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TECHNOLOGY MODERNIZATION OF INDIA POST USING UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY: AN INITIAL PERSPECTIVE-BASED EVALUATION OF RECENT INITIATIVES

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Abstract
Purpose: *Building on the past extensions to UTAUT, the objective of our work is to pay particular attention to the consumer use context and develop UTAUT application in postal research.*

Methodology: *Referring methodology opted in the earlier studies in different regions, we collected primary data, by way of pre-structured questionnaires from the users of India Post across India on simple random or convenience basis for the aspect, that is not studied till date. A public survey from educated youth at large across India was there. The survey was based on random sampling, where survey was randomly circulated among individuals at social media. A Public Survey of Commune across India, on its Opinion and Preferences towards India Post was floated in Late 2021 and completed by first quarter of 2022. State Representation is from all parts of the country.*

Findings: *Equation Analysis observe that the indicators established by literature have more of impact on behavioral intentions, rather than that of actual usage, i.e. Only 34% actual effect. Social influence, facilitating conditions and IT Impact are found to be highest contributors towards formation of Use behavior. On the other hand, facilitating conditions has been the most effecting construct in determining Behavioral intentions, with social influence and Performance expectancy being the other major contributors, followed by Effort expectancy. Performance expectancy and Effort expectancy had all time negative impact on the end Use. Whereas, IT Impact had the sole inverse impact on intentions.*

Implications: *The study depicts that the Indian environment, especially for the products and services offered by India Post, varies and hence is the impact of different indicators regarding the UTAUT Model in Indian postal, banking and insurance sector context.*

Value: *India, with its maximum post offices and widely distributed postal system, have a far-flung reach and presence remotely. While the past studies contribute to understanding the utility of UTAUT in different contexts, there is still the need for a systematic investigation and theorizing of the salient factors that would apply to a consumer technology use, having a lack of studies on postal sector in India.*

Originality: *This work is our own original work. Any co-reflection of work may be a coincidence.*

Keywords: UTAUT Model, Consumer Acceptance, Use of Information Technology, India Post.

Introduction

During post liberalization period the banking sector in India has grown enormously keeping pace with and in some cases leading the country's remarkable economic growth. The average population per bank branch has decreased from 64,000 in 1969 to 13,466 in 2011. Financial inclusion is not an India specific problem, it is global one. Other than banking and other financial institution, India Post which

partially do banking activity is doing a commendable job towards providing easy financial services to the people throughout the country especially in the remote areas through its huge network. The Traditional Postal Services receive a competition from ultra-modern courier service providers, and need to stay updated and competitive with its all-time loyal and in the pocket services. Mobilisation of domestic financial resources is a major concern in many developing countries. Savings are increasingly being acknowledged as a powerful tool for poverty reduction. Postal savings funds play a significant role in financing public debt and in a number of countries, the funds are intermediated through a variety of policy based financial institutions with developmental objectives, returning the funds to the direct benefit of the community of savers. Only rural find Post office schemes offered by the Government of India attractive, being risk free.

The Big Picture

India Post operates through its 23 Postal Circles, 54 Postal Regions, 446 Postal Divisions, 17 Circle Stamp Depots, 46 Postal Store Depots, 69 RMS Divisions, 6 Postal Training Centers, and 155531 Post Offices, 24 General Post Offices, 811 Head Post Offices (H.O.), 24746 Sub Post Office (S.O.) (Annual report 2018-19). IP has a Marketing Division, Rural Business Division, Sorting Hubs, among others to better coordinate its business. As per the Postal Statistics of India, Regional 2011, J&K, Chhattisgarh, and Assam have the lowest outstanding balance of saving schemes, indicating least coverage by financial inclusion and lesser savings with people. Whereas, Maharashtra, Gujarat, U.P. And West Bengal have the highest figures. India Post provides Postal, Banking, and Insurance Services, in Conventional, IT Adapted / Enabled Mode.

Postal Services**:** Postal services with its vast networks, are governed by department of posts, government of India, under the brand entity 'India Post'. Additionally, some courier services regionally govern the mail communication.

