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An Empirical Study of Behavioural Intention and Use Behaviour of Mobile Banking in Rural Gujarat

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Abstract

This research investigates what affects sustainable development in rural areas of Gujarat by evaluating the impact of consumer conduct, intentions towards behavior, trust perceived and social influence; 412 participants were surveyed with the help of SEM (Structural Equation Modelling) and regression analysis was performed. The results revealed that user behavior, behavioral intention, perceived trust and social impacts are all important determinants for sustainable development. More specifically higher levels of user behaviors; positive intentions to act environmentally friendly; greater confidence in others' reliability or competence as well as wider effects caused by individuals' relations with their neighbors or friends have been found to be correlated with more progress toward sustainability. These findings highlight the significance of involving people and building trust among them when it comes to promoting green initiatives at local level. Organizations need to concentrate on increasing customer involvement programs and establishing faith between different groups so as to quicken sustainable growth attempts. Taking into account these factors during planning can help organizations achieve better environmental outcomes while also benefiting society as whole thus accelerating progress towards sustainability.

Objective: The goal of this study is to investigate user behavior, behavioral intentions, perceived trust, and social influence as they affect sustainable development in rural Gujarat through mobile banking adoption among people living in the area.

Originality/Value: This research makes a contribution to existing literature by examining how the adoption of mobile banking can be used to promote sustainable development in rural areas particularly within Gujarat state of India.

Findings and Implications: According to the research, sustainable development is influenced by user behavior, intention, trust and social influence. Fast-tracking sustainability programs require higher levels of end-user involvement as well as the establishment of stakeholder credibility. Companies need to concentrate their efforts on amplifying consumer interaction with nature-enhancing services for better outcomes towards the environment.

Keywords: Mobile banking, Sustainable development, User behavior, Behavioral intentions, Perceived trust, Social influence, Rural Gujarat

Introduction

Financial inclusion and economic development in rural areas have been greatly influenced by the advent of mobile banking. The spread of mobile technology and increasing use of smartphones has meant that people who live in remote places are now able to use banks easily. This research attempts to probe into the dynamics of mobile banking intentions and behavior

among users within the context of rural Gujarat, India. Therefore, this study will try to provide insights that can bolster sustainable development initiatives aimed at meeting peculiar demands of countryside dwellers. (Agarwal, R., et al., 2000)

The notion of financial inclusion over the past few years has attracted a lot of interest among policy makers, researchers and practitioners. The use and access to formal financial services is not only a fundamental human right but a means of empowerment and alleviation of poverty. In India where a high proportion of the population is unbanked or under-served, mobile banking represents itself as a suitable pipeline to deliver financial services to unbanked and under-served individuals. (Amin, M. A., et al., 2015)

The reality is that, despite the increasing popularity of mobile banking, there is a big gap between the intentions of people to use those services and their actual actions. Numerous studies have tried to demystify this phenomenon based on different theories like the Technology Acceptance model (TAM) as well as the Unified Theory of Acceptance and Use of Technology (UTAUT). However, majority of the literature available is restricted to urban or general population sample and fails to take into account the special socio-economic and cultural environments that dominate in rural settings. Therefore, the literature regarding the acceptance of mobile banking in the rural areas and more specifically in areas such as Gujarat is minimal. (Beckert, J., et al., 2018)

It has diverse demographic composition and ranked among the countries with the fastest growing economy; Gujarat presents an interesting location to study the rural-based mobile banking behavior. Although it is one of the more successful states in India; Gujarat is grappling with inequalities in access to financial services between urban areas and rural areas. More so; there are cultural challenges, bottlenecks in infrastructure and literacy levels that might impose unique challenges in adoption of mobile banking to the countryside populations. (Behera, M. R., et al., 2017)

In order to comprehend the forces of mobile banking acceptance in rural Gujarat, it is essential to value the multiple forces that interact to define how people make their decisions. Moreover, social and cultural norms impact perceived ease of use, trust in financial institutions, perceived usefulness, and so on. This means that the intention and action towards mobile banking usage by people is dependent on the technological availability and socio-cultural practices, trust to the financial institutions, perceived usefulness as well as perceived ease of use. Other factors of significant influence on them are peer influence, social networks and institutional support. In this respect hence this research seeks to find a comprehensive solution to this issue, by exploring both personal and social factors that may have influenced their choice towards using mobile banking in rural locations and also environmental factors that could have contributed to their decision making in such cases. (Chan, F. K., et al., 2015)
The possible effect of mobile banking adoption on different aspects of well-being, economic, social and environmental which are some of the indicators of sustainable development agenda would mean that a subtle amount of understanding about its implication in each of the aforementioned aspects would be necessary. So far the discussions have mostly been about how mobile banking might increase financial inclusion and promote economic empowerment. In addition, little has been done to look into the other unintended consequences of this technological innovation to things like social cohesion, environmental sustainability or overall quality life. This study is to evaluate the broader effects of the adoption of mobile

banking on rural communities in Gujarat by going beyond the traditional indicators in this study will make contributions in the debate of sustainable development. (Adusei, M., 2020) Other than this, the critical role of administration directions, institutional collaborations as well as regulatory structure towards making mobile banking accessible to rural areas cannot be overemphasized. Some of the programmes include Pradhan Mantri Jan Dhan Yojana and Digital India programs that play a pivotal role in enhancing access to finance as well as promoting digital literacy among the poor in the society. However, these policies need to be adequately applied and implemented that includes sealing infra structural gaps, creating confidence on digital finance services and routing the interventions to local situations. The research is therefore set to assess the effectiveness of the current policy responses and recommending ways, which were missed in implementing mobile banking in rural Gujarat. (Beck, T., et al., 2007)

