

## **A Study on Factors Affecting the Payment Options by the Users of Digital Financial Products in India**

Kanungo E<sup>1</sup>, Devika<sup>2</sup>, Prasad P.G.<sup>3</sup>

S.C.S. (Autonomous) College, Puri, Odisha, India <sup>1</sup>  
ICFAI Business School, ICFAI University, Jaipur (Rajasthan), India <sup>2</sup>  
Sadhu Goureswar College, Jajpur, Odisha, India <sup>3</sup>

*elinakanungo83@yahoo.co.in, professoreafm@gmail.com, gpanda673@gmail.com*

### **ABSTRACT**

The objective of financial inclusiveness for economic development can be accomplished through the adoption of digital pathways. Delivery of financial services is to be promoted via digital platforms. This has also prompted the use of Digital Financial Services and Products (DFS) for different purposes. People have also started using the digital platform as payment methods. The present paper attempts to explore the cardinal factors affecting the payment methods opted by people in India. The paper reflects factors namely Access, Ownership of different DFS, Proficiency in using digital methods of payment, Financial Knowledge, and Awareness affecting the Current Payment Methods opted by people (CPM). The study proposes the Modes of Digital Operations (MDOP) as the mediator affecting the relationship between exogenous and endogenous constructs. The data collected by framing a structured questionnaire was analyzed by framing a Structural Equation Model (SEM) using Smart PLS with 5000 bootstrapping. The result revealed that 98.4 % people with age above 50 years use digital methods of payment like debit cards, credit cards, mobile money, etc. by taking the help of their friends and relatives. They are dependent on others for digital use as they lack proficiency or awareness of digital operations or financial knowledge. The policy-making authorities are required to pay attention to the need for awareness programs and Financial Literacy camps to make people competent in using digital methods of payment without any dependence.

**Keywords: Digital Financial Services and Products, Current Payment Methods, Structural Equation Model, Mediator, Smart PLS, Modes of Digital Operations**

### **INTRODUCTION**

The landscape for digital payment in India is highly diverse having several options available for consumers to make various transactions. The vibrant eco-system of digital payment is quite as advanced as the other countries in the world. It has a robust infrastructure for digital payment mechanisms along with a large pull of talent. India was predominately a cash-based economy which has very well accepted the changes introduced in the digital era. Now it is progressing

towards a digital-based economy. It is in an accelerating “lift-off” face of its digital odyssey. Through digitalization, the government is putting efforts to improve the provision of public services to people who have limited access to education health, and financial services. The unflappable commitment of the government of India to promote financial inclusion through digitalization has paved the way for digital payment systems and the availability of different Digital Financial Products and Services (DFS) to build their grip on the economy. The digitalization of the banking sector in India offers solutions that will help bring the economically less-privileged section and reach out to the wider section of society thereby leading to building a financially inclusive economy, (Iqbal & Sami, 2017). The COVID-19 pandemic has propelled the usage of digital products in the past few years. The pandemic across the globe has accelerated the transformation and growth of different financial services (Asongu et al., 2021, Tay et al., 2022). Many people have started using digital platforms as per the instructions of the authorities to contain the widespread of the virus. The penetration of the internet and the rampant use of mobile phones has escalated the use of digital money in the economy. It was observed that small businesses and low-income families have started using digital payment services. The payment ecosystem in India has undergone a radical shift in recent years especially in Covid 19 pandemic. A forever change is observed in the way in which people are transacting. Since the inception of various forms of digital money in India (Debit cards, Credit cards, Digi-wallets, etc.), people have started using both digital means and cash for different transactions. It is observed that people in rural areas and with less knowledge of digital platforms are dependent on their friends and relatives to carry out different operations digitally. Though different options for digital money are available, the use of cash in the economy is still prevalent. It is therefore important to analyze the factors affecting the choice of payment options by the people. The present study aims to find answers to two questions namely-What are the factors that influence the use of digital money by people? Does the presence of friends and relatives help influence the choice between digital money and cash? The present study analyzes different factors having an impact on the payment methods opted by people. It also aims to analyze the mediating role of Modes of Digital Operations (MDOP) as a mediator.

