“Changing customer mindset in adopting digital financial services during the COVID-19 pandemic: Evidence from India”

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CHANGING CUSTOMER MINDSET IN ADOPTING DIGITAL FINANCIAL SERVICES DURING THE COVID-19 PANDEMIC: EVIDENCE FROM INDIA

Abstract

Digital Financial Services (DFS) have been growing steadily all over the world. The COVID-19 crisis has reinforced the need for DFS. This study aims to examine the growth of DFS in the global and Indian markets and to analyze the factors that change the mindsets and attitudes of adults towards the adoption of DFS during the pandemic. The growth of DFS is analyzed using secondary data. The changing customer mindset is studied and analyzed through primary data collected by a survey approach. The unit of analysis includes adults who use or prefer to use DFS. A total of 384 respondents, determined by Krejcie and Morgan formula, were personally interviewed. 384 is taken as sample size as this sample size avoids type II errors in the data analysis. The collected data were processed in SPSS21 software. The study results found that technological benefits (67.9%) have the most significant positive effect on changing people's mindsets and attitudes towards DFS followed by the pandemic forces (50.7%). Peer influences (33.2%) and perceived trust (38.3%) have also affected the change in mindsets and attitudes of adults regarding DFS. But the change in mindset is significantly and positively influenced by perceived risk (50.1%) rather than affecting negatively. So, the factors are confirmed again. The factors that drive changes in mindsets and attitudes of adults towards the adoption of DFS are Pandemic Forces & Convenience, Perceived Safety and Security, User Benefits and Experiences, Peer Influences, and Perceived Trust during the pandemic.

Keywords financial institutions and services, behavioral finance, technological changes, risk management

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INTRODUCTION

COVID-19 has adversely impacted the normal life of the public and the economy all over the world. The COVID-19 pandemic has affected India adversely. All kinds of industry, except health care, irrespective of their nature have got a hit. The governments lay down strict Anti-COVID-19 spread rules and impose lockdowns that affect the normal lives of the households, businessmen, and employees.

The World Bank predicted that the economic growth of India would be 1.5 percent to 2.8 percent for the financial year 2020–2021 rather than the average growth rate of 6 percent (KPMG, 2020). The repercussions of the pandemic are more disappointing. It was predicted that 140 million individuals have lost their job, and approximately 40 million migrant workers have lost their livelihoods (CMIE, 2020). Furthermore, it was reported that 45 percent of households have a sharp income drop (The World Bank & KNOMAD, 2020). Key business sectors of the economy such as Travel and Tourism, Manufacturing, Auto manufacturing, and housing sectors are petrified. The banking sector and insurance sector are moderately affected by the pandemic. These sectors have lost in some respects and gained in some other areas (FICCI,

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2020). The government of India initiated many economic reliefs such as a financial package to boost the economy, and a loan moratorium to overcome the repercussions of the pandemic.

One of the global responses to tackle the economic impact of the pandemic has been Digital Financial Services (DFS). Digital Financial Services are payments, lending, remittances, insurance, personal finance management, and other financial services that can be accessed and used through digital platforms. Digital Financial Services comprise traditional financial solutions such as debit cards, credit cards, and Point of Sales and comprise modern financial solutions such as mobile wallets, digital payments, e-commerce, digital lending platforms, crowdfunding, Peer-to-Peer Lending (P2P), App-based lending, InsurTech, and WealthTech. The modern financial solutions are termed Financial Technology (FinTech) solutions. FinTech has been rising globally having an estimated worth of more than $127 billion (Nawayseh, 2020). FinTech has provided a lot of employment opportunities and a source of income for the economies of many countries.

The COVID-19 pandemic impacted key payment markets and liquidity of the economy. Further, consumer spending has drastically come down. All over the world, especially in developing and emerging economies, interest in FinTech has been growing among the people during the pandemic as the FinTech companies provide financial solutions that preserve the livelihoods of the people. Furthermore, businesses also place faith in the FinTechs because they enable the movement of cash, credit, savings, salaries, peer-to-peer transfers, and other financial transactions during a hard time of the pandemic.

Both economically advanced and emerging countries have recorded considerable development in the access and usage of DFS during the pandemic as individuals and businessmen have considered other ways to carry out their financial transactions that are affected due to lockdown, and social distancing (Benni, 2021). On the other hand, traditional financial institutions (FIs) are gradually embracing financial technologies to accelerate their business. Thus, DFS has become a new normal. Furthermore, the growth of DFS indicates the changing mindset of the people towards the adoption of DFS. So, this study aims to study the growth of DFS and to identify the determinants of change in the mindset and attitude of individuals towards the adoption of DFS.

1. LITERATURE REVIEW

Digital financial services have become a matter of research interest for the academic community in recent times. Many research works are carried out on DFS and the factors that determine the adoption of DFS. DFS refers to "the broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances, and insurance. The digital financial services (DFS) concept includes mobile financial services (MFS)" (AFI, 2016). DFS is the financial services that make use of digital technologies for their delivery and usage (Pazarbasioglu et al., 2020). Low cost and speedy internet connections are required to gain access to DFS by all kinds of people (Ozili, 2018).