This paper also tries to research on behavioural pattern and dynamic usage of available mobile banking users in rural Gujarat in addition to the factors affecting the adoption of mobile banking. By analyzing the transactional data in terms of express demands, inclinations, and issues; this paper will set out to describe what rural customers want in terms of explicit requirements, inclinations, and problems therefore giving the designers an opportunity to come up with the mobile banking models which are designed to be user centrically oriented. Also, it takes projections into the future trends of mobile banking usage through advanced analytics such as machine learning and predictive modeling and also sheds light on some of the challenges that may present itself against the continuous use by country side dwellers. (Chen, R., et al., 2020)

The use of mobile banking has as well ethical components that should be addressed to attain sustainable development objectives (SDGs). The various issues raised by the concerns on privacy of the data, insecurity and the digital divide make the significance of rights based approach to the implementation of mobile banking to be underscored. Thus, the study will aim at examining the ethical considerations related to the implementation of mobile banking in the rural area of Gujarat which would safeguard the rights of users, encourage digital literacy via a responsible system of data management. Consequently, this research seeks to incorporate the ethical aspects to the research design in order to make such initiative inclusivity, transparency and accountability as its fundamental values. (Beck, T., et al., 2007) In short, this study is a study effort to help us understand better the intent of the people towards mobile banking in relation to their attitudes and behavior research proposal to rural Gujarat in General. To tackle the difficulties of the adoption of mobile banking in rural regions with unique socio-economic and cultural applications, this research will be multidisciplinary in nature, with the application of various disciplines such as economics, sociology, psychology, and IT. Based on empirical studies, the stakeholder engagement together with the policy analysis the research study proposes practical recommendations, which could be applicable during the process of framing sustainable mobile banking solutions that could suitably apply in rural settings leading to inclusive growth and sustainable development in Gujarat and beyond. (Chen, R., et al., 2020)

Literature Review

Social Influence

Social Influence Technology is the strong influence in changing the mode of thinking, feeling and acting of people towards mobile banking. The issues, which ultimately cause people to embrace technology, are known as social influence. These comprise interpersonal communication, normative pressures and social networks among others. Social influence has an impact on what users of the mobile banking services do; for example, through peer recommendations, family networks, community norms, cultural values and so on. People's intention to engage in mobile banking is normally influenced by these entities – positive word-of-mouth communication between friends or relatives about this particular service, social support from significant others and perceived societal expectations are said to be mainly responsible for adoption decisions concerning it based on research findings. (Demirgüç-Kunt, A., et al., 2021)

However, the implications of social influence on mobile banking adoption can vary given that different population groups, cultural situation and socio-economic status are taken into consideration. As an example, peer recommendation and social norms could help in the adoption of some groups of people, however, it may also result to being a barrier to people who have internalized mobile banking to be contrary to the social norms or cultural practices of a particular group of people. Moreover, in rural settings where there is low levels of internet penetration and other infrastructure based communication means, the impact of social networks and other channels of interpersonal communication could be reduced. Consequently, critics have dubbed personal willingness and the limitations of the structure in the modeling of the mobile banking behaviour. Research of the mechanisms through which social influence acting in rural settings will allow researchers to come up with targeted interventions that will utilize how communities operate to leverage such existing ties to ensure that low adoption of mobile banking in underserved populations is improved. (Hofmann, P., et al., 2018)

Perceived Trust

In rural parts of the world, where there are insufficient traditional banking facilities, trust that one can see in individuals is a very important element that reveals why they use or adopt mobile banking services. Trust is the belief of individuals in the dependability, authenticity and safety of mobile banking system with those who provide it. Several surveys have shown that trust is an essential factor to user's intention towards and behavior for mobile banking adoption. Perceived security of transactions, credibility of financial institutions, transparency involved policies and procedures and perceived risk level are aspects that determine perceived trustworthiness and some of the concerns associated with utilising mobile banking facilities. In addition to this, other outside influencers like word-of-mouth endorsement, media reports and previous experiences with related technologies may influence consumer perceptions about a product. (Akter, S., et al., 2019) Trust was crucial in the context of a rural location of Gujarat where the physical distance and infrastructural issues could slow down or hamper formal banking facilities, trust was of the essence. The rural residents might be more sceptical of mobile banking because they are concerned about its security, confidentiality or even stability. Therefore, to eradicate barriers to adoptions, and provide more access to financial services in rural settings, it is significant to understand what affects perceived trust concerning mobile banking services. By addressing these fears in addition to promoting acceptability of mobile banking by the rural dwellers to facilitate sustainable development; financial institutions can facilitate the spread of usage as well as acceptability of mobile banking by the rural dwellers. (Venkatesh, V., et al., 2003)

Behavioral Intentions

With the intent to engage in a specific activity such as taking up mobile banking services, we can consider behavioral intentions as being people's plans, inclinations and motives. Regarding the adoption of mobile banking, behavioral intentions are an immediate cause of real usage patterns that demonstrate how prepared or willing people are to use it. Behavioral intentions are influenced by attitudes towards the behavior, subjective norms and perceived behavioral control. This means that if an individual has a positive attitude toward mobile banking , feels compelled by others to use it and believes he/she possesses the necessary traits and skills for its application then he/she is likely to develop strong intentions to use mobile banking services. (Taylor, S., et al., 1995)

