

Demonetization – Transformation to Digital India – A Study

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Abstract: *Technology is leading the world. The world has seen an unprecedented change in the technology landscape over the last decade and innovation has become more important than ever before. Technology can help build a digital India a knowledge-based society and economy— by empowering, connecting and binding everyone. The success of India is inherently linked to its ability to keep pace with technology. Good governance is the measuring tool of performance of any economy. The, revolutionary scheme digitalization was initiated by the present government which intended to control corruption and expected that all transactions between government and citizens are to be computerized. A digitally knowledgeable and empowered population can transform the whole economy. The automation of the economic sectors will lead to better performance and growth of the sectors, which in turn impact the growth rate of the economy.*

Urban India has been in the digital fold for a few years now, whereas after demonetization, villagers, local vendors and farmers are slowly getting used to digital transactions. People are used to cash transactions and cash hoarding. Immunity to black money and inertia to change are gripping our economy

The demonetization will be instrumental in increased number of mobile transactions, use of mobile wallets for more and more transactions. The study explores the possibilities of gathering the opinions of people towards this much needed initiative taken by the present government which was aiming at transparent, corruption and black money free, cash less transaction oriented economy. The focus of the study also aims at finding out the effectiveness of implementation of demonetization, satisfaction levels of people towards digitalization and challenges faced using digitalization after demonetization.

Key words: *Demonetization, Digitalization, Services, Cash less Transactions, Technology*

I. Introduction:

Demonetization is the act of changing the existing currency into another form. The old units should be retired and replaced by new currency. In other words demonetization means either introducing new notes or coins of the same currency or fully replacing the old currency with new currency. Some reasons for demonetization are resisting inflation, resist corruption, and discourage a cash system in the country.

The government's main objectives of note ban is, to eradicate counterfeit currency, resist tax evasion, destroy the black money, and terrorist financing activities, and to encourage the country towards the cashless economy. Among the unending intense argument on the benefits of demonetization, there's been a strong growth in digital payments and transactions in the months since the currency swap was announced on November 8, according to Reserve Bank of India data.

Digital transactions have increased and magnified in volume and value across various modes from wallets to cards and interbank transfers from a year earlier. Card transactions at point of sale (PoS) terminals at merchant locations have surged, reflecting a positive change for the economy, as more people start using their debit cards for payments rather than for withdrawing cash at ATMs. Debit card transactions rose to more than 1 billion in January from 817 million last year. While ATM transactions have remained constant at around 700 million, the incremental growth has been driven mostly by card swipes at PoS terminals.

The switch to the digital economy has many benefits but the question remains, does the common man of India ready to accept the move from cash to cashless transactions.

Therefore, this new move will definitely have a huge impact on the digital marketing in India. It encourages people to be involved in fewer cash transactions and to use the electronic or plastic money. Apart from the most obvious boosts in terms of tax income, financial analysts, this move will have many benefits in the Indian economy. Indians are traditionally inclined to use cash transactions and therefore some may feel forced to object the transition into a cashless economy.

Digital India industry has adopted various cashless digital options such as E commerce(Flipkart, IRCTC, bigbasket etc..), Ride sharing services (Uber, Ola etc.), utility services (Bill payments), E-wallets (

Paytm, UPI apps etc..) and banking services (net banking, cheque, NEFT, IMPS etc) to transform into digital India.

II. Literature Review:

1. Lokesh Uke (2017), the author expressed his opinion that the significant reasons for demonetization are like resisting inflation, resist corruption, and discourage a cash system in the country. He conducted the study aiming at knowing the potential of note ban decision, and to estimate the consequences based on the note ban system and its impact on the Indian economy. He expresses that the decision to ban the currency by the present government is with the main purpose of demonetization is eradicating the black money and reduces the corruption.**2. Abhani Dhara K (2017)**, he conducted the study with an aim to investigate about the impact of the demonetization over the banking sector. The author has taken a sample of 13 banks in veraval city to understand the effect of demonetization in positive and negative impact of it on the banking business. One of the objective of the study was to know that which accounts are highly affected due to this bold step.**3. E.Kamatchi Muthulakshmi, et all** :This article has made an attempt to assess how the tool of Demonetization can be used to eradicate parallel economy. Demonetization is one of the big steps initiated by Government in addressing the various issues like black money, counterfeit currency, corruption, terrorism etc.