"Digital finance can promote financial inclusion and expand financial services to non-financial sectors" (The World Bank, 2014). Digital financial services helped numerous customers to access formal digital financial transactions (CGAP, 2017). Technology innovations and disruptive business models have boosted DFS as DFS lowers transaction costs and provides speedy, precise, secured, transparent, and tailor-made financial solutions to the poor (Pazarbasioglu et al., 2020). Digital financial services exert a significant effect on the growth of the economy (Ghosh, 2016). The widespread application of DFS would improve the Gross Domestic Product (GDP) of all developing countries to the extent of 6% (Manyika et al., 2016). However, many customers, especially in emerging economies, do not use DFS as they do not have trust and confidence in digital platforms (Malady, 2016). Further, a low degree of Digital Financial Literacy (DFL) becomes a constraint on DFS growth (ADB, 2017). Despite the rise of DFS, many developing countries face challenges

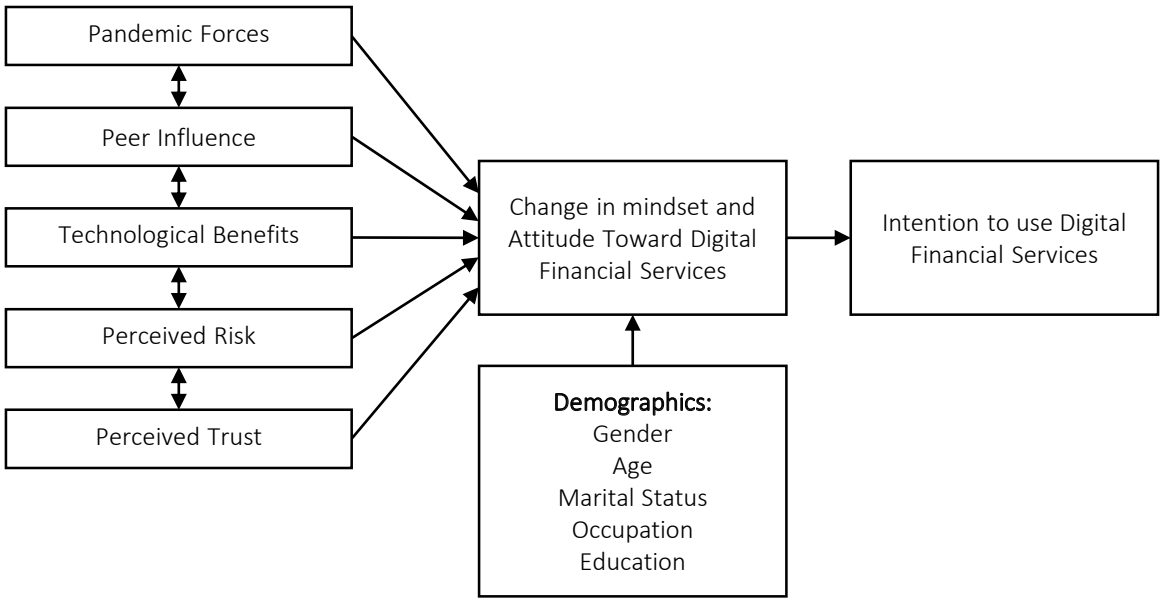

Figure 1. Factors changing adult's mindset and attitudes towards the intention to use digital financial services

in gaining the confidence of merchants to accept digital payments. Micro and Small businesses in rural and urban areas are reluctant to take on digital payments as there is a lower amount of liquidity, higher bank fee, and set-up costs (Ozili, 2018).

Digital Finance Services enhance customer well-being both directly and indirectly by enabling a broader ecosystem. M-PESA helped households to withstand economic shocks by borrowing or getting gifts from friends and relatives (Jack & Suri, 2014). Biometrically authenticated cards used to pay wages in social security programs in India reduced corruption (Muralidharan et al., 2016).

Crises and extraordinary events brought changes in the mindset and/or behavior of Indian society and COVID-19 brought a positive mindset toward DFS among the people (KPMG, 2020). The lockdowns and social distancing increased DFS usage (Baicu et al., 2020). DFS has grown all over the world during the outbreak of COVID-19 (Benni, 2021).

There are many theories for acceptance of usage of technology such as the "Theory of Reasoned Action" (TRA) (Ajzen & Fishbein, 1980), "Technology Acceptance Model" (TAM) (Davis, 1989), "Matching Person and Technology (MPT) Model" (Scherer, 2002), "Unified Theory of Acceptance and Use of Technology" (UTAUT) (Venkatesh et al., 2003), and "Hedonic-Motivation System Adoption Model" (HMSAM) (Lowry et al., 2013).

Many factors impact the adoption of technology and digital financial services. Factors such as relative advantage, relative compatibility, quality, security, accessibility, and trust were used to measure the adoption of digital banking in Mauritius (Bachoo, 2015). Perceived risk, perceived trust, usefulness, comfortable usage, transaction cost, and social influence are applied to measure the acceptance of MFS (Masinge, 2010; Mbele-Sibotshiwe, 2013).