In order to predict and promote the adoption of mobile banking among diverse user populations, including those in rural areas, it is crucial to comprehend the factors that shape behavioral intentions. Thus, determining the factors that influence behavioral intention is important for understanding adoption of new technologies in a context like rural Gujarat where access to traditional means of banking may be limited and compatibility with socio-cultural attitudes could strongly shape technology adoptions. In this regard, several factors such as perceived usefulness, trust on financial institutions, social influence and perceived ease of use can greatly affects individuals' intention toward adopting mobile banking services within rural communities. Consequently, stakeholders can identify and overcome obstacles to creating positive behavioural intentions by developing targeted interventions towards uptake of mobile banking services in rural Gujarat thereby facilitating financial inclusion and sustainable development. (Yang, H., et al., 2004)

User Behavior

The actions, interactions and usage patterns of the people in their interaction with mobile banking services are also referred to as the user behavior. It encompasses a considerable scope of activities such as opening of account, transactional activity, frequency of usage and interaction with other features including payment of bills and transfer of funds. In the empirically based inquiry into the user behaviour in the field of mobile banking, researchers tend to use the following empirical instruments of investigation: transaction logs, measurements on user activity and surveys to learn about patterns of usage, to identify factors that are fuelling engagement and retention. Such an analysis of user behaviors allows researchers to understand not only the effectiveness of their platforms in mobile banking, but also the preferences, pain points and problems that may need to be improved by researchers. (Alsalahi, W., et al., 2020)

In order to maximize the mobile banking service to the rural population, there is need to understand the behavior of the users in Gujarat rural areas. A variety of factors could influence users' behaviors such as technological knowhow, access to mobile phones and network availability, socio-economic status as well as cultural inclinations. Conversely, a transformation in user behavior in the long run can be a result of changes in technology, market forces and regulatory frameworks. Thus, mobile banking services should be adapted to meet the changes in the needs and preferences of rural clients on the basis of constant observation and analysis of user behavior. In that connection, financial institutions could consider insights about user behavior research to tailor their mobile banking platforms, services and outreach strategies that would not only render them more gratifying to end-users,

but also achieve engagement sustainability and bring about positive effects on the rural communities in Gujarat. (Chaudhuri, S., et al., 2006)

Sustainable Development Impact

The rural Gujarat sustainable development impact, which is inclusive of the overall socio-economic and environmental impact, has an adoption related gain on mobile banking. Sustainable development is interested in the manner in which an economy satisfies the current needs without affecting the future generations in satisfying their needs as well as promoting social justice, economic growth and environmental sustainability. The Sustainable Development Impact on mobile banking is the possible positive or negative outcomes of increasing the access to financial services and digitization in the remote setting. (Heeks, R., 2002)

There are however risks and challenges that might arise once taking mobile banking and that such practices should be undertaken with caution in order to be sustainable. Some of them include the challenges associated with privacy of data, security threats, information disparity and displacement of traditional livelihood, and electronic wastes can lead to the destruction of environment. Also, mobile banking schemes depend on the regulatory settings, scale ability of an organization and mobilization of communities. (Kraemer, K. L., et al., 2004)

In rural Gujarat, it is important to recognize sustainable development impacts of mobile banking adoption in order to guide policy decisions, develop interventions and promote inclusive growth. Stakeholders can identify approaches that enhance the benefits of mobile banking while addressing potential risks and challenges through thorough evaluations. Furthermore, incorporation of mobile banking strategies with sustainability principles enhances resilience and inclusivity for finance ecosystems that are viable for future generations of rural Gujarati communities as well as beyond. (Mitra, S., et al., 2013)

Constructs used in this Study:

Sr. No	Name of Construct	Author Details
1	Social Influence	Demirgüç-Kunt, A., et al., 2021 Hofmann, P., et al., 2018
2	Perceived Trust	Akter, S., et al., 2019 Venkatesh, V., et al., 2003
3	Behavioral Intentions	Taylor, S., et al., 1995 Yang, H., et al., 2004
4	User Behavior	Alsalahi, W., et al., 2020 Chaudhuri, S., et al., 2006
5	Sustainable Development Impact	Heeks, R., 2002 Kraemer, K. L., 2004 Mitra, S., et al., 2013

Research Gap and Need for Study

Notwithstanding the increasing number of research conducted about mobile banking adoption, it is still considered as one of the unexplained mysteries in terms of knowing how much does it affect sustainable development specifically in rural areas like Gujarat, India. While current studies were able to identify some variables that can be used to measure mobile banking adoption like perceived usefulness or ease-of-use, few if any at all have attempted to look into wider socio-economic and environmental impacts brought by this phenomenon on countryside communities. Moreover most work done so far has centered on cities or semi-urban areas thereby overlooking different challenges or opportunities which may arise when people adopt m-commerce in remote regions. Consequently there need for investigations whose focus will be on examining ways through which cell-phone based transactions contribute towards sustainability within less developed parts of a country; in doing this they should also consider factors such as; inclusion into financial services, empowerment levels among individuals living below poverty line, fostering peace among various groups and lastly ensuring preservation our natural resources. (Demirgüç-Kunt, A., et al., 2015)