Objectives

1. To study the factors influencing the customers towards online banking.
2. To analyze the opinions of people living in different areas about online banking.
3. To identify Various Promotional Factors Adopted by banks to encourage online banking.
4. To examine the challenges faced using digitalization in post demonetization period.

III. Research Methodology

Our study is conducted with the focus on understanding the factors influencing customers towards online banking. We have considered 4 basic channels of digital banking such as ATM, Online Banking, Mobile banking, and telephone banking and collected the opinions of the consumers in adopting the new methods, issues faced by them like implementation hurdles.

1. Methods of data collection

Both primary and secondary data was collected for the study. The Primary data was collected by distributing structured questionnaires consisting of closed ended questions to the respondents. Before final distribution pilot survey on selected group has also been done. Data from the secondary sources such as relevant information from articles, journals and websites also contributed for the study.

2. Sample Technique

Stratified random sampling method was used to collect the data. The data is analyzed and projected with Graphs and charts by using Tableau, pivot table, correlation, Comparative means analysis and other statistical tools used from Excel and Preamp Excel Template. Factor analysis, reliability tests ,KMO and Bartlett's Tests were conducted using SPSS application.

3. Sample Size

Sample size consists of 51 respondents, who are randomly chosen and administered questionnaire using digital aid with social media networks and collected data and analyzed using various tools.

IV. Data Analysis And Interpretation

Objective 1: To study the factors Influencing the customers towards online banking.

The earliest form of digital banking started with the introduction of ATM machines and cards launched in 1960s. More than 70% of the consumers are now using their smart phones as the preferred method for digital banking. Demonetization forced the common man to adopt digital payments instead of liquid cash transaction for their basic day to day financial activities, which has become a pathway to digital India.

Considering the experience of the consumers about the factors influencing towards online banking especially after demonetization, we could trace out 6 major criteria's described in the below given table.

Table 1: Representing Factors promoting Online banking

Factor promotes towards Online-Banking	Average of responses	Ranking of the responses	Count
Less time for transactions	0.745098039	1	38
Faster services	0.666666667	2	34
Convenience	0.647058824	3	33
Ease of use	0.529411765	4	27
Cost effectiveness	0.431372549	5	22
Technology savvy	0.37254902	6	19

Chart 1: Ranking various Factors promoting Online banking



Source: primary data collected by authors

The above figure represents ranking given by consumers on various factors promoting towards online banking. **Less time for transaction** leads with first position followed by **faster services**, today’s quick digital world need things to be completed in snap of second, this made the people to tend more for online banking by choosing **convenience** (ranked as 3rd), and **ease of use** (ranked as 4th) with **cost effective services** (ranked as 5th). Least preferred is **technology savvy** (ranked as 6th) not that the consumer is addicted to technology but adapted online banking because of other factors obligated for the transformation.

Implementation: Taking highest mean for all factors ranking was given.

Objective 2: To analyze the opinions about Online banking by the people living in different areas.

Limitation of liquid cash gave an extreme transformation towards the opinion of the consumer to accept a paradigm shift on the way to digital trends irrespective of the area of their living, it is observed that consumer living in rural area are still not much in to digital transactions.

