

## **“RECENT TRENDS TOWARDS DIGITALISATION AND ITS IMPACT ON FINANCIAL INCLUSION.”**

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### **INTRODUCTION**

In the last ten years, India has seen a major revolution in digitalisation. The government has started the ‘Digital India’ program for rapid digitalisation of administration. The number of internets, broadband, and smartphone users has increased tremendously. Various schemes like Jan-Dhan Yojana, the BHIM app, Direct Benefit Transfer (DBT) scheme have been launched to improve financial access for ‘hard-to-reach people’ (Nahata, 2018). In this context, this study will explore the impact of digitalisation on financial inclusion concerning the above Government initiatives and other private financial technology initiatives. The time series data related to digitalisation, access and usage of financial services are being used for analysis. The correlation and regression analysis of data is carried out to determine whether the increase in the number of Smartphones, speed of Broadband, Mobile/Digital payment methods and access to financial services have a direct and positive impact on the usage of financial services by ‘hard to reach’ people, as per reports of TRAI, the number of mobile phone users in India was 584.32 million in 2010, which increased to 1157.75 million in 2020. The number of internet users in India was 16.18 million in 2010, which rose to 743.18 in 2020. Similarly, the number of broadband users also increased from 8.8 million to 687.44 million. The number of smartphone users in India in 2010 was 34 million, which grew to 748.32 million in 2020. According to RBI data, the number of commercial bank branches was 28.7 per 1000 km<sup>2</sup> in 2010 and increased to 50.53 per 1000 km<sup>2</sup> in 2020. The number of ATMs per 1,000 km<sup>2</sup> in the country has increased from 20.7969 in 2010 to 73.6741 in 2020. The number of no-frills accounts in 2010 was 740 lakhs which increased to 6000 lakhs in 2020. The value of mobile money transactions in 2010 was Rs. 236246 thousand. It increased to Rs. 5201991118 thousand.

### **Literature Review**

The term digitalisation is generally used for the digital remodelling of the community and economy. It creates new revenue models and value-adding opportunities. It uses digital techniques to transform business models. It is the transition of the economy from the age of industrial society using analogue techniques to a knowledge-based society characterised by digital techniques. (Evans, 2018).

Digitalisation was initiated in the early 1990s and got a big push at the start of this century. The reason for this was an increase in the number of internet connections. It was further stimulated by high-speed internet facilities like broadband. Internet access through mobile phone devices completely changed the entire scenario (Hüther, 2016). A large number of new business models based on data access through mobile phones emerged. The use of technologies such as the 5G internet, artificial intelligence, the internet of things and the use of robotics is increasing day by day in daily life (T. Berger & Frey, 2016).

Digitalisation is impacting all sectors of the economy and society. But speed and intensity of impact are different in different domains of the economy (Schuetz, 2019). For example, citizen services through public administration are slowest in adopting digital techniques. It is still using paper documents and dealing with files. But the market and businesses are adapting and adopting digital technology much faster than others. (Criscuolo et al., 2018).

Digital currency backed by Central Bank can help to attain a higher level of welfare in the economy as it can use the capacity of network linkage and exchange. But before introducing digital currencies, Central banks

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have to deal with many regulatory and legal issues. The reasons such as higher level of financial inclusion, efficient payment system, higher magnitude of revenue generation, transparency in surveillance, tracing of illegal transactions and allowing a public monopoly to counter the competition from private and foreign digital currencies are forcing central banks to introduce digital currency (Raskin & Yermack, 2016).

Financial inclusion aims to bring all sections of society under the ambit of formal financial services irrespective of income, age, community, gender etc. Access to financial services is the first and foremost requirement for the financial inclusion of society. Having access to an operational transaction account is the first step in the direction of financial inclusion. These accounts act as a doorway to other financial services and enable them to earn a day-to-day livelihood. It helps individuals and businesses to plan for long-term objectives and unforeseen exigencies (Priyadarshee et al., 2010).