Banking Services**:** Banking is an industry that handles cash, credit, and other financial transactions. They offer savings accounts, certificates of deposit, and checking accounts (Amadeo, 2019). Banks in India are majorly Cooperative banks, Foreign Banks, Local Area Banks, Payments Banks, Private-Sector Banks, Public-Sector Bank, Regional Rural Banks, Small Finance Banks. Additionally, POSBs are an option of saving account with post offices for very small savings amount holders.

Payment Bank**:** Payments banks is a new model of banks conceptualized by RBI. They accept a restricted deposit, in current account and savings accounts, limited to 1 lakh per customer and cannot issue loans and credit cards, but can provide ATM cards, debit cards, net-banking and mobile-banking. Bharti Airtel led, followed by Paytm and India Post. On 19 August 2015, the RBI gave "in-principle" licenses to eleven entities to launch payments banks.

Insurance Services**:** India Post provides only Life Insurance Products, asour scope confined to.

Literature Review

Very lesser studies have been conducted on postal sector in India. A few studies have been found held abroad, on the postal or courier services of respective country. Banking is also a related sector, vastly explored and hence can be referred as literature. Discussing initially, studies have been held on following perspectives:

Challenges of India Post in General (Privatization, Autonomy) (Potadar et. al, 2015), from private courier, banks and financial institutions (Potadar, et. al, 2015); Role of POs in Indian services (Mohammad, 2015); India Post environment (Samal, 2013); modernization of India Post (Planning Commission, 2011); post sorting (Normany, et. al, 2009); issues in IP operations (Jain, Morris, & Raghuram, 2001); Training reorientation (United Kingdom, Republic of Korea, Brazil, and Trinidad and Tobago) (Raghavan, 2005), in DoP referring AIM model (appraisal, intervention and measure) (Subrahmanian, 2010); Postal reform in Germany (Saidoun); PO growth in Kenya (Khator, 2013); postal sector business using IT (Mirchandani); SWOT of POs Iran (Hosseini, et. al, 2013); IP as a govt. agency (Aggarwal, 2012); performance management of POs (Mokoena, & Mbohwa, 2013); Indian POs (Anand, et. al, 2013; Jain, & Kothari, 2012; Richa, 2004); Rural POs in developed, underdeveloped and EMDEs (Kumar, 2015); Pondicherry Postal Division (Giri, 2014); Thai Postal Service (Kaniganat, & Chaipoopirutana, 2014); PO monopoly and privatization in Japan and India, and mobilizing savings (Ranganathan, 2005); PO Savings Bank (World Bank, 2002; Kanthi, & Kumar, 2013; Raghavan, 2005); Postal Savings and Giro remittances (Scher, 2001); PO savings schemes (Mehta, & Mirchandani); investment pattern in Cochin (Hari Sundar, & Jacob, 2009); factors influencing POs investors (Agarwal, 2012); savings of investors in PO schemes (Saranya, & Karthikeyan, 2015); investor attitude on PO deposits (Ganpathi, & Malar, 2010), on PO savings schemes (Kumar, & Kannaiah, 2014), in Cumbum (Gayathri, 2014), for Greek Postal Services (Lykogiannis, 2014); PLI for govt. employees and RPLI for rural (Dutta, 2014); IP financial inclusion (Malakar, 2013; Malankar, 2013); investments of households in small savings (Suresh, 2004); savings in India (Salam, 2004), among poor (Moorthy, & Kumar, 2014); old age income security in India (Palacios, 2001); gold through POs (Kumar, & Prakash, 2014); PO ATMs (Shafee, & Prabakaran, 2014); PO customer opinion (Thangapandi, 2013) and satisfaction (Subatra, & Plaban, 2014; Thakur, & Singh), in Tunisia (Moez, & Gharbi, 2012); IP SERVQUAL (Birajdar, & Joshi, 2016), in Virudhunagar and Madurai (Rajeshwari, & Sunmista, 2011); PO trust and loyalty in customers (Mathew, 2015); customer satisfaction for banks and POs (Gupta, & Gupta, 2012); POs in comparison to courier services in Mumbai (Chhatbar, 2013); restructuring of Indian Bank (Kumar); financial structure of rural banking institutions (Satish, & Gopalakrishna, 1997); financial performance and value implications of M&A in Greek banking (Mylonidis, & Kelnikola, 2005).