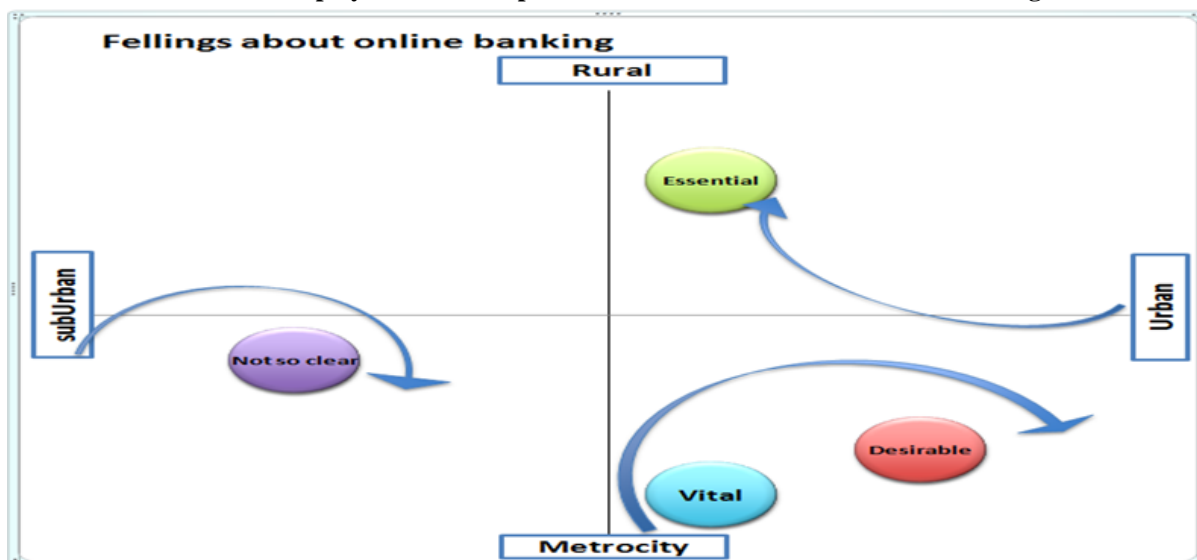
Table2: Pivot table to display the consumer opinion on need for Online banking based on area of Living

Count of Living Area	Living Area			Grand Total
	Metro City	Rural	Urban	
Feeling about New Online banking				
Desirable	1	1	8	10
Essential	12	6	11	29
Not so clear			2	2
Vital	3	1	6	10
Grand Total	16	8	27	51

The below chart displays various feelings towards online banking, such as Essential, desirable, vital, not so clear. Where in the chart clearly interprets that the people living in Urban area feel Online banking is essential, and metro city people desire to adapt online banking as it is vital. And the suburban area consumers are not so clear about the services due to lack of awareness, still rural area consumers are having negligible preference towards online banking.

Implementation: the chart was prepared using per map template.

Chart 2: Display the various opinion of consumer based on the area of living.



Objective 3: Factors Adopted by banks to encourage online banking.

Banks started using Information Technology primarily with standalone PCs and migrated to Local Area Network (LAN) connectivity. With further development, banks adopted the Core Banking solutions (CBS) which enabled banks to increase the comfort and convenience feature to access *Anywhere and Anytime Banking*.

Banks have benefitted in several ways by adopting newer technologies. E-banking has resulted in reducing costs drastically and has helped to generate revenue through various channels. Considering this we have listed out various factors adopted by banks to encourage the customers towards digital banking. It is observed in the study **high incentives and offers** (reward points, cash back offer) have attracted most of the customers to go digital. **Regular SMS reminders** have become a key force to get more customers towards digitalization. Prior to the introduction of ICT in banking sector people were feeling insecure to perform transactions using online banking but thanks to the technological revolution the banks have introduced various security measures to protect the data and have given a guarantee to user information. Traveling using cab services encouraged digital payments and reduced the cost of travelling. It is significantly visible that the banks are not having any indirect force on customers in the direction of digital activities. Demonetization gave a major lead to digital payment but no proper training was conducted to bring out the awareness among the customers and to brief on the services provided by banks and the technological changes implemented by them over a period of time.

Table 3: Factors adopted by bank.

