



DIGITAL GAP ANALYSIS IN THE USE OF MOBILE BANKING APPLICATIONS IN THE CITY OF BANDUNG

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Abstract. *This research discusses the digital divide in the use of mobile banking applications in the city of Bandung, Indonesia, where the use of mobile banking is still relatively minimal compared to other bank services. The study aims to analyze the digital divide based on four stages of using digital technology, which are motivation, physical access and material access, mobile banking skills, and usage. The author uses quantitative methods with the PLS-SEM multivariate analysis technique to determine the relationship between predetermined variables. For data processing, the author uses WarpPLS 8.0 where the data processed is based on samples taken through non-probability sampling using the purposive sampling method with a total of 300 respondents taken from part of the population of Bandung City who use mobile banking applications. Based on research that has been carried out by the author, it was obtained that the variables motivation, physical access and material access, mobile banking skills, and usage are stated to be significant. This shows that there is no digital divide in the use of mobile banking applications in the city of Bandung.*

Keywords: *Consumer Behaviour, Digital Divide, Information Technology, Mobile Banking*

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INTRODUCTION

The current population growth in Indonesia is closely related to technological growth. This is because with population growth, the needs needed by the community will increase, so that this can affect the development of new technologies so that they can meet the needs of the population (Nick Wilkinson, 1973). The technology that is quite widely used by the people of Indonesia is Information and Communication Technology (ICT) such as smartphones and the internet.

A research that is relevant to the findings above is "Factors affecting the adoption of mobile banking in Jordan: Extending the UTAUT model" (2018) by Al-Jabali, Alnsour, and Al-Jabali. This study examines the factors influencing mobile banking adoption in Jordan using the extended UTAUT (Unified Theory of Acceptance and Use of Technology) model. One of the main findings of this study is that physical accessibility and availability of adequate materials is very important in influencing the use of mobile banking in the country.

The novelty that can be carried out in future research is to look at other moderator variables that can affect the use of mobile banking applications, such as psychological, cultural, and environmental factors. In addition, research could be carried out in different areas to see how these factors vary in different geographic and social contexts.

The number of smartphone users in Indonesia in 2021 will reach 180.4 million users, while internet users will reach 210.03 million users in 2022. In addition, there are also innovations made to ICT in the banking sector such as mobile banking (Khairani & Giri, 2020) . Even though mobile banking is an innovation that can be useful, in fact, mobile banking users are still relatively few when compared to the number of customers (Arditya & Giri, 2021)

However, based on data obtained by the Indonesian people, especially residents of the city of Bandung, the number of people using the internet with the aim of accessing finance is still low, with only 163 thousand out of 2.1 million internet users in 2021. Apart from that, based on the data, mobile application users Currently, banking in Indonesia is still relatively minimal, where only 36.5 million customers use the mobile banking application in 2021. Based on this, we can see that there is a digital divide that occurs in Indonesia and in the city of Bandung. The phenomenon of this digital divide is a gap in the use of a technology, one of which is basically caused by digital skills (Hukama & Giri, 2023). Therefore the authors are interested in conducting research with the title "Digital gap analysis in the use of mobile banking applications in the city of Bandung".

RESEARCH METHODS

In this study the authors used quantitative research methods with the PLS-SEM multivariate analysis technique. The strategy that the writer uses in obtaining data is by means of a survey which amounts to 300 respondents. As for sampling, the authors used a non-probability technique using a purposive sampling method. WarpPLS 8.0 software will be used to process the data that has been obtained.