## **REVIEW OF LITERATURE**

The Digital India revolution has accelerated growth due to initiatives taken by the government of India like PMJDY (Pradhan Mantri Jan Dhan Yojana), India stack, e-KYC, UPI, etc, (NITI Aayog, 2022). The introduction of such initiatives by the government enables it to reach its

objective of financial inclusiveness. The pandemic across the globe has accelerated the transformation and growth of different financial services (Asongu et al., 2021, Tay et al., 2022). Digital Financial products and Services (DFS) hence evolved as the secure way to stretch out to vulnerable sections of society.(Pazarbasioglu et al., 2020b). As per (Kunt. et al., 2017) DPS has emerged as an important factor that can ensure financial inclusion to a greater extent. It will enhance the speed of payments, reduce the cost involved in making and receiving payments, and promote transparency. As per the survey conducted in 2020, it was unearthed that the acceleration in the use of digital platforms will continue even after the COVID-19 pandemic in the ASEAN regions. It was also observed that the digital generation is using e-banking and e-wallets after social media (ASEAN Digital Generation Report, 2022). The provision of DFS depends on a digital platform for transactions, devices, and retail agents, (RBI, 2021). DFS evolved in India in three distinct phases. In phase one, many financial services were digitalized. This was between 2014-2016 when many digital wallets like Paytm and Mobikwik started to grow at a rapid rate. The demonetization period is the second phase. The introduction of UPI symbolizes the third phase. The initiative by RBI has exemplified this model by outwitting the use of debit cards and pre-paid wallets. The UPI is the creation of the National Payment Council of India (NPCI) and is managed by it,(mSTAR project & USAID, 2019). People are using digital platforms for purposes like online shopping, receiving remittances, transfer of funds, etc. (Nandru et al., 2021)(Pazarbasioglu et al., 2020a). (Mondal. Susanta, 2020) highlighted debit cards, credit cards, QR codes, mobile banking, internet banking, and e-wallets as different digital payment methods. (Shen et al., 2020) stated in their research that digital technology has emerged as an ideal medium to reach many customers across a wide territory. They further concluded that financial literacy and usage of digital financial products are highly important for increasing financial inclusion in China. To make proper financial decisions and attain individual financial well-being, an individual must possess the financial awareness, knowledge, skills, attitude, and behaviors required(OECD, 2018). According to (Kollinal, 2019) for the usage of digital products, digital literacy is highly essential. (Lyons & Kass-Hanna, 2021) through extensive research laid down a DFL framework by combining key characteristics from both digital literacy and financial literacy. (Huang Bihong et al., 2019) their research highlighted four dimensions of DFL namely knowledge of digital financial products and services, awareness of digital financial risks, digital financial risk control, and knowledge of consumer rights and redressal mechanisms. It comprises elements like basic knowledge and digital proficiency. Thus, the use of digital methods of payment and different DFS requires a person to have basic financial knowledge like knowledge on the

calculation of interest, inflation, diversification of investments, etc. For the use of the virtual platform, there is a need for a gadget like a mobile phone, personal computer, or tablet to name a few. The basic knowledge of using the gadget is also essential. Proficiency or capability of using digital products is also equally essential. Awareness of various digital platforms, products, operations, and risk control mechanisms equally facilitates the digital inclusion of financial products, (Lyons & Kass-Hanna, 2021). It was pointed out (Shree et al., 2021) that the age of people has a negative relationship with the use of digital methods of payment. (Buteau et al., 2021) highlighted that the most preferred mode of payment in retail transactions is still cash. People prefer to use cash in case of transactions of low-value denominations, out-of-order PoS, poor internet connectivity, and convenience to operate. It was also observed that even though people have started using digital payment methods in urban and rural places, but still cash-based transactions are prevalent between merchants and consumers. People are using digital methods of payment along with cash.

### **Research Gap and Research Hypotheses**

The review of research works done earlier has led to identifying the following gaps or problems which the present study aims to deal with along with framing of some hypotheses to answer certain research questions:

A study conducted (Buteau et al., 2021) highlighted that the most preferred mode of payment in retail transactions is still cash. It is worth asking this question why do people having access to infrastructure for digital payments still prefer to use cash for different operations? The first gap identified is the presence of scant studies (Hyytinen & Takalo, 2009; Shree et al., 2021; Sivathanu, 2019) on factors affecting the payment (cash, digital, or a combination of both) options chosen by people in this digital era. (Dimitrova et al., 2023) highlighted that people take the help of known ones to perform digital transactions. A detailed review of the works indicates the presence of the second gap that no substantial study is made on the mediating role of modes of digital operations (MDOP- performing digital transactions independently without taking the help of others) in making choices between different Methods of Payment (MP). The present study aims to analyze different factors identified (Akanfe et al., 2021; Lyons & Kass-Hanna, 2021; Pazarbasioglu et al., 2020a; Saroy et al., 2022) namely Proficiency in using Digital Money (DMP), Financial Knowledge, Awareness, Access, and Ownership having an impact on the payment methods opted by people. It also aims to analyze the mediating role of Modes of Digital Operations (MDOP) as a mediator. The identified gaps accentuate the formulation of

the research hypotheses for achieving the objectives of the study. This leads to the formulation of the following hypotheses-

H<sub>1</sub> – Proficiency in using Digital Money (DMP) has a positive and significant impact on Current Payment Methods (CPM) opted by consumers

