpha value as suggested by Tavakol & Dennick, (2011). The resulting Alpha value is 0.886, which is more than the value of 0.60 as suggested by Nunally and Bernstein (1994), also more than 0.7 as suggested by Carmines and Zeller (1979). With alpha validity, this study can be continued with the analysis of the coefficients of the variables, as shown in Table 2.0 below:

Table 2.0: Cronbach's Alpha

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.886	.886	6

With a high alpha rate (α = 0.886), it means that there is high reliability of predictors effect towards dependent variable (performance of RE), which indicates sufficient internal

consistency. In table 2.1, R^2 shows a high value of 0.577. According to Cohen (1992), the value of R2 .12 and below indicates low, between the value of 0.13 to 0.25 indicates medium, 0.26 or above indicates a high effect measure (Cohen, 1992). Thus, it can be proved that the six instrument codes have a significant impact on the regression model and fit the observed data on the overall entrepreneurial performance of RE, with a significant value (R^2=0.436). Thus, the data accuracy results show that the constructed instrument is reliable and can be extended to hypothesis testing analysis, as shown in Table 2.1 below:

Table 2.1: R-Squared (R^2) Coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.660[a]	.436	.407	.891

a. Predictors: (Constant), DA5, DA3, DA1, DA4, DA2

With sufficient R^2 values, the analysis was continued with ANOVA coefficient values, overall, the constructed framework model was significant with a value of 0.000, as below 0.05 as suggested by Cohen (1992). The results of this analysis indicate that the constructs of RE element variables in this study significantly influence RE performance, as shown in Table 2.2 below:

Table 2.2: Analysis of Variance ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	60.168	5	12.034	15.159	.000[b]
Residual	77.794	98	.794		
Total	137.962	103			

a. Dependent Variable: Performance

b. Predictors: (Constant), DA5, DA3, DA1, DA4, DA2

In the analysis of the Coefficients variables conducted on each of the variables, the significant value was at p =, 0.05 as suggested by Cohen (1992). From the coefficient analysis conducted on each variable, there are only two variables that significantly affect the performance of RE entrepreneurs, namely DA3 (online platform as important strategic management) at a value of sig.= 0.008, and DA5 (optimizing interaction with each market unit through a digital platform) at a sig= 0.02), as shown in Table 2.3 below:

Table 2.3: Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.141	.548		2.082	.040

DA1	.105	.099	.107	1.052	.295
DA2	-.142	.121	-.147	-1.179	.241
DA3	.300	.111	.262	2.697	.008
DA4	.147	.117	.147	1.256	.212
DA5	.386	.124	.400	3.108	.002

a. Dependent Variable: Performance

Hypothesis Result

This study has six variables derived from previous study recommendations (Ulezko et al., 2019). Validity analysis of the study instrument was conducted with an alpha (α) value of 0.886, sufficient for multiple linear regression analysis to be performed. By obtaining a sufficient value of R-square consistency that is at = 0.436, shows that the five independent variables of this study have a strong influence on the dependent variable that is performance. Meanwhile, through the analysis of the coefficients, there are only two predictors that are significant in influencing the performance of RE, namely the most significant start is; 1. The use of online platforms in strategic management and, 2. optimizing interaction with each market unit through a digital platform, as shown in Table 3.0 below:

Table 3.0: Summary Analysis

No	CODE	SIG.	DA Theme	STATUS
1	DA1	.295	Usefulness	Not Supported
2	DA2	.241	Utilizing in business	Not Supported
3	DA3	.008	Platform	**Supported**
4	DA4	.212	Cost & risk	Not Supported
5	DA5	.002	Interaction	**Supported**
6	Performance	.040		(constant)

Thus, from the findings of the analysis of the study, researchers can conclude based on three hypotheses, namely:

Ho1: Internet platforms have been used by REs to improve their operational effectiveness and business performance- significant

Ho1 was significant at the ANOVA value of sig = 0.000, and with the value of F = 15.159, which is higher than the critical F stated at the value of F = 2.46965. With a p-value lower than 0.05 and an F value higher than critical F, this could indicate that REs have used internet platforms to significantly improve their operational capabilities and business performance.