Factors Adopted by bank to encourage digital banking	Mean
Incentives/offers/reward points	0.568627
Regular SMS reminders	0.490196
Guarantee of security and privacy	0.45098
Reducing charges and fees	0.431373
Attractive advertisement	0.372549
Contacting every customer personally	0.254902
Service Demonstrations	0.176471
Indirect force by stopping major services on traditional banking	0.176471
Conducting seminars	0.117647

Implementation: Comparative mean analysis. Graphical Representation using tableau.

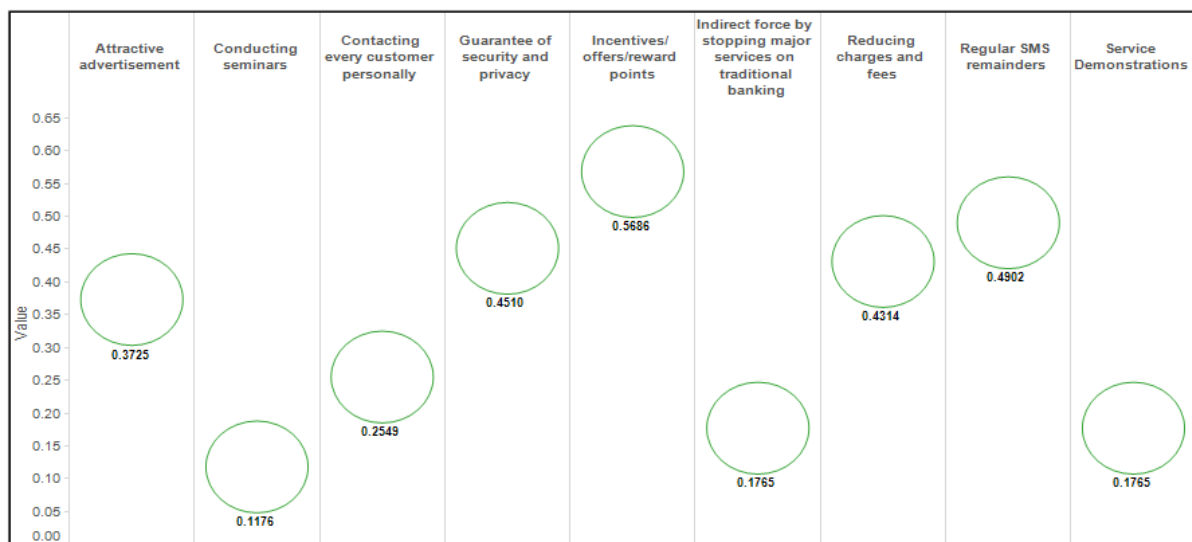


Chart 3: Factors adopted by banks to encourage digital banking services.

Source: primary data collected by authors

Comparative statement to show the usage of digital channels before and after demonetization.

According to the study on various digital channels used to implement online transactions before and after the demonetization, it is clearly shown that the impact of demonetization did not bring any change in the usage of ATM service, but there is a slight increase in Mobile, phone, and online banking adoption after the said period, to the surprise it is proven that still credit card users are very less compared to other channels, and debit card was leading irrespective of the change in market.

Online banking has taken the first rank in providing wide range of digital banking services, In the below chart it is clearly shown that major banking services are implemented only with the option of online banking where as specific services like withdrawal of cash was only through the use of ATM. It is identified that even now customers prefer traditional banking for deposit of cash or opening and closing of RD /FD accounts. Mobile banking was preferred for paying utility bills and checking account balance.