The benefits of digital banking, comfortability in usage, and trust in banking are used to determine customer attitude (Baicu et al., 2020). Social influence, benefits, risks, and trust are the factors that are applied to measure customers' choice of FinTech Applications (Nawayseh, 2020). The literature survey indicates that perceived use, trust, benefits, and social impact factors are predominantly used in determining the behavioral intentions to adopt the technology. This study has customized the factors used to measure the behavioral intentions of adopting DFS keeping the pandemic and the customers in mind and a conceptual research model has been developed (Figure 1).

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The hypotheses mentioned below are constructed.

H1: Pandemic forces significantly and positively affect the change in mindsets and attitudes toward Digital Financial Services.

H2: Peer influences significantly and positively affect the change in mindsets and attitudes toward Digital Financial Services.

H3: Technological benefits significantly and positively affect the change in mindsets and attitudes toward Digital Financial Services.

H4: Perceived risk significantly and negatively affects the change in mindsets and attitudes toward Digital Financial Services.

H5: Perceived trust significantly and positively affects the change in mindsets and attitudes toward Digital Financial Services.

H6: Change in mindset and attitude significantly and positively affects the intention to use digital financial services.

H7: Significant differences exist between the demographic attributes of the respondents and their mindsets and attitudes towards the adoption of DFS.

The study aims to analyze the growth of DFS in India in the course of the pandemic and determine the factors that change people's mindsets and attitudes towards DFS in the course of the pandemic among the people in India.

2. RESEARCH METHODS AND MATERIALS

The growth of DFS is analyzed by employing secondary data available from the Reserve Bank of India (RBI), The National Payment Corporation of India (NPCI), and The Ministry of Electronics and Information Technology (MeitY). Primary data is collected and used to ascertain the factors that change people's mindsets and attitudes towards digital financial services during the pandemic among the people in India. Table 1 portrays the research design employed.

Table 1. Research design

Specifics	Type
Purpose	Descriptive
Inquiry Type	Causal study
Method of the research	Survey method
Study environment	Non-contrived field study
Unit of the analysis	Adults
Time Horizon	Cross-sectional study
Data Type	Primary data
The locale of the study	Bangalore, India

This study is descriptive and examines the cause and effect of the selected variables such as the pandemic applied forces, peer influence, technological benefits, perceived risks, and perceived trust in behavioral intention to use DFS by adults. The survey method has been applied to collect primary data. A structured questionnaire has been used. The research instrument has two parts. Part A seeks information on the personal characteristics of the respondents, and Part B has five-point Likert scale statements to quantify the core constructs. Respondents of the study are the adults who use, who prefer to use, or who prefer to continue to use digital platforms for financial transactions in Bangalore. Questionnaires were distributed to the sample units in-person and collected back. It is a cross-sectional study conducted in Bangalore, India during the pandemic (June 2020 to December 2021). Many variables employed in this study to measure intention to use DFS have been identified based on works of the literature, and those variables are customized according to the prevailing condition, pandemic, and time. Further, new variables such as pandemic forces are brought into the study. Variables such as pandemic forces, peer influence, technological benefits, perceived risks, and perceived trust are used to assess the behavioral intention to use DFS by adults. Demographic characteristics of respondents such as gender, age, marital status, occupation, and education are investigated. DFS usage-related characteristics of respondents such as the preference to use digital platforms for financial transactions, usage of DFS, and the number of years of using DFS are also studied.

Employing Krejcie and Morgan's (1970) formula, the sample size considered for the study is 384.

Based on the nature and requirements of the study, the judgment sampling technique is applied. The sample consists of a variety of adults who are from different walks of life. The data collected using questionnaires were checked for reliability. 55 responses were used for the reliability analysis. Alpha Cronbach scores are 0.726, 0.681, 0.692, 0.752, 0.784, and 0.918 for pandemic forces, peer influence. Technological benefits, perceived risk, perceived trust, and intention to use DFS, respectively. Further, the research instrument was validated by academicians and industry experts.

3. RESULTS

Innovative and disruptive technologies have changed the way businesses are conducted all over the world. In addition to those technologies, COVID-19 pandemic has also modified the business scenario globally. DFS sector shows a lot of growth signs in India. The financial inclusion and digital finance initiatives of policymakers contributed to the development of the DFS sector in India (Moody's Investors Service, 2021). COVID-19 and a favorable economic environment step up the DFS growth in India (Moody's Investors Service, 2021). RBI built Digital Payment Index (DPI) in March 2018 keeping 2018 as a base year to measure the deepening and penetration of digital payments in India (Reserve Bank of India, 2021c). DPI scores for 2019 and 2020 were on the rise, which indicates appreciable penetration and growth of digital payments in India (Reserve Bank of India, 2021b). Amid the pandemic, India has outplayed China, the USA, and other countries in terms of digital real-time payments in the year 2020, and India is ranked in the top in real-time payments transactions with 20.5 billion transactions followed by China with 15.7 billion transactions (ACI Universal Payments, 2021).