The person with a transaction account has more chances to use financial services for credit, insurance, expanding business, investing in health education and absorbing the effect of financial shocks. All these services help to improve the quality of life. This is the main reason why having access to a transaction account is the focal point of the Universal Financial Access 2020 (UFA, 2020) initiative of the World Bank Group (Ali et al., 2020).

Great progress has already been made towards providing access as to the transaction account almost everywhere in the world. About 1.2 billion adults around the world have been given access to transaction accounts between 2011 and 2018. Now approximately 70% of adults in the world have an account. However, 1.7 billion adults are still out of coverage, according to the latest Findex data all over the world. In countries like India, China, Thailand and Kenya, where more than 80% of people have access to transaction accounts, usage of accounts for financial services is the next target of governments to improve the level of financial inclusion (Duncombe & Boateng, 2009).

## Objectives

The increased level of digitalisation led us to think that it will help to increase the reach of financial services (at least basic financial services) to underprivileged or un-served populations. Innovative technologies such as Artificial intelligence and Fin-tech have lowered the marginal cost of these financial services (Lynch, 2020). In light of this, here are some important objectives of this study.

- To explore the relationship between digitalisation and the value of mobile money transactions.
- To find out the linkage between digitalisation and the usage of financial services by people.
- To know the level of correspondence between access to financial services and usage of financial services by people.

## Conceptual Framework

Digital transformation is posing challenges for all types of government machinery in the area of public administration, financial management, regulatory framework and policy implementation. Smartphones have brought digitalisation into everyone's hands and to the door of everyone (Zeranski & Sancak, 2020). Digitalisation is impacting the lives of people like no other technology. The application of newer technology questioning the existing social model, for example, an online portal leaving behind their physical counterparts, small and decentralised financial technology startups are challenging traditional banks (Ali et al., 2020). Many indicators or parameters can be used to measure the level of digitalisation in the economy, such as the number of internet users, number of smartphone users, number of broadband users etc. (Fahmi & Sari, 2020). After a detailed and systematic literature review following five parameters are selected for analysis in this study. The secondary data is collected from various government and other related agencies for these indicators for the period of 2010 to 2020.

Name of variable	Notation in data analysis
• Mobile phone users (No.)	• (Digit_1)
• Total Tele-density	• (Digit_2)
• Internet users (No.)	• (Digit_3)
• Broadband users (No.)	• (Digit_4)
• Smartphones (No.)	• (Digit_5)

Financial inclusion can be viewed from many perspectives. But assessment or availability of financial services and usage of financial services are the two most important. These two variables can be assessed by using various parameters (Behl & Pal, 2016). The following four parameters for measuring coverage of financial services are used in this study.

Name of variable	Notation in data analysis
• No. of commercial bank branches per 1,000 km <sup>2</sup> -(Access_1)	• (Access_1)
• No. of commercial bank branches per 100,000 adults	• (Access_2)
• No. of ATMs per 1,000 km <sup>2</sup>	• (Access_3)
• No. of ATMs per 100,000 adults	• (Access_4)

Financial service or coverage is of no use if these services or products are not used regularly by users. Regular use of financial services leads to real financial inclusion in society. Usage is being assessed by various parameters such as the number of no-frill accounts, the number of accounts with an overdraft facility, the number of accounts having general credit cards (GCC) and the use of mobile banking for money transactions. The following nine indices are selected for analysis of financial inclusion for this study (Deb & Agrawal, 2017).

Name of variable	Notation in data analysis
• No. of Basic Saving Bank Deposit Account (BSBDA)	• (Usage_1)
• Loans to Weaker Sections (Balance O/s in Rs.)	• (Usage_2)
• Value of mobile money transactions	• (Usage_3)

## Research Methodology And Data Collection

- HYPOTHESES
- H1-Digitalisation has a direct influence on the usage of financial services by people.
- H2-The access to financial services has a direct relationship with people's usage of financial services.
- H3-Digitalisation has a direct impact on the value of mobile money transactions.