H<sub>2</sub> – Financial Knowledge has a positive and significant impact on CPM opted by consumers

H<sub>3</sub>- Awareness among consumers has a significant impact on CPM opted by them

H<sub>4</sub> – Ownership of digital financial instruments has a significant impact on CPM opted by consumers

H<sub>5</sub>- Access to digital Infrastructure has a significant impact on CPM opted by consumers

H<sub>6</sub>- MDOP mediates the relationship between DMP and CPM

H<sub>7</sub>- MDOP mediates the relationship between FK and CPM

H<sub>8</sub>- MDOP mediates the relationship between Awareness and CPM

H<sub>9</sub>- MDOP mediates the relationship between Access and CPM

## METHODS

**Research Design:**The current study is based on multi-stage sampling methods. At first, the convenient sampling method is used to select Puri as the place of research and afterward, snowball sampling has been used to reach the respondents. The district of Puri was chosen because it is popular as one of the four ‘*Dhams*’ (pilgrimage centers) in India where Lord Jagannath is worshipped. The other Dhams are Badrinath, Dwarka, and Rameswaram. The famous ‘Black Pagoda’ – Konark is also situated in the Puri district. It is considered as ‘World’s Tourist Hub’ where people across the world visit not only to worship Lord Jagannath but also to enjoy the cultural heritage and scenic beauty. This place very well justifies the conduct of research as the relationship between the need for digital payment and visits by tourists across the globe cannot be denied, especially after the pandemic (Akhtar et al., 2021).

**Sampling Design:**The district of Puri includes one sub-division, 11 blocks, 11 tahasils, and 1722 revenue villages as a part of its administrative setup. The sample for the present study was selected by the application of multi-stage sampling techniques. The selection of urban

places was made according to the information obtained from the 2011 census. For the selection of rural places, the division of the Puri district into several blocks was considered. Out of 11 blocks in Puri, 6 blocks were chosen in a way that would represent the entire district. The study depicts the digital usage scenario for both urban and rural places, 4 urban, 1 semi-urban, and 6 villages are selected representing the entire district.

**Sampling Tool:** After reviewing articles related to the current study, academicians having vast knowledge and exposure to the present work of research were consulted while framing the questionnaire. The structured questionnaire has five sections. Data is collected by using snowball sampling methods from those who already owned a bank account. The respondents in the present research sample include people with a minimum age of 15 years to senior citizens aged above 60 years. A structured questionnaire is framed to collect data from the residents of selected places. Responses were collected from 776 respondents on a 5-point Likert scale (Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree). The analysis of the present study has been made using structural equation modeling in partial least square (PLS) combined with bootstrap for testing the hypotheses of this study. Data was analyzed using Smart PLS and Software Package for Social Science (SPSS) IBM 2025.

**Table 1- Clarification of Conceptual Confusions**

VARIABLE	MEASUREMENT	INDICATORS	ROL
Proficiency	Reflective	Open an account on a digital platform- PDMA 1	(Lyons & Kass-Hanna, 2021)
		Open the menu and find a particular option in the digital platform- PDMA 2	(Matthews, 2019)
		Initiate a digital financial transaction- PDMA 3	(Borg & Smith, 2018)
		correct an error while doing a digital financial transaction- PDMA 4	
		Reverse an error while doing a digital financial transaction- PDMA 5	

		Complete or cancel a transaction a digital financial transaction- PDMA 6	
FK	Reflective	Possession of financial numeracy skills- FK 1	(Lyons & Kass-Hanna, 2021)
		Knowledge of simple interest- FK 2	(Matthews, 2019)
		Knowledge of compound interest- FK 3	(Naumenkova et al., 2019)
		Knowledge of diversification of funds- FK 4	
		Knowledge of inflation-FK 5	
		Knowledge of financial planning- FK 6	
Awareness	Reflective	Awareness of digital risks like Phishing, hacking, etc- AW-1	(Morgan & Trinh, 2019),
		Knowledge of financial products and services offered digitally- AW 2	(Pazarbasioglu et al., 2020b)
		Knowledge of consumer rights- AW 3	
		Knowledge of consumer redressal mechanism- AW 4	
Ownership	Reflective	Ownership of Debit card- Own 1	(2021)(Bathula & Gupta, 2021)
		Ownership of Credit card- Own 2	
		Ownership of digital money account- Own 3	(Nandru et al., 2021)
CPM		Use of digital payment systems mostly along with cash	(Shree et al., 2021)
MDOP		Modes of operating digital products	(Dimitrova et al., 2023)

Access	Reflective	Access and use of the Internet-ACC 1	(Lyons & Kass-Hanna, 2021)
		Ownership of the smartphone-ACC 2	(Morgan & Trinh, 2019), (Azeez & Akhtar, 2021)