DFS has increased in India during the crisis time due to the digital push by the Government of India along with the marketing strategies and customer rewarding models designed and offered by Paytm, PhonePe, Pine Labs, Razorpay, BharatPe, and others (Financial Express, 2021b). India contributed 15.6% to global real-time payments transactions and accounted for 22.9% of global other electronic payments in 2020 (ACI Universal Payments, 2021). The total value of digital payments for the year 2020–2021 has been INR 141.485173 trillion and the total volume of digital payments has reached 43.71 billion transactions in India (Reserve Bank of India, 2021a). It was estimated that there would be a 117.5% surge in digital transactions in the year 2021 when compared to 2020 (Reserve Bank of India, 2021a).

COVID-19 has devastated the economy of India. To come back to the growth track, the role of lending is extremely critical (Mukherjee, 2021). The Indian lending landscape has progressively embraced the digital route over time. Several factors contributed to the growing digital lending space in India (Gupta, 2021). The factors include growing demand for instant loans, inclusive approach, innovative lending models, innovative lending products, and conducive digital lending regulatory and policy environment. Digital lending to small businesses has greater growth capability in India (Moody's Investors Service, 2021). A considerable number of Micro, Small, and Medium Enterprises (MSMEs) in India lack access to bank credit as they do not have the required records. This situation is an opportunity for digital lending companies (Moody's Investors Service, 2021). During the pandemic, consumer and personal loans are major components in FinTech lending with an 87% share in active loans and consumer and personal loan sizes have come down, by 40%, to less than INR 9,000 (Equifax & SIDBI, 2021). Personal loans' value grows up and the value of business loan drop during the pandemic period (Equifax & SIDBI, 2021). Uttar Pradesh, Maharashtra, Delhi, Gujarat, and Rajasthan were the states that received more than 50% of Fintech loans during the pandemic. Digital Lending companies have revolutionized the lending style through new credit rating methods, unconventional products, and real-time solutions. The digital lending sector observed 38 percent Year on Year (YoY) growth as of September 2020, despite the COVID pandemic (Equifax & SIDBI, 2021).

"The impact of COVID-19 on global insurance markets is largely felt through asset risks, notably capital markets volatility, and weaker premium growth prospects" (S&P Global, 2021).

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Indian life insurance sector was healthy before the pandemic and COVID-19 reversed all the positive trends in the Indian insurance sector (Arthur D Little Global, 2021). However, the insurance industry survived during a hard time through better service and technology (Financial Express, 2021a). Many Indian insurance companies provide coverage for COVID-19 ailment. Insurers have been putting their maximum efforts to support their insured through digital platforms. Digit Insurance, an InsurTech, observed a 50% jump in health insurance sales during the pandemic (Business Today, 2021). Online distribution portal Policy bazaar has recorded a 35-40% increase in health insurance sales and a 20% increase in life insurance during the pandemic (Business Today, 2021). Thus, various components of digital finance have grown significantly during the pandemic.

The ongoing pandemic has changed the priorities of the common man from wealth creation to life survival. The pandemic will have repercussions on humanity (KPMG, 2020). Need for the necessities has become a priority over travel, and outdoor entertainment (Alan et al., 2020). Digital platforms are relied upon due to lockdown, social distancing, and supply chain disturbances. Digital Financial Services grow steadily all over the world including in India. Digital Payment systems have gained the confidence of the people (PWC, 2020). India has reached first place in real-time payments in the year 2020 with 20.5 billion real-time payments transactions (ACI Universal Payments, 2021). Many studies examined consumer feelings during COVID-19 in India and found that consumer feelings and sentiments have changed (Mehta et al., 2020).

The research objective of this study is to examine the determinants of the change in mindset and attitude of individuals towards the adoption of DFS during the pandemic period as the pandemic profoundly transformed the consumer requirements, and their behaviors. Normality tests were conducted to identify the nature of the data. The results (Table 2) indicate that the core variables of this study are not normally distributed.

Table 2. Tests for normality

Particulars	Kolmogorov-Smirnov[a]		Shapiro-Wilk	
	Statistic	p-value	Statistic	p-value
Pandemic Forces	.099	.000	.947	.000
Peer influence	.110	.000	.944	.000
Technological Benefits	.070	.000	.975	.000
Perceived Risk	.134	.000	.924	.000
Perceived Trust	.118	.000	.947	.000
Intention to use	.116	.000	.960	.000
Attitude	.047	.041	.986	.001

Note: a – Lilliefors Significance Correction.

In this study, 54.7% of the sample units are male and 45.3% are female. As far as the age of the respondents is concerned, 60.2% of the sample units are in the 31 years to 50 years age group, 18.2% are in the 19 years to 30 years age group, and 18% are aged between 51 years and 60 years and 3.6% are more than 60 years of age. 55.2% of the respondents are single and 44.8% are married. 93.7% of the respondents are salaried and 6.3% are self-employed. 62.2 of the respondents have completed under-graduation, 17.7% have completed post-graduation, 16.4% completed school education or diploma, and 3.6% completed educational qualifications such as Ph.D., Charted Accountancy, and Management Accountancy. Further, all the respondents used digital platforms to avail financial services and prefer to use digital platforms for financial transactions and all the respondents. 49.2% of the respondents use digital financial services for the last year, 45.1% have used DFS for more than two years but less than three years, and 5.7% of the respondents use DFS for more than three years.