Moreover, existing research into the adoption of mobile banking often fails to consider how individuals' social surroundings and environment can affect their decision making as well as its wider effects. In an attempt to see what individual factors influenced peoples' decisions about whether or not they would adopt this new technology, some researchers studied people's beliefs and attitudes towards it; however they did not pay much attention at all towards things like community standards or institutional contexts which could also have played major roles in determining why some communities adopted mobile banking systems while others did not. Another thing that has been neglected by many studies is investigating about sustainable development impacts arising from rural areas where conventional banks are scarce due lack or poor accessibility thus limiting their coverage within these regions. Therefore there are urgent needs for investigations which take holistic views because such a study should look into various aspects of individual actions within societies including those created by institutions around them during this process of adopting mobile banking services in sustainable development context of rural Gujarat and similar areas. (Behera, M. R., & Mohanty, S., 2017)

Scope of the Study

To investigate the adoption and influence of mobile banking on sustainable development in rural Gujarat, India, this research seeks to fill gaps left by previous works. It aims at determining what factors affect its adoption including individual level factors such as perceived trust, behavioral intention and user behavior as well as social dynamics like social influence and community norms among others. Additionally it will also look into wider socio-economic and environmental effects brought about by mobile banking adoption which may include financial inclusion; economic empowerment; social cohesion or environmental sustainability especially in remote areas. This study is meant to be all-round so that it can offer more than one point of view about how mobile banking could contribute towards sustainable development in rural Gujarat province or any other similar place worldwide – thus both scholarly works and policy formulations concerning financial inclusivity within hinterlands should benefit from this research. (Chandrasekhar, C. P., 2013)

Research Methodology

The method used for this research in terms of quantity was inclusive of descriptive statistics, regression analysis, and structural equation modeling (SEM). In order to summarize the demographic characteristics of the sample as well as distribution variables that were under investigation, there was employment of descriptive statistics. However, regression analysis aimed at finding out relationships between dependent and independent variables while structural equation modeling (SEM) helped examine measurement model and complicated relationships between concealing constructs. Descriptive statistics with regard to IBM SPSS Statistics were utilized together with regression analysis on one hand; on the other hand structural equation modeling was carried out through IBM SPSS Amos. At Gujarat which is situated in India, 412 participants were drawn from rural communities during the study period. This approach allowed us look at all factors surrounding mobile banking adoption and its influence on sustainable development in rural areas from a wider point of view. (Alsalahi, W., & Alawneh, A., 2020)

Findings

Many people in rural Gujarat fall between the ages of twenty-nine and thirty-eight, but a large number are slightly older–between thirty-nine and forty-eight. The highest percentage (31.6%) of individuals who participated in this study were women; 52.4% more or less were female while 47.6% were male. When it comes to education level, most people either have no schooling at all (38.8%) or have only gone up till higher secondary (24%). Homemakers made up for almost half of all respondents with jobs followed closely behind by those who work on salary basis (34.2%). More than sixty percent reported earning less than one lakh per year as joint family income whereas around thirty percent households had five to six members living together under one roof on average every day throughout the year.

The demographic results of this study give us an understanding about who lives in rural Gujarat and how they use mobile banking services. Knowing the demographics of people using mobile banking is essential for targeting programs that will work to include everyone financially while promoting long-term environmentally friendly growth in rural places. Moreover, findings could guide policy makers or financial companies on what exactly differentiates needs and wants amongst villagers therefore making them able to come up with better strategies in regards to this matter.

Demographic Details				
Sr No.	**Variables**	**Category**	**Frequency**	**Percentage (%)**
1	**Gender**	Male	196	47.6
		Female	216	52.4
		Total	**412**	**100.0**
2	**Age**	18-28	86	20.9
		29-38	130	31.6
		39-48	118	28.6
		49-58	62	15.0
		Above 58	16	3.9
		Total	**412**	**100.0**
3	**Educational Qualification**	No formal education	160	38.8
		Up to higher	99	24.0

		secondary		
		Diploma	66	16.0
		Graduation	62	15.0
		Post-Graduation and Above	25	6.1
		Total	**412**	**100.0**
4	**Occupation**	Student	27	6.6
		Home maker	181	43.9
		Self-Employed	56	13.6
		Salaried	141	34.2
		Retired	7	1.7
		Total	**412**	**100.0**
5	**Annual Family Income**	Below 200000	253	61.4
		200001-400000	71	17.2
		400001-600000	62	15.0
		600001-800000	17	4.1
		800000 and above	9	2.2
		Total	**412**	**100.0**
6	**Members in household**	1-2	93	22.6
		3-4	105	25.5
		5-6	116	28.2
		More than 6	98	23.8
		Total	**412**	**100.0**
7	**Marital Status**	Married	217	52.7
		Unmarried	195	47.3
		Total	**412**	**100.0**