Coming forth to the study in particular, following is the description of past literature in brief.

The Present Study – UTAUT

The unified theory of acceptance and use of technology (UTAUT) is a technology acceptance model formulated by Venkatesh and others in "User acceptance of information technology: Toward a unified view" (Venkatesh et al., 2003). The UTAUT aims to explain user intentions to use an information system and subsequent usage behavior. The theory holds that there are four key constructs: 1) performance expectancy, 2) effort expectancy, 3) social influence, and 4) facilitating conditions. The first three are direct determinants of usage intention and behavior, and the fourth is a direct determinant of user behavior. Gender, age, experience, and voluntariness of use are posited to moderate the impact of the four key constructs on usage intention and behavior. The theory was developed through a review and consolidation of the constructs of eight models that earlier research had employed to explain information systems usage behavior (theory of reasoned action, technology acceptance model, motivational model, theory of planned behavior, a combined theory of planned behavior/technology acceptance model, model of personal computer use, diffusion of innovations theory, and social cognitive theory). Subsequent validation by Venkatesh et al. (2003) of UTAUT in a

longitudinal study found it to account for 70% of the variance in Behavioral Intention to Use (BI) and about 50% in actual use (Koivimäki, Ristola, Kesti).

Understanding individual acceptance and use of information technology is one of the most mature streams of information systems research (see Benbasat and Barki 2007; Venkatesh et al. 2007). There have been several theoretical models, primarily developed from theories in psychology and sociology (for a review, see Venkatesh et al. 2003), employed to explain technology acceptance and use. A review and synthesis of eight theories/models of technology use resulted in the unified theory of acceptance and use of technology (UTAUT; Venkatesh et al. 2003). UTAUT has distilled the critical factors and contingencies related to the prediction of behavioral intention to use a technology and technology used primarily in organizational contexts. In longitudinal field studies of employee technology acceptance, UTAUT explained about 70 percent of the variance in behavioral intention to use a technology and about 50 percent of the variance in technology use. Since its original publication, UTAUT has served as a baseline model and has been applied to the study of a variety of technologies in both organizational and non-organizational settings. There have been many applications and replications of the entire model or part of the model in organizational settings that have contributed to fortifying its generalizability (e.g., Neufeld et al. 2007). There are three broad types of UTAUT extensions/integrations. The first type of extension/integration examined UTAUT in new contexts, such as new technologies (e.g., collaborative technology, health information systems; Chang et al. 2007), new user populations (e.g., healthcare professionals, consumers; Yi et al. 2006) and new cultural settings (e.g., China, India; Gupta et al. 2008). The second type is the addition of new constructs in order to expand the scope of the endogenous theoretical mechanisms outlined in UTAUT (e.g., Chan et al. 2008; Sun et al. 2009). Finally, the third type is the inclusion of exogenous predictors of the UTAUT variables (e.g., Neufeld et al. 2007; Yi et al. 2006). These extensive replications, applications, and extensions/integrations of UTAUT have been valuable in expanding our understanding of technology adoption and extending the theoretical boundaries of the theory. However, our review of this body of work revealed that most studies using UTAUT employed only a subset of the constructs, particularly by dropping the moderators (see Al-Gahtani et al. 2007; Armida 2008). Thus, while the various studies contribute to understanding the utility of UTAUT in different contexts, there is still the need for a systematic investigation and theorizing of the salient factors that would apply to a consumer technology use context.

Research Gap

From the above review discussion, it becomes clear that well lesser studies are held on the topic in Indian context and further, no study has been found executed till date on North-Western India on the phenomenon. Hence, it would be quite interesting to suggest the solution for the postal system in the given Indian region itself.

Problem Statement

The India post is one of the most trusted government organizations from last 150 years. It is facing the acute competition from other competitors. To become the leader in the mailing and financial services the department of post need to adopt certain important changes in its services and technology. The ease and convenience of the customer with timeliness in service delivery must be the utmost priority. The India post has a brand image but to make their services indispensable the service quality and other dimensions of satisfaction need to be focused. The India post has to concentrate on balanced growth in all its services for retaining the existing customers and attracting new one. Hence, here the problem scope will lie along exploring the ways ahead as a suggestion to let the India post achieve its zenith.