The study under consideration is a quantitative and uses time series data for India related to digitalisation, and Financial inclusion for the last decade, i.e. 2010-20. The study uses secondary data published by agencies of the Government of India, international organisations and other related establishments. Some of these sources are following:

- RBI Reports and Bulletins.
- NABARD Reports.
- PMJDY Website.
- TRAI Reports and Statistics.

- World Bank Development reports.
- IMF Reports related to economy.

## Data Analysis

Data collected for variables of digitalisation and financial inclusion is normalised in excel using following formula

$$X \text{ new} = (X - X \text{ min}) / (X \text{ max} - X \text{ min})$$

Where X: It is a set of the observed values.

X min: It is the minimum values in X

X max: It is the maximum values in X

Descriptive statistics for variables of digitalisation and financial inclusion shows mean, median, maximum, minimum, standard deviation, skewness, probability and kurtosis (Table No. 1).

**Table No. 1-Descriptive statistics**

	ACCESS 1	ACCESS 2	ACCESS 3	ACCESS 4	DIGIT 1	DIGIT 2	DIGIT 3	DIGIT 4	DIGIT 5	USAGE 1	USAGE 2	USAGE 3
Mean	0.565692	0.618993	0.622868	0.645721	0.658050	0.619181	0.404921	0.295061	0.374241	0.524955	0.414602	0.236567
Median	0.637435	0.741461	0.777959	0.840331	0.643593	0.591849	0.393626	0.133246	0.303309	0.615691	0.366893	0.032470
Maximum	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Minimum	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Std. Dev.	0.360655	0.377338	0.384687	0.385166	0.313197	0.315031	0.342363	0.358699	0.334421	0.388356	0.333093	0.360305
Skewness	-0.331265	-0.496722	-0.522966	-0.616094	-0.638075	-0.430810	0.313042	0.926983	0.641799	-0.125014	0.366597	1.338858
Kurtosis	1.616052	1.670487	1.625566	1.707088	2.698164	2.359178	1.995407	2.396337	2.192845	1.342198	1.973857	3.231013
Jarque...	1.079035	1.262496	1.367228	1.462040	0.788180	0.528477	0.642211	1.742399	1.053765	1.288294	0.728999	3.310787
Probability	0.583029	0.531928	0.504789	0.481418	0.674293	0.767790	0.725347	0.418449	0.590443	0.525110	0.694544	0.191017
Sum	6.222615	6.808925	6.851546	7.102928	7.238545	6.810986	4.454134	3.245672	4.116656	5.774506	4.560625	2.602233
Sum S...	1.300722	1.423839	1.479842	1.483532	0.980923	0.992446	1.172123	1.286649	1.118376	1.508206	1.109506	1.298196
Observ...	11	11	11	11	11	11	11	11	11	11	11	11

## Impact of Selected Variables on Financial Inclusion

The bivariate regression model is used to study the relationship between three dependent variables of financial inclusion, i.e. No. Of BSBDA, Loans to Weaker Sections and Value of mobile money transactions and variables of digitalisation (five) and access to financial services (four). The regression Equation used for analysing the impact of various independent variables on financial inclusion is

$$(\text{Variable of financial inclusion})_t = C_1 + C_2 (\text{Selected Determinant Variable})_t$$

Where  $C_1$  and  $C_2$  are regression coefficients, and  $t$  is used for the time variable