Analysis of differences between demographic characteristics and core variables such as pandemic forces, peer influence, technological benefits, perceived risk, and perceived trust is done to understand the differences in perceptions towards the core variables. Hypothesis 7 has been tested and analyzed in this section by making more hypotheses.

Mann-Whitney test results presented in Table 3 reveal that respondents' perceptions on pandemic forces, peer influence, technological benefits, risk, and trust in using DFS do not differ significantly based on gender. Hence, both male and female respondents have the same level of perceptions of pandemic forces, peer influence, technological benefits, risk, and trust in using DFS.

Table 3. Difference between gender and the core variables

Source: Primary data.

Variables	P-value	Result
Gender and pandemic forces	0.552	NS
Gender and peer influence	0.787	NS
Gender and technological benefits	0.454	NS
Gender and perceived risk	0.561	NS
Gender and perceived trust	0.092	NS

Note: NS stands for "Not Significant" and S stands for "Significant".

Table 4. Difference between marital status and the core variables

Variables	P-value	Result
Marital status and pandemic forces	0.161	NS
Marital status and peer influence	0.418	NS
Marital status and technological benefits	0.604	NS
Marital status and perceived risk	0.670	NS
Marital status and perceived trust	0.678	NS

Mann-Whitney test results presented in Table 4 indicate that the respondents' perceptions on core variables do not significantly differ based on marital status and so, both single and married respondents have the same level of perceptions on pandemic forces, peer influence, technological benefits, risk, and trust in using DFS.

Table 5. Difference between age and the core variables

Variables	P-value	Result
Age and pandemic forces	0.089	NS
Age and peer influence	0.021	S
Age and technological benefits	0.556	NS
Age and perceived risk	0.827	NS
Age and perceived trust	0.000	S

Kruskal-Wallis test results presented in Table 5 disclose that the perceptions of the respondents on pandemic forces, technological benefits, and risk of using DFS do not differ significantly based on age. But the perceptions of peer influence and trust in using DFS significantly differ because of age.

Table 6 shows that perceptions of pandemic forces, peer influence, and trust in using DFS differ significantly with education qualifications. However, perceptions of technological benefits and risk do not differ significantly by education.

Table 7. Difference between occupation and the core variables

Variables	P-value	Result
Occupation and pandemic forces	0.255	NS
Occupation and peer influence	0.627	NS
Occupation and technological benefits	0.232	NS
Occupation and perceived risk	0.683	NS
Occupation and perceived trust	0.211	NS

Perceptions of respondents on pandemic forces, peer influence, technological benefits, risk, and trust in using DFS do not differ significantly based on occupation. The respondents have the same level of perceptions on pandemic forces, peer influence, technological benefits, risk, and trust in using DFS irrespective of occupation.

Kendall's Tau correlation, a non-parametric correlation tool, has been used to find out the relationship between the core variables of the study such as pandemic forces, peer influence, technological benefits, risk, trust, change in mindset and attitude, and intention to use DFS. The correlation results (Table 7) depict that the variables considered in the study such as perceptions of respondents on pandemic forces, peer influence, technological benefits, risk, and trust to measure the

Table 6. Difference between education and the core variables

Variables	P-value	Result
Education and pandemic forces	0.000	S
Education and peer influence	0.001	S
Education and technological benefits	0.051	NS
Education and perceived risk	0.171	NS
Education and perceived trust	0.000	S

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Table 8. Correlation among the core variables – Kendall's Tau

Particulars	1	2	3	4	5	6	7
1. Pandemic forces	1	–	–	–	–	–	–
2. Peer influence	0.137	1	–	–	–	–	–
3. Technological benefits	0.455	0.257	1	–	–	–	–
4. Perceived risk	0.353	0.324	0.385	1	–	–	–
5. Perceived Trust	0.260	0.220	0.285	0.282	1	–	–
6. Change in mindset and attitude	0.579	0.442	0.659	0.565	0.494	1	–
7. Intention to use	0.446	0.272	0.370	0.241	0.080	0.390	1

change in mindset and attitude of the respondents towards DFS are positively and moderately related although it was hypothesized that risk would negatively correlate with change in mindset and attitude of the respondents. The relationship between risk and change in mindset and attitude motivates to have more insight on variables considered through Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). Furthermore, the variables such as respondents' perceptions on pandemic forces, peer influence, technological benefits, risk, and trust are positively related to the intention to use DFS.