Ho2: The readiness of REs to develop digital business digitalization platforms in their business operations affects the business performance. – not significant

Ho2 was insignificant due to the value of DA 4 exceeding 0.05 (p = 0.212). this indicates that RE's readiness in upgrading digital-based infrastructure and management does not have a significant impact on their performance. These findings also indicate that RE views the costs and risks of digitalization as a challenge in upgrading digital capabilities and facilities.

Ho3: The adoption of digital business digitalization RE affects the performance of their business.- Significant.

Ho3 was significant with a high Cronbach's Alpha value (α = 0.886), while the data consistency value was also at an adequate rate (R2 = 0.436), which was higher than required at a minimum rate of 0.26 or above that indicates a high effect measure. While the p-value of the ANOVA is at sig = 0.000.

CONCLUSION

This study looks in general terms at the digitalization of the RSME business digitalization and its impact on business performance. The five cores of digitization were derived from past research sources and served as elements of the forecasting assessment of RSME business performance. The sampling method is simple random sampling. A total of 105 respondents answered online and the google form platform from 2020 to January 2021. This factor exploratory study instrument was validated with Cronbach's Alpha value, while data consistency was accessed with R-square value. The results of the coefficient analysis showed that the constructed framework had a significant effect through ANOVA analysis. The results of the study found that RSME have started using internet platforms in their business operations. However, they do not yet have the preparedness in terms of costs and risks that may arise from the development of their infrastructure and digitalization upgrade management. This study suggests further research be done with a more comprehensive triangulation methodology, as well as broader study subjects, to see and evaluate the capabilities of entrepreneurs and their business digitization in more depth, as well as to assist them in a more effective business digitalization strategy and development.

REFERENCES

Cohen, J. 1992. A Power Primer Psychol Bull 112:155-159. Psychological Bulletin, 112(July), 155–159. http://www2.psych.ubc.ca/~schaller/528Readings/Cohen1992.pdf

Connelly, B. L., Ireland, R. D., Reutzel, C. R., & Coombs, J. E. 2010. The power and effects of entrepreneurship research. Entrepreneurship: *Theory and Practice* 34(1): 131–149.

Devasena, C. L. 2014. Impact Study of Cloud Computing on Business Development. Operations Research and Applications: *An International Journal (ORAJ)*: 1(1): 1–7.

Erdfelder, E., Faul, F., & Buchner, A. 1996. GPOWER: A general power analysis program. *Behavior Research Methods, Instruments, and Computers* 28(1): 1–11.

Erdfelder, E., FAul, F., Buchner, A., & Lang, A. G. 2009. Statistical power analyses using

G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods* 41(4): 1149–1160.

Etikan, I., & Babatope, O. 2019. A Basic Approach in Sampling Methodology and Sample Size Calculation. *MedLife Clinics*, 1:1006.

Fuller, T., & Moran, P. 2001. Small enterprises as complex adaptive systems: A methodological question? *Entrepreneurship and Regional Development* 13(1): 47–63.

Glasow, P. 2005. *Survey Research Reading*. t.tp.: t.pt.

Guo, H., Yang, Z., Huang, R., & Guo, A. 2020. The digitalization and public crisis responses of small and medium enterprises: Implications from a COVID-19 survey. *Frontiers of Business Research in China* 14(1): 1–25.

Hakim Ghazali, N. 2018. Awareness and Perception Analysis of Small Medium Enterprise and Start-up Towards FinTech Instruments: Crowdfunding and Peer-to-Peer Lending in Malaysia. *International Journal of Finance and Banking Research* 4(1): 13.

Hill, R. 1998. What Sample Size is "Enough" in Internet Survey Research? Interpersonal Computing and Technology: *An Electronic Journal for the 21st Century* 6(3–4): 1–10.

Peltoniemi, M., & Vuori, E. 2004. Business ecosystem as the new approach to complex adaptive business environments. *Proceedings of EBusiness Research Forum*, hlm. 267–281.

Qushem, U. Bin, Zeki, A. M., & Abubakar, A. 2017. Successful Business Intelligence System for SME: An Analytical Study in Malaysia. *IOP Conference Series: Materials Science and Engineering*, 226(1).

Yazdanifard, R., & Li, M. T. H. 2014. The Review of Alibaba's Online Business Marketing Strategies Which Navigate them to Present Success. *Global Journal of Management And Business Research* 14(7): 33–39.