Digital Marketing Usage among Small Rural Businesses in Malaysia: An Exploratory Factor Analysis (EFA)

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Center for Technopreneurship Development (CTED), Faculty of Technology Management and Technopreneurship,Universiti Teknikal Malaysia Melaka(UTeM)
Email: amin@utem.edu.my

Abstract
The purpose of this study is to evaluate the elements of digital marketing usage among small rural businesses using the EFA procedure. Furthermore, this study has developed and validated instrument of digital marketing usage in the context of rural businesses in Malaysia. This study utilized cross sectional research design. Quantitative data was collected as feasibility study data from 30 rural businesses in the state of Melaka, Malaysia, using self-administered survey. This study has finalized the instrument to six items with one dimension. This study has discussed the procedure to run EFA analysis for Digital Marketing Usage construct and calculated the value for Cronbach's Alpha. It is suggested that future studies to look into different context in examining Digital Marketing Usage construct such among technology based business and urban small business.
Keywords: Exploratory Factor Analysis (EFA), Digital Marketing Usage (DM), Small Rural Business

Introduction
Although the government has provided support and assistance, many new ventures among small rural businesses failed within the first three years of operations. It was found that the awareness level on entrepreneurship has increased, however, the ability to manage and sustain the businesses among the rural entrepreneurs were not encouraging (Bernama, 2018).
The high failure rate among new ventures was due to their weaknesses in accessing resources, low level of initial capital, low business market, inability to grow the business and lack of skill to develop business networking through online and offline platform with customers and experienced industry players related to their products and services (Ridzwan et al., 2017). This failure was also due to their lack of exposure in utilizing internal and external resources from various sources. Furthermore, they also lack the ability to market their products using the online platform (Hazim, 2021).

Literature Review

Digital marketing usage among small rural businesses is very crucial for them to be more competitive advantage in the market especially during the pandemic crisis (Rohayah et al., 2019). This study focuses on small rural entrepreneurs who utilize online platform to market their products and services. It also raises a better understanding of the effects of digital business on the performance of the rural entrepreneurs. In this era of Industrial Revolution 4.0 and the volatility of the environment, small rural businesses are facing many challenges related to the usage of digital marketing platform in their businesses. Rural entrepreneurs need to be able to tackle the issues, in order to grow their businesses through the use of digital application.

Digital Technology allows small rural businesses to be more creative in promoting their products and services and to network with their clients through online platform (Kelalan & Cheuk, 2017). Therefore, the awareness among small rural businesses in using the digital marketing platform is important in order to reduce cost, increases productivity and enhance customer relationship. As a result, small businesses will be able to grow and compete in the market.

The elements of the usage of digital platform which have been discussed in the literature are in terms of the level of importance of digital marketing (Leticia, 2021), telecommunication infrastructures ready (Melović, 2020), response to the current trend in digital marketing (Francisco, 2019), usage of social media platform (Anshu Saxena Arora, 2019), updating social media content regularly and systematically (Victor, 2017) and using electronic transactions in sales transaction (Abdul Talib, 2019).

Methodology

This study used a cross-sectional research design to develop a valid and reliable measure for Digital Marketing Usage construct particularly in the context of rural businesses in Malaysia. The target population for this study is the rural business entrepreneurs in Malaysia. The rural business entrepreneurs were selected because this study will examine the effects of digital marketing usage on their business performance. This study then collected survey data from the entrepreneurs near the Rural Community Centers who are willing to participate in this study in the state of Melaka, Malaysia. This study randomly selected 30 rural business entrepreneurs as the pilot study respondents. Data was collected through a self-administered questionnaire.

Research Instrument

The items utilized in this study have been adapted and modify from the study by (Anshu, 2019; Abdul Talib, 2019; Francisco Diez-Martin, 2019; Leticia, 2021; Melovic, 2020; Victor, 2017). This study examines the elements of the usage of digital platform which are the level of importance of digital marketing, telecommunication infrastructures ready, response to the current trend in digital marketing, usage of social media platform, updating social media content regularly and systematically and using electronic transactions in sales transaction. The items are shown in Table 1 below. 10-point interval scale was used in the questionnaire to measure the response from the respondents of this study.

Table 1
List of items measuring Digital Marketing Usage

Item Code	Item
DM1	• Internet and Digital Marketing are very important to run this business.
DM2	• This business has good telecommunication technology infrastructure and hardware to access internet easily.
DM3	• We use digital marketing as the response to the current trend in product marketing.
DM4	• We use digital marketing resources such as website, e-mail and social media platform such as Facebook and Instagram and others to advertise our product.
DM5	• We update our social media and all business digital marketing platform systematically and periodically.
DM6	• We use electronic transaction in our business transaction such as sales and product payment.

Exploratory Factor Analysis (EFA)
EFA procedure was operated using IBM SPSS software in order to evaluate the interrelatedness among the items which measure Digital Marketing Usage. This procedure should be done before proceeding to Structural Equation Modeling procedure (Hair et al., 2010). The following section discusses the results of EFA.