Regression Analysis has been used to check hypotheses 1 to 6, and the results are presented in Table 8. Regression results reveal that all the hypotheses except hypothesis 4 are accepted. Pandemic effects, peer influences, technological benefits, and perceived trust have significant positive effects on changes in respondents' mindsets and attitudes towards DFS. Perceived risk has a significant impact on the change in mindsets and attitudes of the respondents towards DFS, but it has a positive effect. So, null hypothesis 4 has been rejected. Further, a change in mindset and attitude of the respondents toward DFS significantly and positively affects the intention to use DFS. ANOVA p-values indicate that all the models considered for the study are significant. Durbin-Watson statistics exhibit that there are no serious autocorrelation issues in the study and there is no problem of multicollinearity as VIF values are 1.000.

Exploratory Factor Analysis is used to identify the factors that affect changing mindsets of customers in the adoption of DFS. Five variables such as pandemic forces, peer influences, technological benefits, perceived risk, and perceived trust are taken into consideration. When summing the communalities, the results show a value of 12.752 out of a standardized variance of 20.000. Thus, the variance is now reduced to 12.752, which equals 63.76%, i.e. (12.752/20.000 · 100). This means that 63.76% of the variance is common and 36.24% is unique. It can be observed in Table 9 that the first factor accounts for 24.914% of the variance, the second factor accounts for 12.725% of the variance, the third factor accounts for 10.660% variance, the fourth factor explains 8.675% variance, and the fifth one explains 6.785% variance. The rest of the factors are insignificant.

Table 8. Linear regression analysis

Null Hypotheses (H_0)	R^2 Value	Durbin-Watson	ANOVA p-value	Coefficients p-value	Decision
Pandemic forces significantly and positively affect the change in mindsets and attitudes toward Digital Financial Services	0.507	1.867	0.000	0.000	H_0 is accepted
Peer influences significantly and positively affect the change in mindsets and attitudes toward Digital Financial Services	0.332	1.924	0.000	0.000	H_0 is accepted
Technological benefits significantly and positively affect the change in mindsets and attitudes toward Digital Financial Services	0.679	1.986	0.000	0.000	H_0 is accepted
The perceived risk significantly and negatively affects the change in mindsets and attitudes toward Digital Financial Services	0.501	2.087	0.000	0.000	H_0 is rejected
Perceived trust significantly and positively affects the change in mindsets and attitudes toward Digital Financial Services	0.383	2.191	0.000	0.000	H_0 is accepted
Change in mindset and attitude significantly and positively affects the intention to use digital financial services	0.273	1.899	0.000	0.000	H_0 is accepted

Table 9. Total variance explained by extracted factors

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.983	24.914	24.914	4.983	24.914	24.914
2	2.545	12.725	37.640	2.545	12.725	37.640
3	2.132	10.660	48.299	2.132	10.660	48.299
4	1.735	8.675	56.975	1.735	8.675	56.975
5	1.357	6.785	63.759	1.357	6.785	63.759
6	.885	4.426	68.185	–	–	–
7	.805	4.023	72.208	–	–	–
8	.755	3.774	75.982	–	–	–
9	.591	2.956	78.939	–	–	–
10	.562	2.810	81.749	–	–	–
11	.530	2.652	84.401	–	–	–
12	.505	2.525	86.925	–	–	–
13	.418	2.088	89.013	–	–	–
14	.397	1.987	91.000	–	–	–
15	.360	1.802	92.802	–	–	–
16	.338	1.691	94.494	–	–	–
17	.324	1.618	96.111	–	–	–
18	.318	1.591	97.702	–	–	–
19	.263	1.313	99.016	–	–	–
20	.197	.984	100.000	–	–	–

Note: Extraction Method: Principal Component Analysis.

Component matrix on the loading of five variables on five factors extracted is presented in the appendix (Table A1).

Based on loadings of the factors, five factors found in factor analysis are named Pandemic forces and convenience, perceived safety, user benefits and

Table 10. Rotated component (factor) matrix

Dimensions of the variables	Component				
	1	2	3	4	5
Internet and digital finance services were useful in performing financial transactions during the pandemic	.578	–	–	–	.590
Lockdown imposed due to the pandemic made me use DFS	.512	–	–	–	
I am not interested in having physical access to financial services due to pandemic	.606	–	–	–	
Digital Financial Services reduce the pandemic risk exposure and enhance the quality of services	.823	–	–	–	
My relatives recommended the use of Digital Financial Services	–	–	–		
My family member, admired by me the most, influenced me to use Digital Financial Services	–	–	–	.816	
I use DFS as my friends and colleagues use them	–	–	–	.770	
I use DFS as it is a symbol of lifestyle and pride in the society	–	–	–	.540	
Digital Financial Services have multiple benefits			.769		
I can easily and quickly access DFS			.791		
DFS provides a speedy financial solution as compared to traditional financial services			.683		
DFS is simple to use	.854	–	–	–	
DFS is safe and secured	–	–	–		
DFS provides a better user experience	–	–	–		
I am exposed to a higher amount of risk when I use DFS		.610			
The success of digital financial transactions is highly uncertain		.839			
My privacy is more vulnerable when I use DFS		.626			
I trust the technologies used in DFS	–	–	–		.655
I believe that Digital Financial Services are reliable	–	–	–		.653
Digital Financial Services are trustworthy	–	–	–		.832

Note: Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization; a – Rotation converged in 12 iterations.