The Estimation Equation for No. of BSBDA used is

$$(\text{No. of BSBDA})_t = C_1 + C_2 (\text{Selected Determinant Variable})_t$$

Table No. 2 Regression Analysis for BSBDA							
Dependent Variable	Independent Variable	Coefficient	S. Error	t-Statistic	p-value	R-square	F-Statistic
No. of BSBDA	Mobile phone users (No.)	1.1444	0.1590	7.1952	0.0001	0.8519	51.7716
	c	-0.2281	0.1149	-1.9850	0.0784		
No. of BSBDA	Total Tele-density	1.1228	0.1695	6.6207	0.0001	0.8296	43.8343
	c	-0.1702	0.1167	-1.4590	0.1785		
No. of BSBDA	Internet users (No.)	1.0777	0.1179	9.1371	0.0000	0.9026	83.4878
	c	0.0885	0.0613	1.4435	0.1828		
No. of BSBDA	Broadband users (No.)	0.9361	0.1813	5.1634	0.0006	0.7476	26.6611
	c	0.2487	0.0818	3.0373	0.0141		
No. of BSBDA	Smartphones (No.)	1.0780	0.1439	7.4895	0.0000	0.8617	56.0929
	c	0.1215	0.0707	1.7171	0.1201		
No. of BSBDA	No. of com. bank branches per 1,000 km <sup>2</sup>	1.0644	0.0541	19.6422	0.0000	0.9772	385.8184
	c	-0.0772	0.0358	-2.1519	0.0598		
No. of BSBDA	No. of com. bank branches per 100,000 adults	1.0051	0.0736	13.6411	0.0000	0.9538	186.0813
	c	-0.0972	0.0527	-1.8432	0.0984		
No. of BSBDA	No. of ATMs per 1,000 km <sup>2</sup>	0.9781	0.0832	11.7536	0.0000	0.9388	139.1492
	c	-0.0843	0.0601	-1.4016	0.1945		
No. of BSBDA	No. of ATMs per 100,000 adults	0.9559	0.1069	8.9419	0.0000	0.8988	79.9579
	c	-0.0923	0.0794	-1.1622	0.2750		

(Source: - Prepared by Authors)

The results of the regression analysis of No. of BSBDA with selected determinant variables are shown in Table No. 2. Analysis of these results shows that p values of slope coefficients of t-statistics of all nine independent variables Mobile phones users (No.), Total Tele-density, Internet users (No.), Broadband users (No.), Smartphones (No.), No. of com. bank branches per 1,000 km<sup>2</sup>, No. of com. bank branches per 100,000 adults, No. of ATMs per 1,000 km<sup>2</sup> and No. of ATMs per 100,000 adults is less than the level of significance, i.e. 0.05. Hence a conclusion can be drawn from here that the No. of BSBDA depends on all of these variables at confidence of 95%. This outcome is also confirmed by results of the Wald test. The Wald test results are shown in Table No. 3. The p-value of all Wald test is zero, which certify the results of regression analysis.

Table No. 3 Wald Test for BSBDA Total				
Dependent Variable	Independent Variable	Chi-square	p-value	Remarks
No. of BSBDA	Mobile phone users (No.)	51.7716	0.0000	Mobile phone users (No.) significantly impact No. of BSBDA
No. of BSBDA	Total Tele-density	43.8343	0.0000	Total Tele-density significantly impacts No. of BSBDA

No. of BSBDA	Internet users (No.)	83.4878	0.0000	Internet users (No.) significantly impact No. of BSBDA
No. of BSBDA	Broadband users (No.)	26.6611	0.0000	Broadband users (No.) significantly impact No. of BSBDA
No. of BSBDA	Smartphones (No.)	56.0929	0.0000	Smartphones (No.) significantly impact No. of BSBDA
No. of BSBDA	No. of com. bank branches per 1,000 km <sup>2</sup>	385.8184	0.0000	No. of com. bank branches per 1,000 km <sup>2</sup> significantly impacts No. of BSBDA
No. of BSBDA	No. of com. bank branches per 100,000 adults	186.0813	0.0000	No. of com. bank branches per 100,000 adults significantly impacts No. of BSBDA
No. of BSBDA	No. of ATMs per 1,000 km <sup>2</sup>	139.1492	0.0000	No. of ATMs per 1,000 km <sup>2</sup> significantly impacts No. of BSBDA
No. of BSBDA	No. of ATMs per 100,000 adults	79.9579	0.0000	No. of ATMs per 100,000 adults significantly impacts No. of BSBDA

(Source: - Prepared by Authors)

The Estimation Equation for Loans to Weaker Sections (Balance O/s in Rs.) used is

$$(\text{Loans to Weaker Sections})_t = C_1 + C_2 (\text{Selected Determinant Variable})_t$$