Study Objectives

Given the above initial review, having research on India Post in mind, given its business processes and condensed the research objectives till marketing and business perspective, objective for the research is to study the customer satisfaction of India Post in its users across India.

Building on the past extensions to UTAUT, the objective of our work is to pay particular attention to the consumer use context and develop UTAUT application in postal research. Compared to general theories, in more recent years, theories that focus on a specific context and identify relevant predictors and mechanisms are considered to be vital in providing a rich understanding of a focal phenomenon and to meaningfully extend theories. Specifically, both Johns (2006) and Alvesson and Kärreman (2007) note that new contexts can result in several types of important changes in theories, such as rendering originally theorized relationships to be non-significant, changing the direction of relationships, altering the magnitude of relationships and creating new relationships. Each change can reveal the breakdown of theories that results in the creation of new knowledge (Alvesson and Kärreman 2007). In the case of UTAUT, which was originally developed to explain employee technology acceptance and use, it will be critical to examine how it can be extended to other contexts, such as the context of consumer technologies, which is a multibillion-dollar industry given the number of technology devices, applications, and services targeted at consumers (Stofega and Llamas 2009). Against this backdrop, the study of the boundary conditions and extensions to UTAUT in a consumer context represents an opportunity to make an important theoretical contribution. Specifically, in the context of technology adoption, detractors and proponents of models, such as the technology acceptance model (TAM), have noted the need to expand the space of theoretical mechanisms (see Bagozzi 2007; Benbasat and Barki 2007; Venkatesh et al. 2007).

Study Hypothesis

Given above literature background and set objective, following are the hypothesis framed on:
Directional**:** Positively / Negatively
Attitudinal**:** Strongly (.75) / Highly (.5) / Moderately (.25) / Minimally (.01)
H1a: Performance expectancy causesBehavioral intention
H1b: Performance expectancy cause Use behavior
H2a: Effort expectancy causesBehavioral intention
H2b: Effort expectancy cause Use behavior
H3a: Social influence cause Behavioral intention
H3b: Social influence cause Use behavior
H4a: Facilitating conditions cause Behavioral intention
H4b: Facilitating conditions cause Use behavior
H5a: IT impact cause Behavioral intention
H5b: IT impact cause Use behavior

Methods

Referring methodology opted in the earlier studies in different regions, we collected primary data, by way of pre-structured questionnaires from the users of India Post across India on simple random or convenience basis for the aspect, that is not studied till date.

Sample

Customers**:** Alike other public places of utility dispensing, their frequency of visit varies. Generally, they are 10-500 in a single working day at a station.

Sampling Frame: Customer is one purchasing or utilizing some product or service of India Post, either visiting the station or through an agent.