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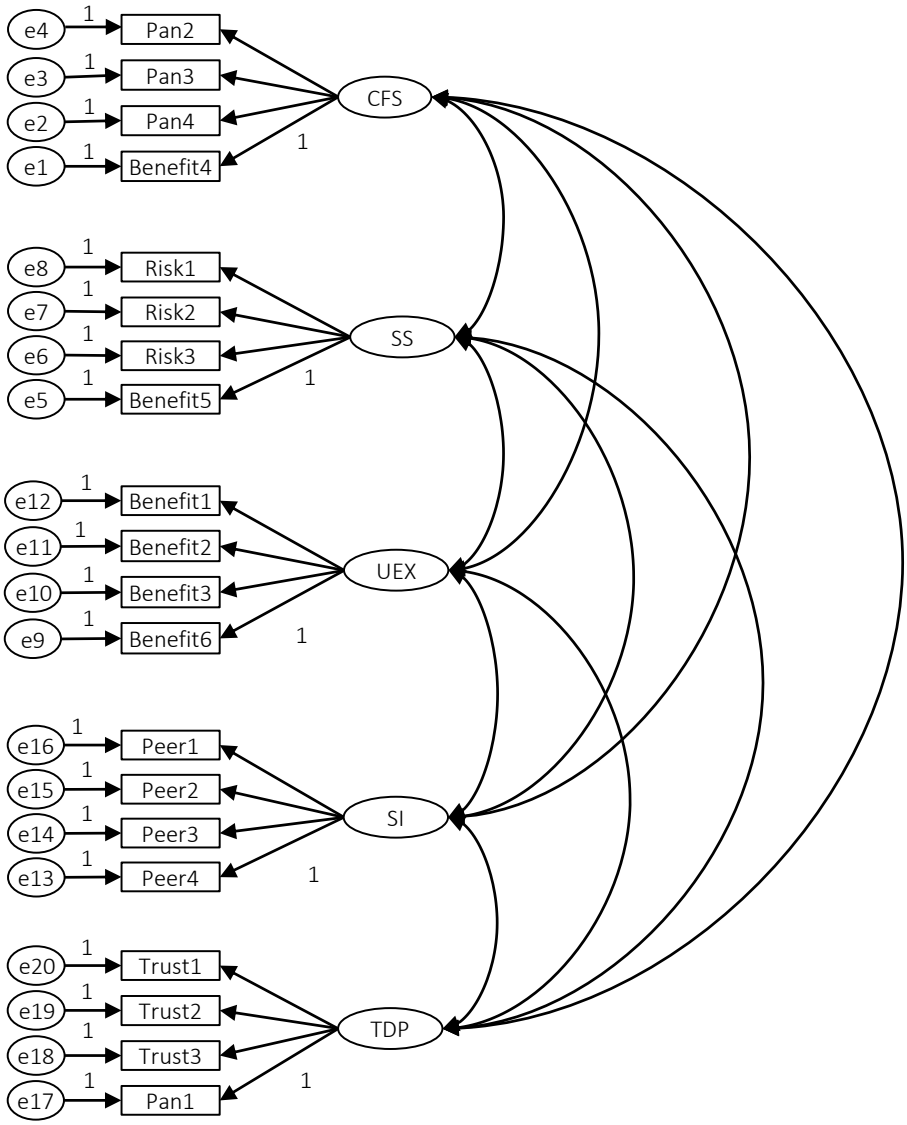

Figure 2. Confirmatory factor analysis

Table 11. Goodness of fit

Particulars	(χ2)	GFI	RMSEA	AGFI	NFI	CFI	IFI	RFI	PCFI	PNFI
Accepted Value	< 5	> 0.90	< 0.10	> 0.80	> 0.90				> 0.50	
Model Value	1.24	0.950	0.096	0.972	0.98	0.925	0.963	0.921	0.663	0.719

experience, peer influences, and perceived risk during a pandemic. To confirm the factor loadings again, Confirmatory Factor Analysis has been done using Structural Equation Modelling (SEM).

SEM analysis using AMOS provides composite reliability scores of the factors, namely Pandemic forces and convenience, perceived safety and security, user benefits and experience, peer influences, and perceived risk during the pandemic are 0.714, 0.738, 0.745, and 0.761, respectively. The findings reveal that the factors have higher composite reliability than the required reliability.

The Goodness-of-fit statistics indicate an overall acceptable fit and is an over-identified model. Figure 2 provides a pictorial representation of latent variables and their observed variables. CFS denotes pandemic forces and convenience, SS denotes perceived safety and security, UEX represents user benefits and experience, SI represents peer influence, and TDP denotes perceived trust during the pandemic.

4. DISCUSSION

One of the objectives of this study is to empirically assess the changes in adults' mindsets and attitudes toward the adoption of DFS during the crisis. To achieve this objective, primary data was collected using questionnaires that used social constructs such as pandemic forces, peer influence, technological benefits, trust, and risk. The study explains the importance of digital platforms to tackle the pandemic's ill effects on day-to-day life. The study results reveal important theoretical and practical implications for the usage of DFS in the pandemic period.