RESULTS AND DISCUSSION

Measurement Model Test Results (Outer Model)

Convergent Validity

The value needed so that an indicator can be explained by the construct that is measured can be seen from the outer loading value where it requires a value of > 0.5 and an average variance extracted (AVE) of > 0.5 (Sholihin & Ratmono, 2021:45). The following is a table of convergent validity test results:

Table 1. Convergent Validity Test

Variable	Item	Loading Factor (> 0.5)	Average Variance Extracted (> 0.5)	Explanation
Motivation (MOT)	MOT1	(0.703)	(0.677)	Valid
	MOT2	(0.514)		Valid
	MOT3	(0.793)		Valid
	MOT4	(0.696)		Valid
	MOT5	(0.680)		Valid
Physical access and material access (PMA)	PMA1	(0.649)	(0.727)	Valid
	PMA2	(0.870)		Valid
	PMA3	(0.870)		Valid
	PMA4	(0.519)		Valid
Mobile banking skills (MBS)	MBS1	(0.657)	(0.825)	Valid
	MBS2	(0.701)		Valid
	MBS3	(0.689)		Valid
	MBS4	(0.722)		Valid
	MBS5	(0.692)		Valid
	MBS6	(0.534)		Valid
	MBS7	(0.710)		Valid
	MBS8	(0.669)		Valid
	MBS9	(0.673)		Valid
	MBS10	(0.751)		Valid
	MBS11	(0.678)		Valid
	MBS12	(0.665)		Valid
	MBS13	(0.709)		Valid
	MBS14	(0.629)		Valid
	MBS15	(0.671)		Valid
	MBS16	(0.680)		Valid
	MBS17	(0.633)		Valid
	MBS18	(0.630)		Valid
	MBS19	(0.645)		Valid
	MBS20	(0.521)		Valid
	MBS21	(0.672)		Valid
	MBS22	(0.523)		Valid
	MBS23	(0.518)		Valid
	MBS24	(0.641)		Valid
	MBS25	(0.529)		Valid
	MBS26	(0.579)		Valid

	MBS27	(0.542)		Valid
	MBS28	(0.648)		Valid
	MBS29	(0.605)		Valid
	MBS30	(0.649)		Valid
Usage (USG)	USG1	(0.652)	(0.704)	Valid
	USG2	(0.615)		Valid
	USG3	(0.760)		Valid
	USG4	(0.744)		Valid
	USG5	(0.751)		Valid
	USG6	(0.702)		Valid

Source: Data Processed using warpPLS (2022)

Based on the results of the tests that have been carried out, it can be concluded that each indicator can be explained by the construct being measured. This is because the values obtained from each indicator have met the required value so that an indicator can be said to be valid.

Discriminant Validity

This discriminant test is intended to determine how much a variable differs from other variables. This test can be seen with the cross-loading approach, where the value required to be valid is that the loading value of the variable being tested is greater than the loading value for other constructs.

Table 2. Discriminant Validity Test (Cross-loadings)

	MOT	PMA	MBS	USG
MOT1	(0.703)	0.018	0.007	0.166
MOT2	(0.514)	-0.079	-0.13	-0.095
MOT3	(0.793)	0.01	-0.026	-0.067
MOT4	(0.696)	0.075	0.08	0.168
MOT5	(0.680)	-0.048	0.04	-0.193
PMA1	0.05	(0.649)	0.344	0.014
PMA2	-0.05	(0.870)	-0.048	-0.026
PMA3	-0.062	(0.870)	-0.156	0.075
PMA4	0.125	(0.519)	-0.087	-0.099
MBS1	-0.052	0.281	(0.657)	0.299
MBS2	-0.061	0.189	(0.701)	0.153
MBS3	-0.172	-0.093	(0.689)	-0.032
MBS4	-0.081	-0.035	(0.722)	-0.107
MBS5	-0.012	-0.207	(0.692)	-0.178
MBS6	0.14	-0.182	(0.534)	-0.207
MBS7	0.023	0.132	(0.710)	0.134
MBS8	-0.082	0.26	(0.669)	0.173
MBS9	0.043	0.197	(0.673)	0.168
MBS10	-0.06	0.371	(0.751)	0.096
MBS11	0.006	-0.145	(0.678)	-0.077
MBS12	0.005	-0.224	(0.665)	-0.057