The results of regression analysis of Loans to Weaker Sections with selected determinant variables are shown in Table No. 4. Analysis of these results shows that p values of slope coefficients of t-statistics of all nine independent variables Mobile phones users (No.), Total Tele-density, Internet users (No.), Broadband users (No.), Smartphones (No.), No. of com. bank branches per 1,000 km<sup>2</sup>, No. Of com. bank branches per 100,000 adults, No. Of ATMs per 1,000 km<sup>2</sup> and No. Of ATMs per 100,000 adults is less than the level of significance, i.e. .05. Hence a conclusion can be drawn from here that Loans to Weaker Sections depend on all of these variables at a confidence of 95%. These results are further confirmed by the results of the Wald test. The Wald test results are shown in Table No. 5. The p-value of all Wald test is zero, which certify the results of regression analysis.

Table No. 4 Regression Analysis for Loans to Weaker Sections (Balance O/s)							
Dependent Variable	Independent Variable	Coefficient	S. Error	t-Statistic	p-value	R-square	F-Statistic
Loans to Weaker Sections (Balance O/s)	Mobile phone users (No.)	0.9353	0.1687	5.5431	0.0004	0.7734	30.7263
	c	-0.2008	0.1219	-1.6475	0.1339		
Loans to Weaker Sections (Balance O/s)	Total Tele-density	0.8930	0.1886	4.7338	0.0011	0.7134	22.4094
	c	-0.1383	0.1298	-1.0658	0.3142		
Loans to Weaker Sections (Balance O/s)	Internet users (No.)	0.9688	0.0296	32.7053	0.0000	0.9916	1069.6370
	c	0.0222	0.0154	1.4468	0.1819		
Loans to Weaker Sections (Balance O/s)	Broadband users (No.)	0.8890	0.0893	9.9494	0.0000	0.9166	98.9905
	c	0.1522	0.0403	3.7724	0.0044		
Loans to Weaker Sections (Balance O/s)	Smartphones (No.)	0.9888	0.0397	24.8819	0.0000	0.9856	619.1133
	c	0.0445	0.0195	2.2788	0.0487		

Loans to Weaker Sections (Balance O/s)	No. of com. bank branches per 1,000 km <sup>2</sup>	0.8814	0.0919	9.5896	0.0000	0.9108	91.9622
	c	-0.0840	0.0608	-1.3809	0.2006		
Loans to Weaker Sections (Balance O/s)	No. of com. bank branches per 100,000 adults	0.8112	0.1159	6.9946	0.0001	0.8446	48.9248
	c	-0.0875	0.0830	-1.0545	0.3191		
Loans to Weaker Sections (Balance O/s)	No. of ATMs per 1,000 km <sup>2</sup>	0.7838	0.1226	6.3911	0.0001	0.8194	40.8467
	c	-0.0736	0.0886	-0.8304	0.4278		
Loans to Weaker Sections (Balance O/s)	No. of ATMs per 100,000 adults	0.7515	0.1426	5.2692	0.0005	0.7552	27.7654
	c	-0.0706	0.1059	-0.6671	0.5214		

(Source: - Prepared by Authors)