Source: Author's compilation

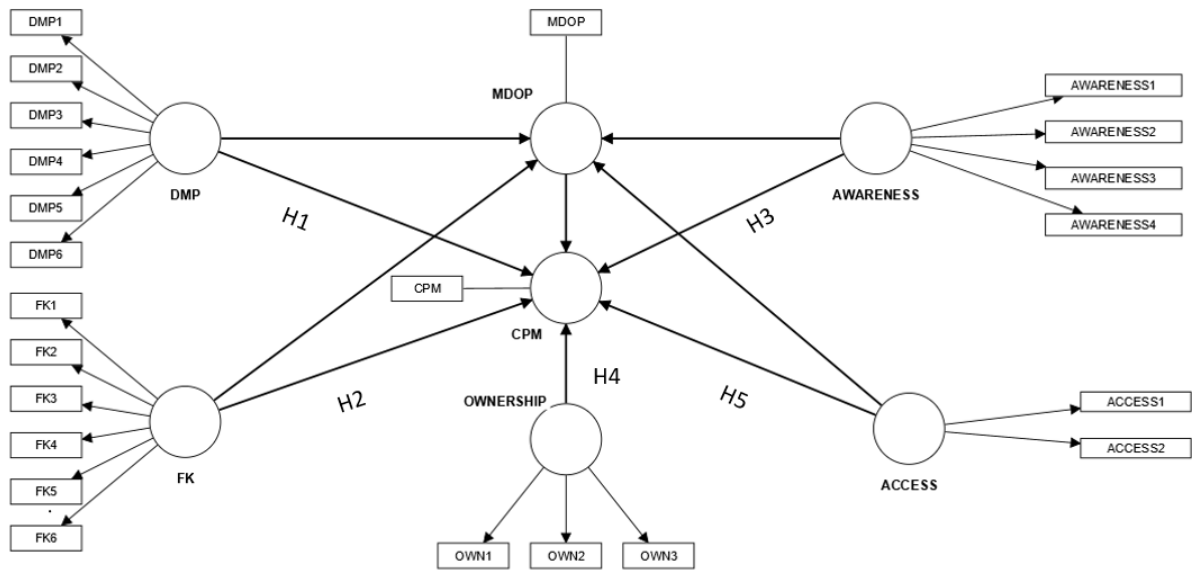


Fig 1- Proposed Model

## RESULTS AND DISCUSSION

### Assessment of Measurement Model

The reliability analysis of the dataset using Smart PLS 4.0 reflects that all construct factor loadings are within the threshold of ( $> .070$ ). the value of Cronbach's alpha ranges between 0.821 to 0.934 (Nunnally, 1978), (Bagozzi & Yi, 1988). The internal consistency and reliability of the constructs were high. Convergent validity is assessed through Average Variance Extracted (AVE) having a value greater than 0.50, (Hair et al., 2019). The constructs have AVE values greater than 0.50. The VIF values of the indicators are less than 3.3, (Diamantopoulos & Siguaw, 2006). The discriminant validity is examined with the help of the Heterotrait-Monotrait ratio of correlations (HTMT) (Hafiz Hanafiah, 2020). A value less than 0.85 indicates no discriminant



validity i.e. no collinearity exists among the constructs. So, the measurement model met the basic requirements of reliability and validity.

**Table 2- Outer Model Assessment of Constructs**

Variable	Item	Convergent Validity			Cronbach's alpha	Multicol linearity
		Cross loadings	Composite reliability	AVE		
DMP	DMP1	0.785	0.917	0.704	0.916	1.668
	DMP2	0.825				2.563
	DMP3	0.870				3.128
	DMP4	0.829				2.343
	DMP5	0.866				3.766
	DMP6	0.882				3.717
FK	FK1	0.809	0.886	0.625	0.879	2.189
	FK2	0.832				2.226
	FK3	0.826				2.286
	FK4	0.804				2.090
	FK5	0.729				1.704
	FK6	0.735				1.648
Awareness	Awareness	0.767	0.775	0.597	0.775	2.173
	Awareness	0.788				2.262
	Awareness	0.766				1.985
	Awareness	0.769				1.937
Ownership	Ownership 1	0.793	0.790	0.671	0.756	1.423
	Ownership 2	0.785				1.544
	Ownership 3	0.876				1.700
Access	Access1	0.774	0.900	0.907	0.898	2.965
	Access2	0.880				2.965

*Source: Smart PLS output*

**Table 3- Discriminant Validity- HTMT (Heterotrait–Monotrait ratio of correlation measure)**

	ACCESS	AWARE NESS	CPM	DMP	FK	MDOP	OWNER SHIP
ACCESS							
AWARENESS	0.657						
CPM	0.524	0.612					
DMP	0.599	0.704	0.615				
FK	0.544	0.701	0.686	0.766			
MDOP	0.652	0.807	0.754	0.835	0.814		
OWNERSHIP	0.789	0.797	0.750	0.849	0.813	0.804	