MBS13	0.057	0.113	(0.709)	0.068
MBS14	-0.015	-0.087	(0.629)	0.018
MBS15	-0.011	-0.277	(0.671)	-0.1
MBS16	-0.038	-0.261	(0.680)	-0.147
MBS17	-0.059	-0.242	(0.633)	-0.212
MBS18	0.088	-0.195	(0.630)	-0.177
MBS19	-0.022	-0.037	(0.645)	-0.29
MBS20	0.185	-0.012	(0.521)	-0.084
MBS21	-0.029	-0.058	(0.672)	-0.101
MBS22	0.195	-0.022	(0.523)	0.028
MBS23	0.173	0.02	(0.518)	0.038
MBS24	0.055	-0.3	(0.641)	-0.149
MBS25	0.066	-0.016	(0.529)	0.08
MBS26	0.028	-0.02	(0.579)	0.043
MBS27	0.173	-0.26	(0.542)	-0.25
MBS28	-0.163	0.352	(0.648)	0.131
MBS29	-0.155	0.336	(0.605)	0.318
MBS30	-0.028	0.286	(0.649)	0.349
USG1	-0.077	-0.076	-0.211	(0.652)
USG2	0.233	-0.087	0.106	(0.615)
USG3	-0.01	0.1	0.058	(0.760)
USG4	0.044	-0.019	-0.013	(0.744)
USG5	-0.156	-0.093	-0.152	(0.751)
USG6	-0.001	0.158	0.217	(0.702)

Source: Data Processed using warpPLS (2022)

Based on the table it can be concluded that the discriminant validity test with the cross-loading approach is said to be valid because it meets the necessary conditions. In addition to using the cross-loading approach, discriminant validity tests can be carried out using the Fornell-Larcker criterion approach. To be valid, this approach requires that the AVE root value in the diagonal element is greater than the value in the non-diagonal column (correlation).

Table 3. Discriminant Validity (AVE Root)

	MOT	PMA	MBS	USG
MOT	(0.683)			
PMA	0.303	(0.742)		
MBS	0.391	0.595	(0.642)	
USG	0.509	0.444	0.61	(0.706)

Source: Data Processed using warpPLS (2022)

Based on the table it can be concluded that the discriminant validity test with the cross-loading approach is said to be valid because it meets the necessary conditions. In addition to using the cross-loading approach, discriminant validity tests can be carried out using the Fornell-Larcker criterion approach. To be valid, this approach requires that the AVE root value in the diagonal element is greater than the value in the non-diagonal column (correlation).

Reliability Test

To test reliability, researchers can use a composite reliability value with a value of ≥ 0.7 , and Cronbach's alpha with a value of ≥ 0.6 (Sholihin & Ratmono, 2021: 43-44). The following is a table of reliability test results which includes composite reliability and Cronbach's alpha values:

Table 4. Reliability Test

Variable	Composite Reliability (> 0.7)	Cronbach's Alpha (> 0.6)	Explanation
Motivation (MOT)	0.811	0.708	Reliable
Physical access and material access (PMA)	0.825	0.710	Reliable
Mobile banking skills (MBS)	0.954	0.950	Reliable
Usage (USG)	0.856	0.797	Reliable
Gen 1	1.000	1.000	Reliable
Age 1	1.000	1.000	Reliable
Edu 1	1.000	1.000	Reliable
Gen 2	1.000	1.000	Reliable
Age 2	1.000	1.000	Reliable
Edu 2	1.000	1.000	Reliable
Gen 3	1.000	1.000	Reliable
Age 3	1.000	1.000	Reliable
Edu 3	1.000	1.000	Reliable

Source: Data Processed using warpPLS (2022)

Based on the tests that have been carried out, the results show that the confidence level of the gauge is reliable or reliable. This is because the value obtained from the test results meets the requirements needed for a measure to be said to be reliable.