Table No. 5 Wald Test for Loans to Weaker Sections (Balance O/s)				
Dependent Variable	Independent Variable	Chi-square	p-value	Remarks
Loans to Weaker Sections (Balance O/s)	Mobile phone users (No.)	30.7263	0.0000	Mobile phones users (No.) significantly impact Loans to Weaker Sections (Balance O/s)
Loans to Weaker Sections (Balance O/s)	Total Tele-density	22.4094	0.0000	Total Tele-density significantly impacts Loans to Weaker Sections (Balance O/s)
Loans to Weaker Sections (Balance O/s)	Internet users (No.)	1069.637	0.0000	Internet users (No.) significantly impact Loans to Weaker Sections (Balance O/s)
Loans to Weaker Sections (Balance O/s)	Broadband users (No.)	98.9905	0.0000	Broadband users (No.) significantly impact Loans to Weaker Sections (Balance O/s)
Loans to Weaker Sections (Balance O/s)	Smartphones (No.)	619.1133	0.0000	Smartphones (No.) significantly impact Loans to Weaker Sections (Balance O/s)
Loans to Weaker Sections (Balance O/s)	No. of com. bank branches per 1,000 km <sup>2</sup>	91.9622	0.0000	No. of com. bank branches per 1,000 km <sup>2</sup> significantly impacts Loans to Weaker Sections (Balance O/s)
Loans to Weaker Sections (Balance O/s)	No. of com. bank branches per 100,000 adults	48.9248	0.0000	No. of com. bank branches per 100,000 adults significantly impacts Loans to Weaker Sections (Balance O/s)
Loans to Weaker Sections (Balance O/s)	No. of ATMs per 1,000 km <sup>2</sup>	40.8467	0.0000	No. of ATMs per 1,000 km <sup>2</sup> significantly impacts Loans to Weaker Sections (Balance O/s)
Loans to Weaker Sections (Balance O/s)	No. of ATMs per 100,000 adults	27.7654	0.0000	No. of ATMs per 100,000 adults significantly impacts Loans to Weaker Sections (Balance O/s)

(Source: - Prepared by Authors)

The Estimation Equation for the Value of mobile money transactions used is

(Value of mobile money transactions)<sub>t</sub> = C<sub>1</sub> + C<sub>2</sub> (Selected Determinant Variable)<sub>t</sub>

**Table No. 6 Regression Analysis for Value of mobile money transactions**

Dependent Variable	Independent Variable	Coefficient	S. Error	t-Statistic	p-value	R square	F-Statistic
Value of mobile money transactions	Mobile phone users (No.)	0.7806	0.2816	2.7718	0.0217	0.4605	7.6829
	c	-0.2771	0.2035	-1.3617	0.2064		
Value of mobile money transactions	Total Tele-density	0.7268	0.2943	2.4691	0.0356	0.4038	6.0966
	c	-0.2134	0.2025	-1.0537	0.3195		
Value of mobile money transactions	Internet users (No.)	0.9365	0.1600	5.8533	0.0002	0.7919	34.2616
	c	-0.1426	0.0832	-1.7143	0.1206		
Value of mobile money transactions	Broadband users (No.)	0.9671	0.0904	10.6917	0.0000	0.9270	114.3136
	c	-0.0487	0.0408	-1.1924	0.2629		
Value of mobile money transactions	Smartphones (No.)	1.0089	0.1259	8.0098	0.0000	0.8769	64.1579
	c	-0.1410	0.0619	-2.2771	0.0488		
Value of mobile money transactions	No. of com. bank branches per 1,000 km <sup>2</sup>	0.7363	0.2250	3.2716	0.0097	0.5432	10.7034
	c	-0.1799	0.1489	-1.2078	0.2579		
Value of mobile money transactions	No. of com. bank branches per 100,000 adults	0.6368	0.2371	2.6855	0.0250	0.4448	7.2123
	c	-0.1576	0.1697	-0.9285	0.3774		
Value of mobile money transactions	No. of ATMs per 1,000 km <sup>2</sup>	0.6008	0.2394	2.5089	0.0334	0.4115	6.2949
	c	-0.1377	0.1731	-0.7954	0.4468		
Value of mobile money transactions	No. of ATMs per 100,000 adults	0.5439	0.2536	2.1442	0.0606	0.3381	4.5979
	c	-0.1146	0.188	-0.6085	0.558		

The results of regression analysis of the value of mobile money transactions with selected determinant variables are shown in Table No. 6. Analysis of these results shows that p values of slope coefficients of t-statistics of all nine independent variables Mobile phones users (No.), Total Tele-density, Internet users (No.), Broadband users (No.), Smartphones (No.), No. of com. bank branches per 1,000 km<sup>2</sup>, No. Of com. bank branches per 100,000 adults, No. Of ATMs per 1,000 km<sup>2</sup> and No. Of ATMs per 100,000 adults, it is less than the level of significance, i.e. .05. Hence a conclusion can be drawn from here that all of these variables impact the value of mobile money transactions at a confidence of 95%. These results are also confirmed by the results of the Wald test. The Wald test results are shown in Table No. 7. The p-value of all Wald test is zero, which certify the results of regression analysis.