*Source: Smart PLS output*

### Assessment of the Structural Model and Hypotheses Testing

The objective behind constructing a SEM is to show the inter-relationship between the manifest and latent variables of the main predictor, and outcome variables in a single model. For testing the mediation effect, direct and indirect path coefficients were constructed from the independent variables to the dependent variables through the mediator variable. The model was generated through the bootstrapping of 5000 samples in Smart PLS. The result of the bootstrapping reflects the *t* and *p* values which show acceptance and rejection of hypotheses. This step involves examining the significance of the path coefficients ( $\beta$ ) (Table-4), assessment of values of  $R^2$  and predictive relevance  $Q^2$  (Table-5). The determination coefficient ( $R^2$ ) is one of the major indicators to determine the prediction level of the research model. According to (Chin, 1998), values of 0.19, 0.33, and 0.67 are weak, moderate, and substantial respectively. It is found from Table 5 that a 59.4 % variance in the endogenous construct is well explained by the exogenous constructs. The model has a moderate predictive relevance concerning  $R^2$ . The significant presence of MDOP as the mediator is reflected in Table 4.

The present study investigated that the effect size is strong in the proposed model. The out-of-sample prediction is assessed by the technique developed by Stone- Geisser's  $Q^2$  value. The values of 0.02, 0.15, and 0.35 indicate a weak, moderate, and strong degree of relevance (Hair, 2014). The  $Q^2$  value of endogenous constructs CPM, MDOP, and Purpose (Table 5) have a strong degree of relevance.

**Table 4- Test of hypotheses path coefficient**

Relationship	Effects	$\beta$ Value	Std dev	T stats	P value	Hyp othe ses	Deci sion
DMP -> CPM	Direct Effect	0.341	0.082	4.168	0.000	H1	Yes
FK -> CPM	Direct Effect	0.371	0.079	4.679	0.000	H2	Yes
AWARENESS -> CPM	Direct Effect	0.350	0.064	3.538	0.000	H3	Yes
OWNERSHIP -> CPM	Direct Effect	0.519	0.116	4.962	0.000	H4	Yes
ACCESS -> CPM	Mediatin g Effect	0.662	0.085	5.772	0.440	H5	Yes
ACCESS -> MDOP -> CPM	Mediatin g Effect	0.499	0.037	6.319	0.000	H6	Yes
DMP -> MDOP -> CPM	Mediatin g Effect	0.567	0.054	6.502	0.000	H7	Yes
AWARENESS -> MDOP -> CPM	Mediatin g Effect	0.579	0.038	7.404	0.000	H8	Yes
FK -> MDOP -> CPM	Mediatin g Effect	0.409	0.042	5.792	0.000	H9	Yes

*Source: Smart PLS output*

**Table 5- Coefficient of Determination for the Relationship**

	Q <sup>2</sup> predict	R-square adjusted
CPM	0.409	0.594
MDOP	0.700	0.793

*Source: Smart PLS output*

(Lontchi et al., 2022) analyzed the result of a significant relationship within the constructs through the Beta value ( $\beta$ ), t-value, and p-value respectively. Table 4 shows that DMP has a direct, positive, and significant impact on the CPM ( $\beta_1 = 0.341$ , t-statistics = 4.168,  $p < 0.05$ ).

These results reflected that the current method of payment (a combination of cash and digital methods in which the digital platform is preferred more) is affected by the competency of users in using the account of a digital money provider. The ability to open a menu, select options, correction of transactions does affect the usage of digital money (Lyons et al., 2020). So, the alternative hypothesis H1 is accepted.

H2 tested whether CPM is explained by FK (Financial Knowledge). The outputs of the analysis depict that FK ( $\beta_1 = 0.371$ ,  $t$ -statistics = 4.168,  $p < 0.05$ ) significantly predicts CPM. The outputs of the analysis support the research done earlier (Oggero et al., 2020). The hypothesis is supported and the result indicated that while choosing payment mostly by using digital means, financial knowledge is quite essential.

H3 tested whether CPM is explained by Awareness of digital operations. The outputs of the analysis support the research done earlier (Shree et al., 2021) and depict that Awareness ( $\beta_1 = 0.350$ ,  $t$ -statistics = 3.538,  $p < 0.05$ ) significantly predicts CPM. The hypothesis is accepted and signifies that for using the DPS for making payments, it is important that people must be aware of the risks present in digital platforms, knowledge of financial products and services, Knowledge of consumer rights, and knowledge of consumer redressal system.