Structural Model Test Results (Inner Model)

R-Square (R^2) Test

Table 5. R-Square Test

Variable	R-Square	Explanation
Physical access and material access (PMA)	0.168	Weak
Mobile banking skills (MBS)	0.444	Moderate
Usage (USG)	0.384	Moderate

Source: Data Processed using warpPLS (2022)

To find out the measure of the predictive power of the model, the value of R^2 is needed. The R^2 value of 0.75 can be said to be at a substantial level, 0.50 is moderate, and 0.25 is weak. Based on the results contained in the table, the R^2 value is obtained where the results show that the R^2 value on the three exogenous variables has a weak and moderate effect. The following is an interpretation of the R^2 value that has been obtained: The motivation variable has an influence of 16.8% on the physical access and material access

variables and around 83.2% is identified as being influenced by other variables during the study; Physical access and material access variables have an influence of 44.4% on the mobile banking skills variable and around 55.6% are identified as influenced by other variables during the study; The mobile banking skills variable has an influence of 38.4% on the usage variable and around 61.6% is identified as being influenced by other variables during the study.

Q Square (Stone-Geisser/ Q^2)

Q Square is one of the stages in the evaluation of structural models where this measure is predictive relevance. Models with predictive validity must have a Q^2 value greater than zero to be said to be good (Sholihin & Ratmono, 2021: 55). In the table it can be seen that the estimation results for the Q^2 value obtained are above zero, this indicates that the results have good predictive validity.

Table 6. Q-Square Test

Variable	Q-Square	Explanation
Physical access and material access (PMA)	0.171	Good
Mobile banking skills (MBS)	0.414	Good
Usage (USG)	0.388	Good

Source: Data Processed using warpPLS (2022)

Effect Size (f^2)

The effect size is a measure of the change in the R^2 value when an independent variable is removed from the framework so that it is known how the independent variable affects the dependent construct (Sholihin & Ratmono, 2021: 84). This effect size is divided into three groups, namely 0.02 which can be said to have a weak impact, 0.15 is said to be an influence with a medium impact, and 0.35 can be said to have a large effect (Kock, 2013; Hair et al., 2013).

Table 7. Effect Size Test

Variable	F-Square	Explanation
Motivation (MOT)	0.125	Medium
Physical access and material access (PMA)	0.418	High
Mobile banking skills (MBS)	0.388	High

Source: Data Processed using warpPLS (2022)

The following is an interpretation of the effect size value that has been obtained: the estimation results show that the effect of the motivation variable (MOT) on the physical access and material access (PMA) variables is 0.125. This result is classified as a medium size effect group, indicating that motivation has a moderate effect on physical access and material access; the estimation results show that the effect of physical access and material access (PMA) variables on mobile banking skills (MBS) is 0.418. This result is classified as a large effect size group, indicating that physical access and material access have an important influence on mobile banking skills; and the estimation results show that the influence of the mobile banking skills (MBS) variable on usage (USG) is 0.388. This result is classified as a

large effect size group, indicating that mobile banking skills have an important influence on usage.

Hypothesis Test

Table 8. Hypothesis Test

Hypothesis	Variable Relations	Path Coefficient	P-Value	Explanation
H1	MOT → PMA	0.311	<0.001	H0 is rejected, H1 has a significant effect
H2	PMA → MBS	0.652	<0.001	H0 is rejected, H2 has a significant effect
H3	MBS → USG	0.624	<0.001	H0 is rejected, H3 has a significant effect
H4	GEN1*MOT → PMA	-0.071	0.109	H0 is accepted, H4 has no significant effect
H5	AGE1*MOT → PMA	-0.024	0.339	H0 is accepted, H5 has no significant effect
H6	EDU1*MOT → PMA	-0.047	0.205	H0 is accepted, H6 has no significant effect
H7	GEN2*PMA → MBS	-0.039	0.251	H0 is accepted, H7 has no significant effect
H8	AGE2*PMA → MBS	-0.067	0.121	H0 is accepted, H8 has no significant effect
H9	EDU2*PMA → MBS	0.027	0.318	H0 diterima ,H9 tidak terdapat pengaruh signifikan
H10	GEN3*MBS → USG	0.068	0.119	H0 is accepted, H10 has no significant effect
H11	AGE3*MBS → USG	0.006	0.460	H0 is accepted, H11 has no significant effect
H12	EDU3*MBS → USG	-0.076	0.093	H0 is accepted, H12 has no significant effect