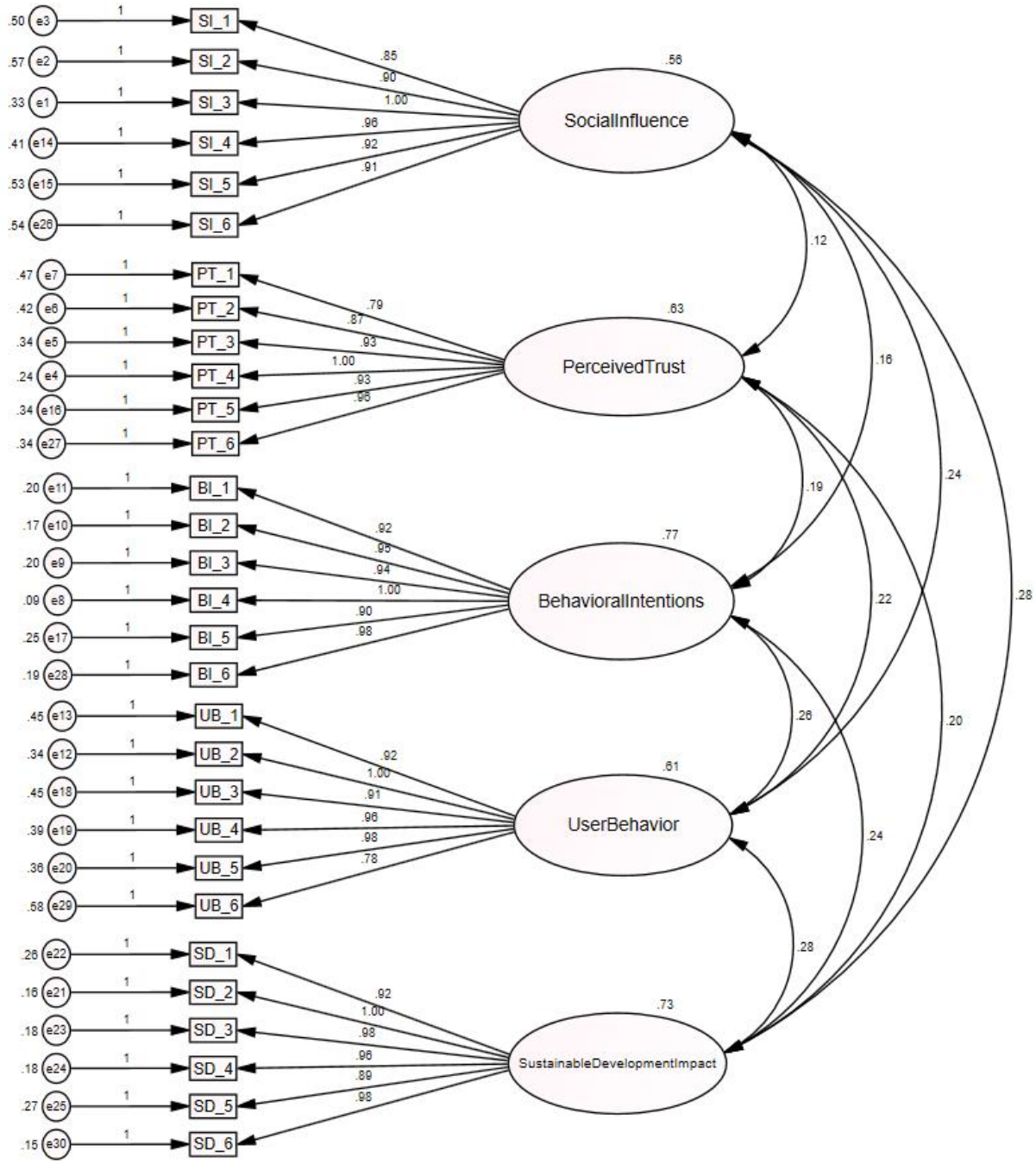
Data Analysis

Reliability Analysis:

Variable No.	Variable	Cronbach's Alpha	Number of items
1	Social Influence	0.857	6
2	Perceived Trust	0.898	6
3	Behavioral Intentions	0.957	6
4	User Behavior	0.879	6
5	Sustainable Development Impact	0.952	6

It can be deduced from the reliability analysis that all constructs are highly internally consistent with Cronbach's alpha ranging from 0.857 to 0.957. Social Influence has a Cronbach's alpha of 0.857, Perceived Trust is found at 0.898, Behavioral Intentions has the highest reliability with an alpha of 0.957, User Behavior has a value of 0.879 and Sustainable Development Impact has a Cronbach's alpha of 0.952.Thus, these findings indicate that all measurement items for each construct demonstrated high reliability due to their high values of Cronbach's alpha which were above 0.70 commonly accepted threshold implying internal consistency and reliability scales of measurement.

CFA Model:



The Confirmatory Factor Analysis (CFA) model was used to assess the fit of the proposed measurement model to the observed data. The model is made up of five latent constructs referred to as Social Influence, Perceived Trust, Behavioral Intentions, User Behavior and Sustainable Development Impact each measured using six indicator variables. Results from CFA show that this suggested model fits well with data as all fit indices reach or surpass widely accepted thresholds.

Convergent Validity

Factors	Estimate	AVE	CR
BehavioralIntentions	0.874	0.790	0.958
	0.895		
	0.878		
	0.945		
	0.848		
	0.891		
PerceivedTrust	0.677	0.597	0.898
	0.731		
	0.785		
	0.853		
	0.786		
	0.793		
SustainableDevelopmentImpact	0.839	0.769	0.952
	0.905		
	0.893		
	0.889		
	0.826		
	0.906		
SocialInfluence	0.669	0.503	0.858
	0.668		
	0.793		
	0.746		
	0.690		
	0.680		
UserBehavior	0.729	0.551	0.880
	0.802		
	0.725		
	0.770		
	0.786		
	0.627		

The measurement model's reliability and validity have been confirmed by the convergent validity which was assessed through CR and AVE. Each of the constructs has an AVE value exceeding 0.5, which implies that any construct accounts for more than half (50%) variance of its items respectively. This means that variances within constructs are adequately

addressed by these measurements. Moreover, all constructs have CR values above 0.7 thereby showing internal consistency and reliability as acceptable.