**Table No. 7 Wald Test for Value of mobile money transactions**

Dependent Variable	Independent Variable	Chi-square	p-value	Remarks
Value of mobile money transactions	Mobile phone users (No.)	7.6829	0.0056	Mobile phones users (No.) significantly impact the value of mobile money transactions



Value of mobile money transactions	Total Tele-density	6.0966	0.0135	Total Tele-density significantly impacts the value of mobile money transactions.
Value of mobile money transactions	Internet users (No.)	34.2616	0.0000	Internet users (No.) significantly impact the value of mobile money transactions
Value of mobile money transactions	Broadband users (No.)	114.3136	0.0000	Broadband users (No.) significantly impact the value of mobile money transactions.
Value of mobile money transactions	Smartphones (No.)	64.1579	0.0000	Smartphones (No.) significantly impact the value of mobile money transactions
Value of mobile money transactions	No. of com. bank branches per 1,000 km <sup>2</sup>	10.7034	0.0011	No. of com. bank branches per 1,000 km <sup>2</sup> significantly impacts the value of mobile money transactions
Value of mobile money transactions	No. of com. bank branches per 100,000 adults	7.2123	0.0072	No. of com. bank branches per 100,000 adults significantly impacts the value of mobile money transactions
Value of mobile money transactions	No. of ATMs per 1,000 km <sup>2</sup>	6.2949	0.0121	No. of ATMs per 1,000 km <sup>2</sup> significantly impacts the value of mobile money transactions
Value of mobile money transactions	No. of ATMs per 100,000 adults	4.5979	0.0320	No. of ATMs per 100,000 adults significantly impacts the value of mobile money transactions.

## Findings

In light of the above results, the first Null hypothesis, i.e. digitalisation has no direct impact on the usage of financial services by people, gets rejected as all five variables of digitalisation have a direct and positive influence on no. of BSBDAs, amount of loans to weaker sections and value of mobile money transaction. Hence alternate hypothesis, i.e. digitalisation has a direct influence on people's usage of financial services, is accepted.

The second Null hypothesis, i.e. the access to financial services has no direct relationship with the usage of financial services by people, is also rejected as all four variables of access to financial services have a direct and positive relationship impact on no. of BSBDAs, amount of loan to weaker section and value of mobile money transactions. Accordingly, an alternate hypothesis, i.e. the access to financial services has a direct relationship with the usage of financial services by people, is also accepted.

The third Null hypothesis, i.e. digitalisation has no direct influence on the value of mobile money transactions, is too rejected as all five variables of digitalisation have a direct and positive impact on the value of mobile money transactions. Therefore alternate hypothesis, i.e. digitalisation has no direct influence on the value of mobile money transactions, is accepted.

## Conclusion

The main objective of this paper is to analyse recent trends in digitalisation and explore the relationship between digitalisation, access or availability and usage of financial services and products. As we can discern from our analysis that India had tremendous growth in all parameters of digitalisation, such as the number of internet users, number of smartphone users, number of broadband users etc. (Umans et al., 2018). The future prediction in this direction is a promising one. Government should continue to improve the level and reach of digitalisation as it is strongly correlated to financial inclusion. Variables of digitalisation like smartphones

and broadband have a strong relationship with the financial inclusion of society. So the government can give extra attention to increasing the reach of lower-income people to smartphones and broadband. Access to financial services is another area where the government can concentrate its efforts, as the availability of financial services is still a hindrance to the financial inclusion of society. India is following a pattern that is different from that of developed countries in this area but will soon reach a landmark comparable to theirs (Ananth & Öncü, 2013). As far as our hypotheses are concerned, all three null hypotheses are rejected. Three variables, i.e. digitalisation and access or availability of financial services, are strongly correlated with the usage of financial services. The finding of this study will be very helpful for policymakers and management involved in the banking system.

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