Source: Data Processed using warpPLS (2022)

In testing hypothesis 1, it was found that the motivation variable (MOT) had a positive and significant influence on physical access and material access (PMA) variables based on a p-value of <0.001 and a path coefficient value of 0.311. In testing hypothesis 2, it was found that the physical access and material access (PMA) variables had a positive and significant influence on the mobile banking skills (MBS) variable based on a p-value of <0.001 and a path coefficient value of 0.652. In testing hypothesis 3, it was found that the mobile banking

skills (MBS) variable had a positive and significant influence on the usage variable (USG) based on a p-value of <0.001 and a path coefficient value of 0.624. In testing hypothesis 4 it was found that the gender moderator variable showed a positive but not significant influence in moderating the relationship between the motivation variable (MOT) and the physical access and material access (PMA) variables based on a p-value of 0.109 and a path coefficient value of - 0.071. In testing hypothesis 5, it was found that the moderator variable age showed a positive but not significant influence in moderating the relationship between the motivation variable (MOT) and the physical access and material access (PMA) variables based on a p-value of 0.339 and a path coefficient value of - 0.024. In testing hypothesis 6, it is found that the moderator education variable shows a positive but not significant influence in moderating the relationship between the motivation variable (MOT) and the physical access and material access (PMA) variables based on a p-value of 0.205 and a path coefficient value of - 0.047. In testing hypothesis 7 it was found that the gender moderator variable showed a positive but not significant influence in moderating the relationship between physical access and material access (PMA) variables with the mobile banking skills (MBS) variable based on a p-value of 0.251 and a path coefficient value of -0.039. In testing hypothesis 8, it was found that the age moderator variable showed a positive but not significant influence in moderating the relationship between physical access and material access (PMA) variables with the mobile banking skills (MBS) variable based on a p-value of 0.121 and a path coefficient value of -0.067. In testing hypothesis 9, it was found that the moderator education variable showed a positive but not significant influence in moderating the relationship between physical access and material access (PMA) variables with the mobile banking skills (MBS) variable based on a p-value of 0.318 and a path coefficient value of 0.027. In testing hypothesis 10, it was found that the gender moderator variable showed a positive but not significant influence in moderating the relationship between the mobile banking skills (MBS) variable and the usage variable (USG) based on a p-value of 0.119 and a path coefficient value of 0.068. In testing hypothesis 11, it was found that the moderator variable age showed a positive but not significant influence in moderating the relationship between the mobile banking skills (MBS) variable and the usage variable (USG) based on a p-value of 0.460 and a path coefficient value of 0.006. At last, in testing hypothesis 12, it was found that the moderator education variable showed a positive but not significant influence in moderating the relationship between the mobile banking skills (MBS) variable and the usage variable (USG) based on a p-value of 0.093 and a path coefficient value of -0.076.

CONCLUSION AND SUGGESTIONS

Conclusion

This study found that physical and material access variables were influenced by motivation, mobile banking skills were influenced by physical and material access, and usage was influenced by mobile banking skills. The study also found that there was no significant effect of moderator variables such as gender, age, and education on the relationship between latent variables. Therefore, it can be concluded that there is no digital divide in the use of mobile banking applications in Bandung. For future research, the authors suggest exploring

different moderating variables such as race, intelligence, personality, health, job position, or household.

Suggestions

Based on the conclusions of this study, it is suggested to conduct further research with a focus on factors that influence motivation and skills in using mobile banking applications. In addition, research can consider a more varied moderating factor, such as race, intelligence, personality, health, job position, or household to deepen understanding of the digital divide in the use of mobile banking applications in Indonesia. This research can help develop government or company programs to increase financial literacy and reduce the digital divide in society.

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