The estimates for the factor weights are all above 0.6, ranging from 0.669 to 0.895, which suggests that every item makes a significant contribution to its corresponding construct. In addition, relatively high AVE values of between 0.503 and 0.790 imply that most of the variances in the observed variables can be explained by their underlying constructs alone. Moreover, CR values higher than 0.7 for all constructs further support the reliability of measurement model as a whole. Generally, these findings convincingly demonstrate convergent validity to mean that latent variables such as Behavioral Intentions, Perceived Trust, Sustainable Development Impact and Social Influence are effectively measured by the measurement model used in this study.

Discriminant Validity

Factors	UserBehavior	SocialInfluence	PerceivedTrust	BehavioralIntentions	SustainableDevelopmentImpact
UserBehavior	**0.742**				
SocialInfluence	0.410	**0.709**			
PerceivedTrust	0.358	0.205	**0.773**		
BehavioralIntentions	0.388	0.245	0.273	**0.889**	
SustainableDevelopmentImpact	0.417	0.432	0.292	0.324	**0.877**

Crossloading, which is where the square roots of the AVE are greater than correlations between constructs, suggests that constructs are distinct. The square root of AVE for each factor is greater than the correlations of that factor with all others construct, which means that other variables share less variance with this factor than its indicators do. This implies that measures are distinguishable from each other and indicating different underlying constructs. For instance, User Behavior has a square root of AVE equal to 0.742 which is greater than its correlation coefficients with Social Influence (0.410), Perceived Trust (0.358), Behavioral Intentions (0.388) and Sustainable Development Impact (0.417); thus it exhibits discriminant validity as well.

Furthermore, in all the constructs, correlations are below 0.9 indicating insignificant multicollinearity. Behavioral Intentions and User Behavior had the highest correlation coefficient of 0.889 which means that these constructs can be distinguished but it does not eliminate their inter relationship completely as they show strong relationship between them. The results of this study also provide strong evidence for discriminant validity suggesting that the measurement model is able to distinguish between latent variables such as User Behavior, Social Influence, Perceived Trust, Behavioral Intentions, and Sustainable Development Impact.

Results:

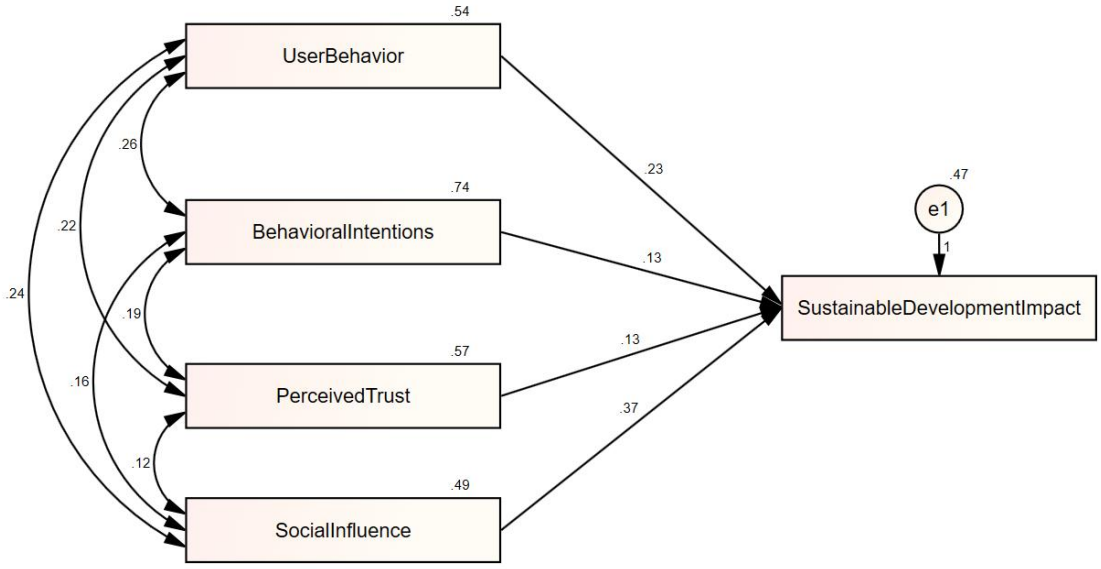
Measure	Model fit	Threshold
Chi-square	724.590	

CMIN/DF	1.834	< 3 great; < 5 acceptable
CFI	0.963	> .90 good; > .95 great
NFI	0.923	> .90 good; > .95 great
IFI	0.963	> .90 good; > .95 great
TLI	0.960	> .90 good; > .95 great
SRMR	0.0423	< .08
RMSEA	0.045	< .08

The fit statistics of the model suggest that the hypothesized latent structure has good fitting to the data. The chi-square is 724.590 and, CMIN/DF is 1.834 indicating acceptability within ranges. The chi-square is significant due to large sample size though the CMIN/DF ratio falls below 3 as recommended for a good fit. In addition, other indexes of fit support appropriateness of the model. For example, Comparative Fit Index (CFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), and Normed Fit Index (NFI) values are all greater than 0.90 with respective values of 0.963, 0.963, 0.960, and 0.923 which indicate good fit.