Data Collection

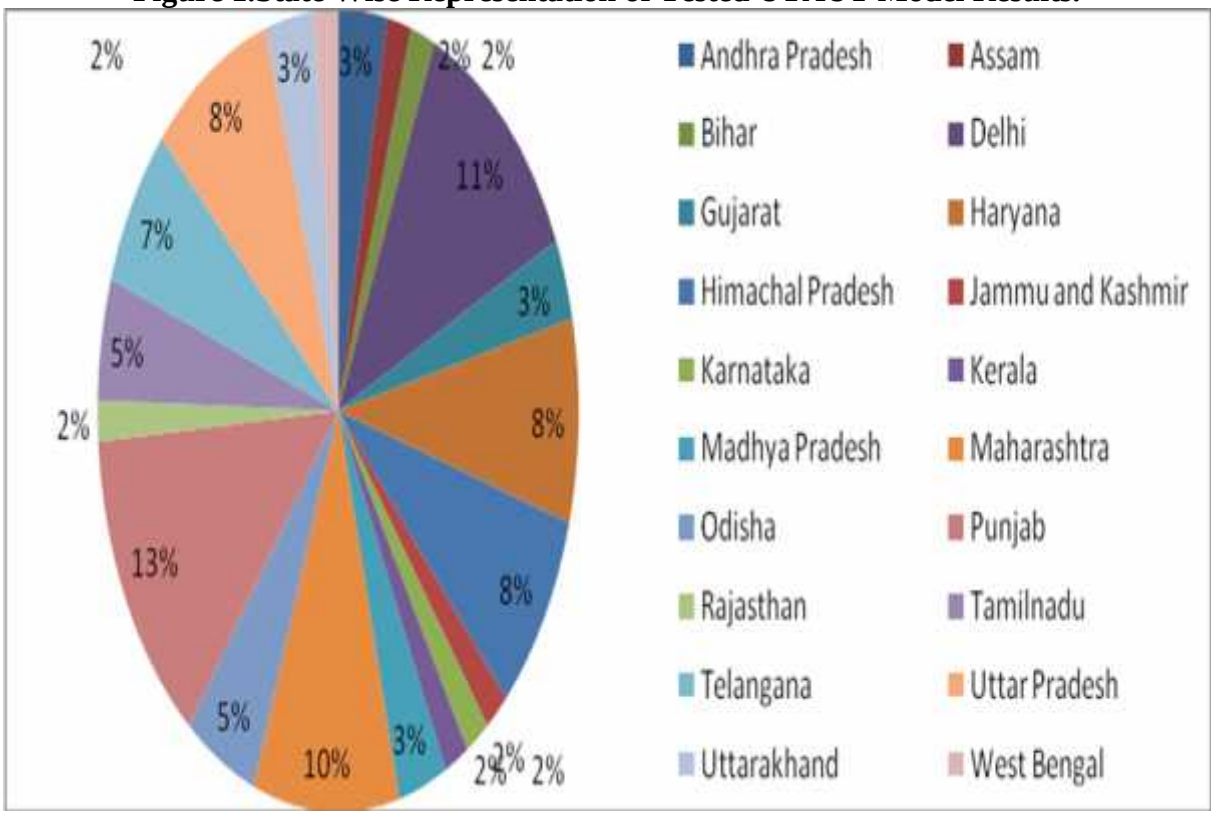
Questionnaires Used**:** A public survey from educated youth at large across India is there. Results for same presented later.

Sample Size and Sampling**:** 244 respondents across India were surveyed. The survey was based on random sampling, where survey was randomly circulated among individuals at social media. Given the convenience, respondents responded upon.

Data Source

Scope: A Public Survey of Commune across India, on its Opinion and Preferences towards India Post was floated in Late 2021, which completed by first quarter of 2022.
State Representation for the following was as follows:

Figure 1.State Wise Representation of Tested UTAUT Model Results.