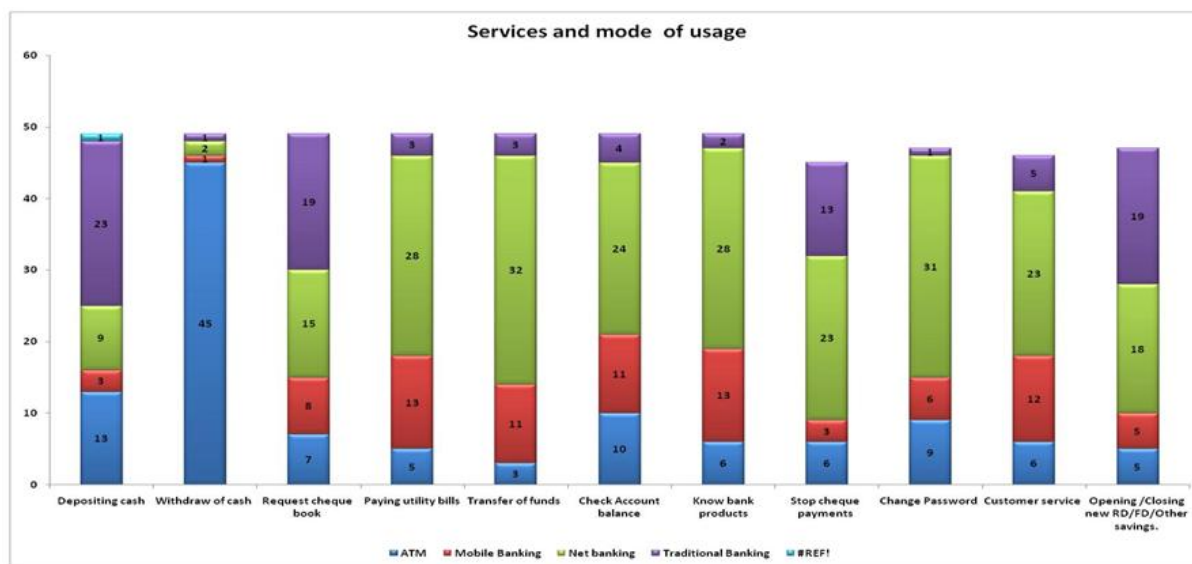


Chart 4: Preference of Digital Channels for various banking services

Source: primary data collected by authors

To analyze the satisfactory levels of the consumers towards various digital channel services

Factor Analysis: Factor analysis is a very useful method of reducing data complexity by reducing the number of variables being studied. 64 Variables of different categories were considered that would affect the consumers satisfaction towards online banking. KMO and Bartlett’s test is used in factor analysis. This is used for the

initial estimation of the factor analysis. If the KMO and Bartlett’s test is greater than 0.6 it is said to be good model. The KMO result of the present study is 0.626848

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.626848
Bartlett's Test of Sphericity	Approx. Chi-Square	1717.985
	df	595
	Sig.	0.0

Table 4: KMO & Bartlett’s test
Implementation: SPSS Factor analysis is used to reduce various variables

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.053	37.293	37.293	13.053	37.293	37.293	6.358	18.166	18.166
2	3.597	10.276	47.569	3.597	10.276	47.569	6.058	17.307	35.473
3	3.12	8.914	56.484	3.12	8.914	56.484	4.456	12.732	48.205
4	2.506	7.16	63.644	2.506	7.16	63.644	3.459	9.884	58.09
5	1.802	5.148	68.792	1.802	5.148	68.792	2.898	8.28	66.369
6	1.542	4.406	73.198	1.542	4.406	73.198	1.785	5.1	71.47
7	1.173	3.352	76.55	1.173	3.352	76.55	1.516	4.33	75.8
8	1.115	3.185	79.735	1.115	3.185	79.735	1.377	3.936	79.735
9	0.94	2.686	82.422						
10	0.896	2.559	84.98						
11	0.724	2.07	87.05						
12	0.657	1.876	88.926						
13	0.526	1.503	90.429						
14	0.492	1.405	91.834						
15	0.398	1.138	92.973						
16	0.338	0.965	93.938						
17	0.301	0.861	94.798						
18	0.258	0.736	95.534						
19	0.247	0.705	96.239						
20	0.22	0.628	96.867						
21	0.172	0.491	97.358						
22	0.159	0.455	97.813						
23	0.129	0.369	98.182						
24	0.11	0.313	98.495						
25	0.1	0.285	98.78						
26	0.097	0.278	99.058						
27	0.077	0.22	99.278						
28	0.063	0.181	99.459						
29	0.053	0.152	99.611						
30	0.04	0.113	99.724						
31	0.031	0.089	99.814						
32	0.029	0.083	99.897						
33	0.017	0.048	99.945						
34	0.013	0.038	99.983						
35	0.006	0.017	100						