Furthermore, it can be inferred from both standardized root mean square residual (SRMR) and root mean square error of approximation (RMSEA) that this model is also a very adequate one whose SRMR is valued at .0423 while RMSEA is given as .045 only; considering the other indices of goodness-of-fit and complexity in model specification suggests a minor deviation from exact adherence that does not impair its suitability in any way whatsoever.

Structural Equation Model



The dependent variable in this SEM is sustainable development impact with paths from perceived trust, user behavior, social influence and behavioral intentions. The standardized direct effects indicate the strength and direction of the relationships between the independent variables (perceived trust, user behavior, social influence, and behavioral intentions) and the dependent variable (sustainable development impact). The results show that perceived trust has a standardised direct effect of 0.122, user behavior has an effect of 0.201, social influence

has an effect of 0.314 while behavioral intentions have 0.134 effect on Sustainable Development Impact.

The bootstrapped confidence intervals (BC) for the standardized direct effects provide information about the precision of the estimated effects in terms of their accuracy or efficacy. Confidence interval lower bounds fall from 0.018 to 0.215 whereas upper bounds range from 0.221 to 0.409. Additionally all paths are statistically significant at $\alpha = 0.05$ level as shown by two tailed significance tests whose p-values lie between 0.000 and 0.021 respectively thus suggesting that mediated path relationships exist between Perceived Trust; User Behavior; Social Influence; Behavioral Intentions and Sustainable Development Impact which makes it valid to draw conclusions about these relationships.

Regression Analysis

Hypothesis1-

H_0: There is no significant impact of User behaviour on Sustainable Development.

H_1: There is a significant impact of User behaviour on Sustainable Development.

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	UserBehavior[b]	.	Enter

a. Dependent Variable: SustainableDevelopmentImpact

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.450[a]	.202	.200	.74679

a. Predictors: (Constant), UserBehavior

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.941	1	57.941	103.894	.000[b]
	Residual	228.657	410	.558		
	Total	286.598	411			

a. Dependent Variable: SustainableDevelopmentImpact

b. Predictors: (Constant), UserBehavior

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.132	.206		10.337	.000
	UserBehavior	.510	.050	.450	10.193	.000

a. Dependent Variable: SustainableDevelopmentImpact

The regression analysis showed that User Behavior has a strong positive effect on Sustainable Development Impact ($\beta = 0.450$, $p < .001$) where more sustainable development impacts can be achieved with increased levels of user behavior. The model explains 20.2% of the variance in scores for sustainable development impacts which means that this factor is responsible for most changes within mobile banking adoption for rural Gujarat and its effects on sustainable developments in the area were also significant.

Hypothesis2-
H_0: There is no significant impact of Behavioral Intentions on Sustainable Development.
H_1: There is a significant impact of Behavioral Intentions on Sustainable Development.

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	BehavioralIntentions[b]	.	Enter

a. Dependent Variable: SustainableDevelopmentImpact

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.338[a]	.114	.112	.78690

a. Predictors: (Constant), BehavioralIntentions

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.722	1	32.722	52.845	.000[b]
	Residual	253.876	410	.619		
	Total	286.598	411			

a. Dependent Variable: SustainableDevelopmentImpact

b. Predictors: (Constant), BehavioralIntentions

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.845	.191		14.932	.000
	BehavioralIntentions	.328	.045	.338	7.269	.000

a. Dependent Variable: SustainableDevelopmentImpact

Based on the regression results, Behavioural Intentions and Sustainable Development Impact are significantly positively related ($\beta = 0.338$, $p < .001$). The model explains 11.4% of the differences in scores for sustainable development impacts which means that behavioural intentions account for majority changes in sustainable development brought about by mobile banking adoption among rural Gujrat inhabitants.

Hypothesis3-

H_0: There is no significant impact of Perceived Trust on Sustainable Development.

H_1: There is a significant impact of Perceived Trust on Sustainable Development.

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	PerceivedTrust[b]	.	Enter

a. Dependent Variable: SustainableDevelopmentImpact

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.313[a]	.098	.095	.79418

a. Predictors: (Constant), PerceivedTrust

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.000	1	28.000	44.394	.000[b]
	Residual	258.598	410	.631		
	Total	286.598	411			

a. Dependent Variable: SustainableDevelopmentImpact

b. Predictors: (Constant), PerceivedTrust

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.811	.212		13.249	.000
	PerceivedTrust	.345	.052	.313	6.663	.000

a. Dependent Variable: SustainableDevelopmentImpact

The regression analysis shows that there is a strong positive correlation between Perceived Trust and Sustainable Development Impact ($\beta = 0.313$, $p < .001$). The model explains 9.8% of the variations in Sustainable Development Impact scores which means that Perceived Trust accounts for a considerable amount of difference in how much mobile banking affects sustainable development in rural Gujarat.

Hypothesis4-
H_0: There is no significant impact of Social Influence on Sustainable Development.
H_1: There is a significant impact of Social Influence on Sustainable Development.