H4 tested whether Ownership affects the CPM significantly or not. The outputs of the analysis depict that Ownership ( $\beta_1 = 0.519$ ,  $t$ -statistics = 4.462,  $p < 0.05$ ) significantly predicts CPM. The outputs of the analysis support the research done earlier (Kulkarni & Ghosh, 2021). The hypothesis is accepted and signifies that for using the digital platform for making payments, it is important that people own digital financial instruments like debit cards, credit cards, e-wallets, etc.

H5 tested whether Access affects the CPM significantly or not. The outputs of the analysis depict that access ( $\beta_1 = 0.662$ ,  $t$ -statistics = 5.772,  $p < 0.05$ ) significantly predicts CPM. The outputs of the analysis support the work done earlier (Kulkarni & Ghosh, 2021). The hypothesis is accepted and signifies that for using the digital platform for making payments, it is important that people have access to the internet and smartphones.

To test the mediation role of digital operations, hypotheses were developed and tested.

H6, H7, H8, and H9 tested if MDOP mediates the relationship between Access and CPM, DMP and CPM, Awareness and CPM, and FK and CPM respectively. The results show the presence of partial mediation in the relationship between Access and CPM ( $\beta_1 = 0.499$ ,  $t$ -statistics = 6.319,  $p < 0.05$ ), DMP and CPM ( $\beta_1 = 0.567$ ,  $t$ -statistics = 6.502,  $p < 0.05$ ), Awareness and

CPM ( $\beta_1 = 0.579$ , t-statistics = 7.404,  $p < 0.05$ ), and FK and CPM ( $\beta_1 = 0.409$ , t-statistics = 5.792,  $p < 0.05$ ) respectively. Access, Ownership, DMP, FK, and Awareness have both direct impact ( $p$  values are less than 0.05) and indirect impact through the mediator. This shows the presence of partial mediation among the constructs.

### **Theoretical Implications of the Study**

- Firstly, this study enriches the current literature on DFL and digital financial inclusion. The study has tried to state the importance of Awareness, proficiency in using digital platforms, and financial knowledge in choosing the options of payment (Use of more digital platforms over cash). It also depicts the relevance of DFL in using different DFS for different purposes.
- Secondly, the model depicted that on CPM, Access has the highest impact ( $\beta_1 = 0.662$ ) followed by Ownership ( $\beta_1 = 0.519$ ). DMP has the least effect on the CPM ( $\beta_1 = 0.341$ ) followed by Awareness ( $\beta_1 = 0.350$ ). This is because those people who are not aware of digital operations and do not possess the desired skill or proficiency in using digital money are also using the digital platform as payment options by taking the help of others.
- Thirdly, the SEM on CPM depicted a 59.4 % variance in the endogenous construct CPM is explained by DMP, FK, Awareness, Ownership, and Access.
- Fourthly, during the study, it was observed that 98.4% of people over 50 years of age were dependent on others to use digital platforms because they were not aware of digital operations and did not possess the desired skill or proficiency in using digital money. They were using the digital platform of payment by becoming dependent on their friends and relatives. Though the people are digitally financially inclusive, in a real sense they are not inclusive due to their dependence on others. Actions need to be taken to make these people digitally equipped and inclusive in a real sense.

### **Policy Implications of the Study**

- The use of digital options of payment along with cash by being dependent on their friends demands the attention of policymakers towards the fact that necessary steps must be initiated to make people inclusive in the real sense.

- Different types of awareness camps must be organized to provide an opportunity for those who lack proficiency in using digital products to increase their digital usage ability, lack awareness of consumer rights, redressal mechanisms, etc.
- Financial knowledge like inflation, investment diversification, financial planning, etc can be increased by introducing these concepts at primary schooling levels.

## CONCLUSION

The usage of financial services is essential to ensure the financial inclusiveness of society. In a digitally inclusive society, people have different options for making payments (cash and digital). The usage of digital money over cash is affected by factors like the ability to use digital money, financial knowledge, awareness, access, and ownership of financial products. However, during the study, it was also observed that 98.4% of people with 50 years and above use digital modes of payment even after lacking digital proficiency, awareness, and financial knowledge. They take the help of their friends and relatives to perform digital operations. This dependence needs to be taken care of by the authorities. Their dependence on others is preventing them from being inclusive in the real sense. The authorities of the state are required to take necessary steps to make people inclusive in a real sense. Necessary measures need to be taken by the financial service providers to equip the users of digital products. The conduct of awareness programs, literacy camps, and workshops to enhance the ability of the users of digital financial products will bring inclusiveness in the real sense.