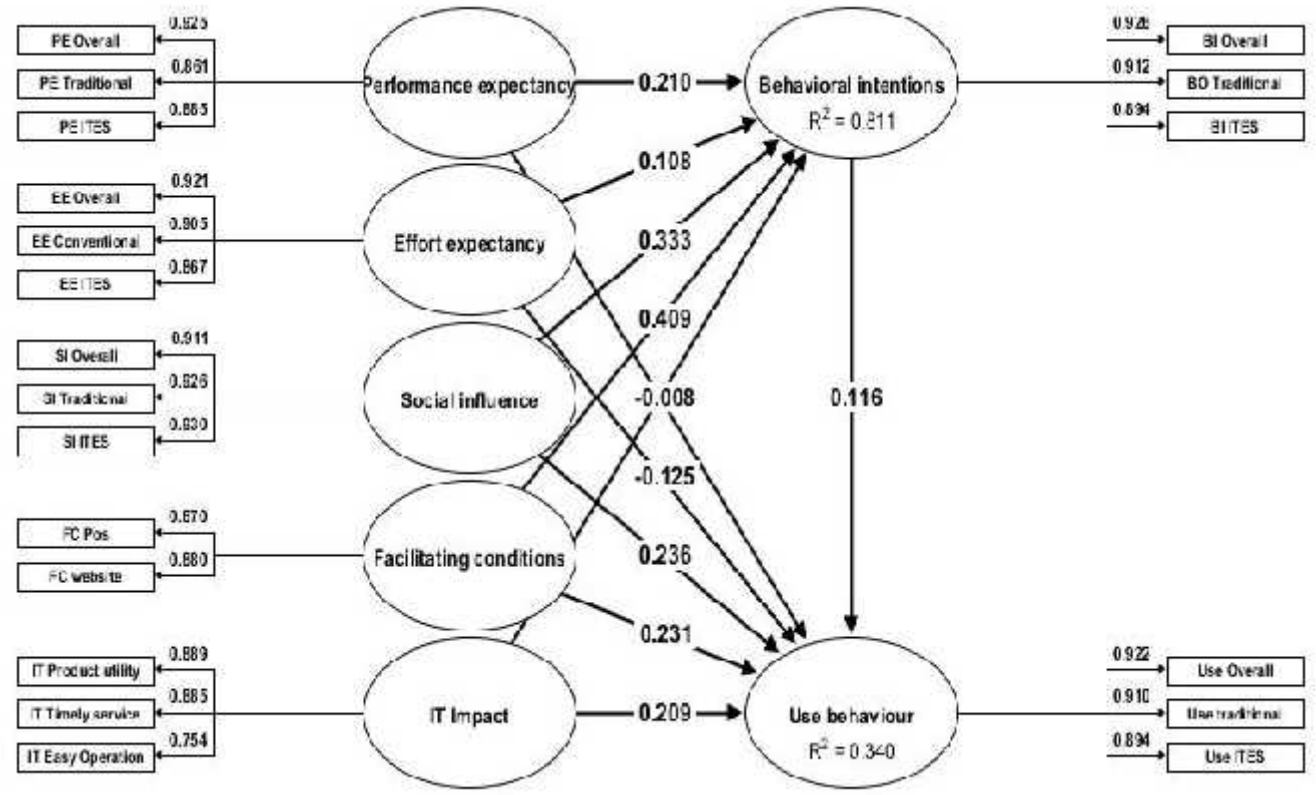


Source: Author's calculations.

Note: The survey was based on random sampling, where survey was randomly circulated among individuals at social media. Given the convenience, respondents responded upon.

Empirical Model

The graphical representation of the formed up empirical model are as follows:



Source: Author's calculations.

Empirical model(s) tested represented in mathematical format is described as follows:

BI = perf. expectancy + effort expectancy + social infl. + fac. cond. + IT impact (1)

UB = PE+EE + SI + FC + IT impact (2)

Behavioral intentions and Use behavior have been tested as the resultant variable(s) of performance expectancy, effort expectancy, social influence, facilitating conditions and IT impact, with a supplement of behavioral intentions, in case of use behavior.

Findings

Table 1.Construct Reliability

Construct	Dijkstra-Henseler's rho (ρ_A)	Jöreskog's rho (ρ_c)	Cronbach's alpha(α)
Performance expectancy	0.8855	0.9201	0.8705
Effort expectancy	0.8807	0.9259	0.8797
Social influence	0.9150	0.9449	0.9126
Facilitating conditions	0.6934	0.8668	0.6928
Behavioral intentions	0.8972	0.9359	0.8971
IT Impact	0.8619	0.8817	0.8061
Use behavior	0.8950	0.9342	0.8944

Source: Author's calculations.

Interpretation: The construct reliability for 'Facilitating conditions', for some of the parameters, is below the standard requirements. Hence the construct is deemed not interpreting standard results.

Table 2.Convergent Validity

Construct	Average variance extracted (AVE)
Performance expectancy	0.7934
Effort expectancy	0.8064
Social influence	0.8511
Facilitating conditions	0.7649
Behavioral intentions	0.8295
IT Impact	0.7141
Use behavior	0.8257

Source: Author's calculations.

Interpretation: Results are as per standard limits.