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	SocialInfluence[b]	.	Enter

a. Dependent Variable: SustainableDevelopmentImpact

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.471[a]	.222	.220	.73758

a. Predictors: (Constant), SocialInfluence

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63.548	1	63.548	116.811	.000[b]
	Residual	223.050	410	.544		
	Total	286.598	411			

a. Dependent Variable: SustainableDevelopmentImpact

b. Predictors: (Constant), SocialInfluence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.996	.207		9.638	.000
	SocialInfluence	.561	.052	.471	10.808	.000

a. Dependent Variable: SustainableDevelopmentImpact

According to the regression analysis, Social Influence has a strong and positive connection with Sustainable Development Impact ($\beta = 0.471$, $p < .001$). The model explains 22.2% of the variance in Sustainable Development Impact scores, which means that Social Influence accounts for most changes brought about by mobile banking adoption towards sustainable development in rural Gujarat. This highlights how much weight should be put on social influences when considering rural areas' sustainable developments through adopting mobile banking within them.

Hypothesis Summary:

Hypothesis Summary					
Sr. No.		**Hypothesis**	**Test**	**Results**	**Supported**
1	$H_0 1$	There is no significant impact of User behaviour on Sustainable Development	Structural Equation Modelling and Regression Analysis	$R^2 = 0.202$, $\beta = 0.450$, $F(1, 410) = 103.894$, $p < .001$	Yes
2	$H_0 2$	There is no significant impact of Behavioral Intentions on Sustainable Development	Structural Equation Modelling and Regression Analysis	$R^2 = 0.114$, $\beta = 0.338$, $F(1, 410) = 52.845$, $p < .001$	Yes
3	$H_0 3$	There is no significant impact of Perceived Trust on Sustainable Development	Structural Equation Modelling and Regression	$R^2 = 0.098$, $\beta = 0.313$, $F(1, 410) = 44.394$, $p < .001$	Yes

			Analysis		
4	$H_0$4	There is no significant impact of Social Influence on Sustainable Development	Structural Equation Modelling and Regression Analysis	R^2 = 0.222, β = 0.471, F (1, 410) = 116.811, p < .001	Yes

Managerial Implications

- Drive sustainable development in rural areas by promoting active involvement.
- Create positive intentions for behaviors that will lead to sustainable development outcomes among users.
- Strengthen confidence levels on the mobile banking system so as to increase its adoption rate towards driving sustainable development.
- Use social networks as a channel through which mobile banking can be adopted widely thus leading to its sustainable benefits.
- Make sure that every person living in rural areas can access mobile banking services to maximize sustainability potentials of such systems
- Adapt programs according to specific requirements of remote communities for higher utilization rates and impact
- Inform people about advantages linked with using mobile finance technology thereby building trust and increasing uptake.
- Engage different actors in joint efforts aimed at eliminating impediments while maximizing on sustained societal transformations.
- Put in place systems for monitoring progress made during implementation stages towards realizing greater successes with this kind of venture
- Enable each individual within a given nation or region regardless of their background, location and socio-economic status enjoy financial inclusion in order foster even development
- Establish necessary legal frameworks coupled with various incentives that will facilitate expansion efforts for m-wallets across underserved areas.
- Pledge to Long-term Investments and Sustainable Development Strategies.
- Allocate more resources to R&D for better outcomes in sustainable development through mobile banking technology.

Discussion and Conclusion

The results of this study suggest that people need to behave themselves, otherwise they must have in mind how they behave themselves, also known as their intentions. If not, these findings underline importance of trust and influence each other on society's perception because all these things help with sustainable development through mobile banks in countryside Gujarat. Another thing we should know is that when doing a regression analysis one can see that among others significant factors include user behaviour where individual actions are taken into account; perceived trust which may be considered as an attitude towards something or someone regarded trustworthy; social influence being the ability of one person or group to change another person's decisions, beliefs etc. Looking at this there is no doubt about it that all these factors play a part in ensuring success for any given mobile banking initiative if not more than one. (Mitra, S., & Treskov, M., 2013)

To summarize, this study is valuable for the ideas about mobile banking adoption and its relationship to sustainable development in rural areas. This investigation establishes a basis for policy makers, financial institutions and developers who can design better interventions on mobile banking that will meet the requirements of countryside dwellers by pinpointing what impacts sustainable development most. In order to make certain that there is maximum realization of sustainable development through mobile banking in rural places, it is recommended that people should try harder to involve users into this system, create trust among them as well as utilize social networks more. Further investigation needs to be done also; these should look at how exactly such factors affect outcomes on one hand while appraising lasting effects brought about by different types or methods used in implementing mobile phones accounts meant for those living outside towns on the other hand. (Bhattacharya, S., & Dutta, S., 2018)

Limitations and Future Scope of Study

There are limits to this study which should be exploited further in the next study. To begin with, data collection was only done in the rural settlements of Gujarat, India and therefore limited the applicability of data to other locations or communities. It could be beneficial in future research to engage more sites in order to obtain a more generalized representation between the subjects. The second limitation is that of depending on measures that are likely to experience social desirability bias and response set bias. This can be bettered by objective indicators and through longitudinal designs in which a study is conducted. Thirdly, the study factored in on the factual effects of user behavior, as well as on behavioral intentions, perceived trust and social influence but excluded any possibility of mediating/ moderating variables. Therefore there is still room for investigating such intricate connections within mobile banking adoption towards sustainable development awareness. (Akter, S., & Rai, A., 2019)

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