### *Acknowledgment*

- *The present work is the outcome of the minor research project titled “New Horizons of Digitalized India and Financial Inclusion- A Comparative Study of Urban and Rural Areas” funded by the Odisha State Higher Education Council (OSHEC), Government of Odisha, India, under OURIP for seed funding, 2020.*

## REFERENCE

Akanfe, O., Valecha, R., & Rao, H. R. (2021). Design of an Inclusive Financial Privacy Index (INF-PIE): A Financial Privacy and Digital Financial Inclusion Perspective. *ACM Transactions on Management Information Systems*, 12(1). <https://doi.org/10.1145/3403949>

- Akhtar, N., Khan, N., Mahroof Khan, M., Ashraf, S., Hashmi, M. S., Khan, M. M., & Hishan, S. S. (2021). Post-covid 19 tourism: Will digital tourism replace mass tourism? *Sustainability (Switzerland)*, *13*(10). <https://doi.org/10.3390/su13105352>
- Asongu, S. A., Biekpe, N., & Cassimon, D. (2021). On the diffusion of mobile phone innovations for financial inclusion. *Technology in Society*, *65*, 101542. <https://doi.org/10.1016/J.TECHSOC.2021.101542>
- Bagozzi, R. R., & Yi, Y. (1988). On the Evaluation of Structural Equation Models. *Journal of Academy of Marketing Science*, *16*(1), 74–94.
- Bathula Srinivasu, & Gupta Ankita. (2021). 17- DETERMINANTS OF DIGI FIN SERVICES. *The Review of Finance and Banking*, *13*(2), 109–120.
- Borg, K., & Smith, L. (2018). Digital inclusion and online behaviour: five typologies of Australian internet users. *Behaviour and Information Technology*, *37*(4), 367–380. <https://doi.org/10.1080/0144929X.2018.1436593>
- Buteau, S., Rao, P., & Valenti, F. (2021). Emerging insights from digital solutions in financial inclusion. *CSI Transactions on ICT*, *9*(2), 105–114. <https://doi.org/10.1007/s40012-021-00330-x>
- Chin. (1998). The partial least squares approach to structural equation modeling. Modern methods for business research. In *The partial least squares approach to structural equation modeling. Modern methods for business research: Vol. 295*(2) (pp. 295–336).
- Diamantopoulos, A., & Sigauw, J. A. (2006). Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. *British Journal of Management*, *17*(4), 263–282. <https://doi.org/10.1111/j.1467-8551.2006.00500.x>
- Dimitrova, Irina., Öhman, P., Yazdanfar, D., Arvidsson, Niklas., Centre for Research on Economic Relations (CER), & Mittuniversitetet Fakulteten för humanvetenskap. (2023). *Full-adoption of digital payment methods? Barriers and barrier-breakers from a Swedish bank customer perspective.*

- Hafiz Hanafiah, M. (2020). Formative vs. Reflective measurement model: guidelines for structural equation modeling research. *International Journal of Analysis and Applications*, 18(5), 876–889. <https://doi.org/10.28924/2291-8639>
- Hair, J. F. (2014). *A primer on partial least squares structural equations modeling (PLS-SEM)*. SAGE.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. In *European Business Review* (Vol. 31, Issue 1, pp. 2–24). Emerald Group Publishing Ltd. <https://doi.org/10.1108/EBR-11-2018-0203>
- Huang Bihong, Morgan.J.Peter, & Trinh .Q. Long. (2019). *The Need to Promote Digital Financial Literacy for the Digital Age*.
- Hyytinen, A., & Takalo, T. (2009). Consumer Awareness and the Use of Payment Media: Evidence from Young Finnish Consumers. *Review of Network Economics*, 8(2), 164–188.
- Iqbal, B. A., & Sami, S. (2017). Papel de los bancos en la inclusión financiera en la India. *Contaduriay Administracion*, 62(2), 644–656. <https://doi.org/10.1016/j.cya.2017.01.007>
- Kollinal, R. K. (2019). Digital India-The Great Dream. *International Journal of Computer Engineering and Technology (IJCET)*, 10(3), 87–93. <http://www.iaeme.com/IJCET/index.asp87http://www.iaeme.com/ijcet/issues.asp?JType=IJCET&VType=10&IType=3JournalImpactFactor>
- Kulkarni, L., & Ghosh, A. (2021). Gender disparity in the digitalization of financial services: challenges and promises for women’s financial inclusion in India. *Gender, Technology and Development*, 25(2), 233–250. <https://doi.org/10.1080/09718524.2021.1911022>
- Kunt. Demirguc Asli;, Klapper Leora;, Singer Dorothe;, Ansar Saiya;, & Hess Jak. (2017). *The Global Findex Database 2017 Measuring Financial Inclusion and the Fintech Revolution*. <https://doi.org/10.1596/978-1-4648-1259-0>
- Lontchi, C. B., Yang, B., & Su, Y. (2022). The Mediating Effect of Financial Literacy and the Moderating Role of Social Capital in the Relationship between Financial Inclusion and