Table 5: Extraction Method: Principal Component Analysis.

Principal Component The first step in factor analysis is the factor extraction process. The main objective of this test is to identify how many factors will be extracted from the data. The factor extraction process can be done using the Principal Component Analysis method. Factors will be extracted based on Eigen value. The higher the Eigen value of a factor, the higher is the amount of variance explained by the factor. A thumb rule is followed for factor extraction using the Eigen value , we retain all those variables whose Eigen value is greater than one. From table, we can conclude that the 35 variables reduced to 8 factors. The 8 factors extracted together account for 79.735 % of total variance.

The principal component analysis along with varimax rotation is used for grouping the variables, variables with a factor loading greater than or equal to 0.5 are grouped under a factor (Component). A factor loading is the correlation between the original variables of specific factor and the key to understand the nature of that particular factor.

Component Transformation Matrix

Component	1	2	3	4	5	6	7	8
1	.558	.571	.415	.242	.306	.165	.089	.046
2	-.708	.414	-.102	.498	.132	.177	.139	-.034
3	.342	-.251	-.628	.512	.321	.079	-.227	-.050
4	-.035	-.561	.567	.566	-.065	-.146	.130	.007
5	.241	.138	-.181	.213	-.717	.129	.326	-.456
6	-.040	-.315	.062	-.242	.345	.684	.368	-.339
7	-.065	.079	.099	-.063	.303	-.464	-.158	-.802
8	.071	-.010	-.234	-.048	.239	-.463	.799	.169

Table 6: Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Factor number	Factor name	Caption	values
Factor 1	Online Banking Services	Account information and balance enquiry OB	0.8572
		E- payments Ob	0.8683
		Fund transfer OB	0.8715
		Fund transfer abroad OB	0.5099
		Bill payment OB	0.8463
		E-recharge OB	0.8064
		Statement request Online banking	0.7955
		Travel and shopping OB	0.6837
Factor 2	Telephone Banking Services	Maintenance of E-lockers OB	0.6112
		Voice prompt TB	0.885
		Clear instructions TB	0.7974
		voice directions TB	0.7262
		additional options TB	0.8903
		balance check TB	0.819
		requesting Cheque book TB	0.7787
Factor 3	Mobile banking services	Reward points MB	0.7724
		Mobile recharge MB	0.792
		E-payments MB	0.8199
		travel and shopping MB	0.7739
		Information about new products MB	0.501
		Transaction status MB	0.5804
		Expensive MB	0.5227
Factor 4	ATM Services	cash withdraw ATM	0.856
		Deposit ATM	0.7903
		number of transactions ATM	0.8368
		conveniently located ATM	0.5177
Factor 5	Convenience	check bank stmt ATM	0.6064

		Quality of notes ATM	0.7969
		conveniently located ATM	0.5169
		Maintenance of E-lockers OB	0.56
		Maintain insurance OB	0.6207
Factor 6	customer request	requesting cheque book ATM	0.6712
		Manage Credit card Online banking	0.6216
Factor 7	SMS	SMS alerts MB	0.7687
Factor 8	loan management	Loan management Online banking	0.5024

Table 7: Reduced List of Factors

Objective 4: the challenges faced using digitalization in post demonetization period

While it may have boosted certain modes of digital transactions, these are still just a drop in the bucket when compared to ground realities and the larger sea on digital adoption. Various challenges were listed in the below table and mean for all the variables are considered, customers feel online banking is less profitable than traditional banking and privacy was an ongoing issue from years of digital banking, keeping aside all this whatever is the decision of government, traditional banking still remains best for some of the services.