The study findings disclosed that individuals have the same level of perceptions on the constructs used to measure the change in mindset and attitude towards DFS namely pandemic forces, peer influences, technological benefits, perceived risk, and perceived trust irrespective of gender, marital status, and occupation. But peer influences and perceived trust differ based on the age of the individuals. This may be because young people are easily influenced by their peers and youngsters are tech-savvy and have more faith in digital platforms. Further education has a say on perceptions of pandemic forces, peer influences, and trust.

The study found that technological benefits had the most significant direct effect on the change in adults' mindsets and attitudes in using DFS during the pandemic. This result is consistent with the results of previous studies by Cao et al. (2018), and Beldad and Hegner (2018). The second most important variable that has a direct effect on the change in mindsets and attitudes of individuals is pandemic forces.

The study results show that change in mindsets and attitudes is influenced by technological benefits and pandemic forces rather than perceived risk. So, Financial Service Providers (FSPs) may design financial services and financial products that provide more benefits during the pandemic and formulate business models and strategies in such a way to provide maximum benefit to the users.

Interestingly, perceived risk significantly and positively affects the change in individuals' mindsets and attitudes rather affecting negatively during the pandemic. This result shows that individuals undermined their fear and risks on digital platforms and used DFS. This result contrasts with the results of other studies that found that perceived risks affect users' attitudes (Grover & Kar, 2020). However, FSPs make all the efforts to provide risk-free financial services without neglecting the risk and ensure better safety and security.

Peer influences and perceived trust have effects on change in mindset and attitude of individuals during the crisis. Changes in mindsets and attitudes of individuals lead to positive significance on intention to use DFS.

The core variables used to assess changes in individuals' mindsets and attitudes are further analyzed to confirm their effect. The study found that five variables were loaded in five factors with a few cross-loadings. The variables identified based on the results that affect the change in mindsets and attitudes of users were pandemic forces and convenience, perceived safety and security, user benefits and experience, peer influences, and perceived trust during the pandemic.

CONCLUSION

This study aimed to analyze the growth of DFS and to identify factors changing the mindset of individuals towards DFS adoption. In adopting DFS, India has achieved significance and contributed 15.6% to global real-time payments and accounted for 22.9% of global other electronic payments. India has reached the top in terms of real-time payments and in adoption of DFS. It outplayed China and the USA in adoption and usage of DFS. To determine the factors that drive change in mindset of the adults towards adoption of DFS, a survey method of research has been applied to gather primary information. Variables such as the pandemic forces, peer influence, technological benefits, perceived risks, and perceived trust are considered initially to understand change in mindset of the adults towards DFS adoption. The factor analysis reveals five factors that determine changing mindset of customers towards DFS

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adoption during the crisis. The five factors identified are labeled as Pandemic Forces & Convenience, Perceived Safety and Security, User Benefits and Experiences, Peer Influences, and Perceived Trust. Moderate effects of demographic variables on changing mindset of the customers towards adoption of DFS are not studied. This is the limitation of the study. Moderate effects of demographic factors on changing customers' mindsets towards the adoption of DFS and the conduct of similar studies in various periods can be the directions for future research.

AUTHOR CONTRIBUTIONS

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APPENDIX A

Table A1. Loadings of five variables on five factors extracted. Component matrix

Dimensions of the variables	Component				
	1	2	3	4	5
Internet and digital finance services were useful in performing financial transactions during the pandemic	.542	–	–	–	–
Lockdown imposed due to the pandemic made me use DFS	.549	–	–	–	–
I am not interested in having physical access to financial services due to pandemic	.546	–	–	–	–
Digital Financial Services reduce the pandemic risk exposure and enhance the quality of services	.558	–.518	–	–	–
My relatives recommended the use of Digital Financial Services	.632	–	–	–	
My family member, admired by me the most, influenced me to use DFS	–	–	–	–	–
I use DFS as my friends and colleagues use them	–	–	.592	–	–
I use DFS as it is a symbol of lifestyle and pride in the society	–	.619	–	–	–
DFS has multiple benefits	–	–	–	–	–
I can easily and quickly access DFS	–	.503	–	–	–
DFS provides a speedy financial solution as compared to traditional financial services	–	–	–.599	–	–
DFS is simple to use	.566	–.536	–	–	–
DFS is safe and secured	–	–	–	–	–
DFS provides a better user experience	–	–	.543	–	–
I am exposed to a higher amount of risk when I use DFS	.533	–	–	–	–
The success of digital financial transactions is highly uncertain	.631	–	–	–	–.503
My privacy is more vulnerable when I use DFS	.603	–	–	–	–
I trust the technologies used in DFS	–	–	––	–.559	–
I believe that Digital Financial Services are reliable	.514	–	–	–.538	–
Digital Financial Services are trustworthy	–	–		–	.671

Note: Extraction Method: Principal Component Analysis. 5 components extracted.