- Sustainable Development in Cameroon. *Sustainability (Switzerland)*, 14(22).  
<https://doi.org/10.3390/su142215093>
- Lyons, A. C., & Kass-Hanna, J. (2021). A methodological overview to defining and measuring “digital” financial literacy. *Financial planning review*, 4(2).  
<https://doi.org/10.1002/cfp2.1113>
- Lyons, A. C., Kass-Hanna, J., Joseph, S., Greenlee, A. J., & Professor, A. (2020). *Impacts of Financial and Digital Inclusion on Poverty in South Asia and Sub-Saharan Africa*.
- Matthews, B. H. (2019). Hidden constraints to digital financial inclusion: the oral-literate divide. *Development in Practice*, 29(8), 1014–1028.  
<https://doi.org/10.1080/09614524.2019.1654979>
- Mondal, Susanta. (2020). 33-DIGITAL FI in INDIA. *International Journal of Innovative Science and Research Technology*, 5(3), 1054–1059.
- Morgan, P. J., & Trinh, L. Q. (2019). *ADB Working Paper Series fintech and financial literacy in the lao pdr* Asian Development Bank Institute.  
<https://www.adb.org/publications/fintech-and-financial-literacy-lao-pdr>
- mSTAR project, & USAID. (2019). *India Digital Financial Inclusion- Journey Map Report*.
- Nandru, P., Chendragiri, M., & Velayutham, A. (2021). *Determinants of digital financial inclusion in India: Evidence from the World Bank’s global index database*.  
<https://doi.org/10.21203/rs.3.rs-329541/v1>
- Naumenkova, S., Mishchenko, S., & Dorofiev, D. (2019). Digital financial inclusion: Evidence from Ukraine. In *Investment Management and Financial Innovations* (Vol. 16, Issue 3, pp. 194–205). LLC CPC Business Perspectives.  
[https://doi.org/10.21511/imfi.16\(3\).2019.18](https://doi.org/10.21511/imfi.16(3).2019.18)
- NITI Aayog. (2022). *A Proposal for Licensing & Regulatory Regime for India DIGITAL BANKS REPORT*. [https://www.niti.gov.in/sites/default/files/2022-07/DigitalBanking07202022\\_compressed.pdf](https://www.niti.gov.in/sites/default/files/2022-07/DigitalBanking07202022_compressed.pdf)
- Nunnally, J. C. (1978). An Overview of Psychological Measurement. In *Clinical Diagnosis of Mental Disorder*.

- Oecd. (2018). *oecd/infe toolkit for measuring financial literacy and financial inclusion*.
- Oggero, N., Rossi, M. C., & Ughetto, E. (2020). Entrepreneurial spirits in women and men. The role of financial literacy and digital skills. *Small Business Economics*, 55(2), 313–327. <https://doi.org/10.1007/s11187-019-00299-7>
- Pazarbasioglu, C., Mora, A. G., Uttamchandani, M., Natarajan, H., Feyen, E., & Saal, M. (2020a). *DIGITAL FINANCIAL SERVICES*.
- Pazarbasioglu, C., Mora, A. G., Uttamchandani, M., Natarajan, H., Feyen, E., & Saal, M. (2020b). *Report on Digital Financial Services*.
- RBI. (2021). *BRICS Digital Financial Inclusion Report*.
- Saroy, R., Awasthy, S., Singh, N. K., Adki, S. M., & Dhal, S. (2022). The impact of covid-19 on digital payment habits of indian households. *Bulletin of Monetary Economics and Banking*, 25(Special Issue, Article-4), 19–42. <https://doi.org/10.21098/bemp.v25i0>
- Shen, Y., Hueng, C. J., & Hu, W. (2020). Using digital technology to improve financial inclusion in China. *Applied Economics Letters*, 27(1), 30–34. <https://doi.org/10.1080/13504851.2019.1606401>
- Shree, S., Pratap, B., Saroy, R., & Dhal, S. (2021). Digital payments and consumer experience in India: a survey based empirical study. *Journal of Banking and Financial Technology*. <https://doi.org/10.1007/s42786-020-00024-z>
- Sivathanu, B. (2019). Adoption of digital payment systems in the era of demonetization in India: An empirical study. *Journal of Science and Technology Policy Management*, 10(1), 143–171. <https://doi.org/10.1108/JSTPM-07-2017-0033>
- Tay, L.-Y., Tai, H.-T., & Tan, G.-S. (2022). Digital financial inclusion: A gateway to sustainable development. *Heliyon*, 8. <https://doi.org/10.1016/j.heliyon.2022.e09766>
- World Economic Forum. (2022). *ASEAN Digital Generation Report-Digital Financial Inclusion*. [https://www3.weforum.org/docs/WEF\\_ASEAN\\_Digital\\_Generation\\_Report\\_2022.pdf](https://www3.weforum.org/docs/WEF_ASEAN_Digital_Generation_Report_2022.pdf)