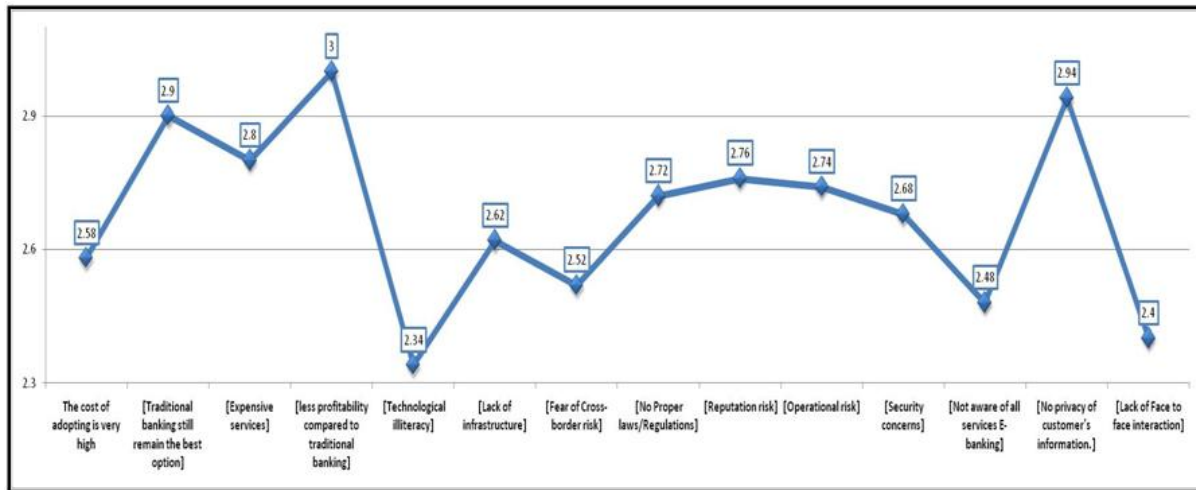


Chart 5: Representing various challenges faced by digitalization

Challenges faced by consumers	Mean
Less profitability compared to traditional banking	3
No privacy of customer's information.	2.94
Traditional banking still remain the best option	2.9
Expensive services	2.8
Reputation risk	2.76
Operational risk	2.74
No Proper laws/Regulations	2.72
Security concerns	2.68
Lack of infrastructure	2.62
The cost of adopting is very high	2.58
Fear of Cross-border risk	2.52
Not aware of all services E-banking	2.48
Lack of Face to face interaction	2.4
Technological illiteracy	2.34

Table 8: Challenges faced by consumers

V. Conclusion:

It is observed in the study that in terms of various factors promoting towards online banking majority of the customers gave highest ranking to the option “**Less time for transaction**”. They prefer online banking because of faster **services**, and next priority was convenience and **ease of use**. Least preferred is **technology savvy**. The people living in Urban area feel Online banking is essential, and metro city people desire to adapt online banking as it is vital. And the suburban area customers are not so clear about the services due to lack of awareness, where as customers living in rural areas feel need for online banking is negligible, they are not much in to digital transactions.

The findings while analyzing the satisfaction levels of the consumers towards various digital channel services, it is observed using factor analysis that 35 variables are reduced to 8 factors and these 8 factors extracted together accounted for 79.735 % of total variance. The result of PCA is shown as online banking services were loaded as a very significant factor in terms of highest satisfaction level, followed by Telephone Banking Services factor and Mobile banking services followed by ATM Services and Convenience. Various challenges faced by consumers in the process of digitalization are that there is No privacy of customer's information , Security concerns, Not aware of all services E-banking. If the banks improve on these key issues probably the dream of transformation to digital India may materialize in forth coming period.

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