Table 2
The correlation Table between items of Digital Marketing Usage
Correlation Matrix

		DM1	DM2	DM3	DM4	DM5	DM6
Correlation	DM1	1.000	.773	.829	.838	.908	.739
	DM2	.773	1.000	.803	.791	.780	.495
	DM3	.829	.803	1.000	.882	.908	.664
	DM4	.838	.791	.882	1.000	.841	.776
	DM5	.908	.780	.908	.841	1.000	.738
	DM6	.739	.495	.664	.776	.738	1.000
Sig. (1-tailed)	DM1		.000	.000	.000	.000	.000
	DM2	.000		.000	.000	.000	.003
	DM3	.000	.000		.000	.000	.000
	DM4	.000	.000	.000		.000	.000
	DM5	.000	.000	.000	.000		.000
	DM6	.000	.003	.000	.000	.000	

The correlation table in Table 2 above shows that the items of Digital Marketing Usage are suitable for factor analysis.
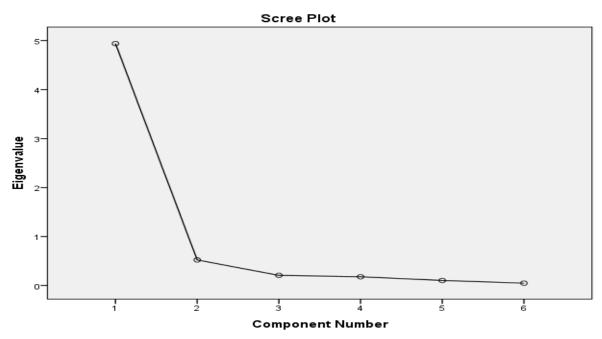
Results of Exploratory Factor Analysis

Figure 1. Scree Plot from the EFA procedure

The scree plot in Figure 1 indicates only one dimension emerged from EFA procedure for this construct. In other words, the EFA procedure has grouped 6 items into one dimension.

Table 3
KMO and Bartletts' Test of Sphericity for Digital Marketing Usage construct

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.828
Bartlett's Test of Sphericity	Approx. Chi-Square	200.308
	df	15
	Sig.	.000

The Exploratory Factor Analysis using extraction method of Principal Component with Varimax (Variation Maximization) Rotation was performed on the 6 items measuring Digital Marketing Usage (DM) construct. The results in Table 3 above indicated that the Bartletts' Test of Sphericity is significant (P-Value < 0.05). Furthermore, the measure of sampling adequacy by Kaiser-Meyer-Olkin (KMO) is excellent at 0.828 which exceeded the required value of 0.6 (Hadia et al., 2016) and can proceed further for data reduction.

The Dimensions or Components and Total Variance Explained for Digital Marketing Usage construct
The results in Table 4 shows that there is only one dimension emerged from EFA procedure based on the computed Eigenvalue greater than 1.0. The eigenvalue for this component is 4.94 while the variance explained for this component is 82.33%. The total variance explained for measuring Digital Marketing Usage construct is 82.33%. Thus this component and its

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respective items are excellent in measuring the Digital Marketing Usage construct since its total variance explained exceeded 60% (Gie Yong & Pearce, 2013).

Table 4
Total Variance Explained for Digital Marketing Usage
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.940	82.333	82.333	4.940	82.333	82.333
2	.523	8.712	91.044			
3	.207	3.452	94.497			
4	.179	2.984	97.481			
5	.103	1.721	99.202			
6	.048	.798	100.000			

Extraction Method: Principal Component Analysis.

The factor loading for every item was greater than 0.6. Thus, no item should be deleted since they achieved the minimum requirement for factor loading of 0.6 (O'Rourke & Hatcher, 2014). In other words, all items were useful to measure the latent construct. Based on the rotated component matrix only one component was extracted from DM construct. The factor loadings for DM1,DM2,DM3,DM4,DM5 and DM6 were 0.937,0.855,0.939,0.944,0.954 and 0.806. respectively.

The Internal Reliability for the Instrument Measuring Digital Marketing Usage construct
Finally, the study needs to compute the value of Cronbach's Alpha for every dimension to assess the Internal Reliability of the respective dimension in measuring the latent construct. The value of Cronbach's Alpha should be greater than 0.7 for the items to achieve the Internal Reliability. The Cronbach's Alpha for the component measuring Digital Marketing construct was .953. Thus the items in this component have achieved the required Internal Reliability since the Cronbach's Alpha value is greater than 0.7 (Panayides, 2013).

Conclusion
This study presented the EFA procedure to analyze the Digital Marketing Usage construct, especially focusing on the small rural businesses in Malaysia. The Digital Marketing Usage dimensions discussed are the level of importance of digital marketing, telecommunication infrastructures ready, response to the current trend in digital marketing, usage of social media platform, updating social media content regularly and systematically and using electronic transactions in sales transaction which can be measured using 6 items developed in this study. The reliability measures for the Digital Marketing Usage construct has shown high Cronbach's Alpha value. The Bartlett's Test result was significant, KMO results was more than 0.6. and factor loadings for all items exceeds 0.6, which is the minimum threshold (Hadia et al., 2016). The strict scale development and validation procedures employed in this study have assured that the Digital Marketing Usage instrument in this study is valid and reliable. Future studies should look into different context of digital marketing usage such as urban small business and youth technology-based business.

Acknowledgement

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