Table 3. Discriminant Validity

Construct	Performance expectancy	Effort expectancy	Social influence	Facilitating conditions	Behavioral intentions	IT Imp.	Use behav.
Performance expectancy							
Effort expectancy	0.8126						
Social influence	0.4788	0.4213					
Facilitating conditions	0.7859	0.7744	0.9413				
Behavioral intentions	0.7627	0.7073	0.8464	1.0796			
IT Impact	0.7080	0.4553	0.5048	0.6129	0.5738		
Use behavior	0.3545	0.2623	0.5813	0.6388	0.5496	0.46	

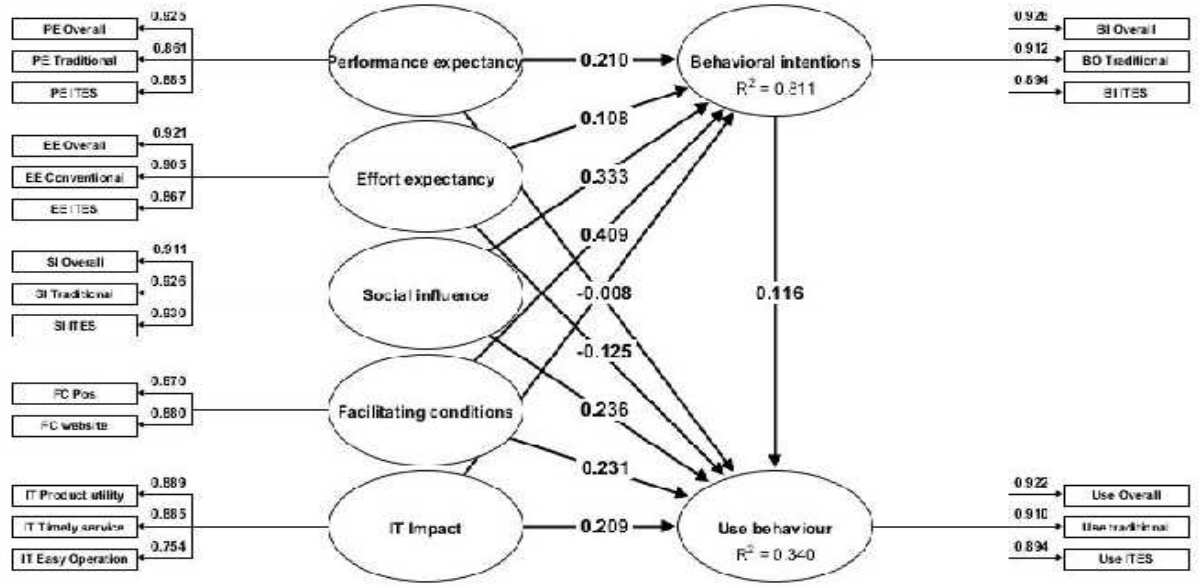
Source: Author's calculations.

Interpretation: As was observed from **t**he construct reliability for 'Facilitating conditions', the construct was below standard results. Hence again, Discriminant validity for 'Facilitating conditions * Social influence' and 'Behavioral intentions * Facilitating conditions' is again found away from standard parameters limits. Hence the construct is deemed not interpreting standard results.

UTAUT Equation Analysis

Unified Theory of Acceptance and Use of Technology (UTAUT) analysis has been done using the Equation Analysis in the ADANCO (Advanced Analysis of Composites) software, version 2.1.1.
The graphical representation of the formed up empirical results are as follows:

Figure 2. Graphical Representation of Tested UTAUT Model Results.



Source: Author's calculations.

Interpretation: Given the analysis of responses from 244 respondents across India, we observe that the indicators established by literature have more of impact on behavioral intentions, rather than that of actual usage, i.e. Only 34% actual effect. Social influence, facilitating conditions and IT Impact are found to be highest contributors towards formation of Use behavior. On the other hand, facilitating conditions has been the most effecting construct in determining Behavioral intentions, with social influence and Performance expectancy being the other major contributors, followed by Effort expectancy. Performance expectancy and Effort expectancy had all time negative impact on the end Use behavior. Whereas, IT Impact had the sole inverse (negative) impact on Behavioral intentions. It depicts that the Indian environment, especially for the products and services offered by India Post varies and hence is the impact of different indicators regarding the UTAUT Model.

Table 4. Fornell-Larcker Criterion

Construct	Performance expectancy	Effort expectancy	Social influence	Facilitating conditions	Behavioral intentions	IT Imp.	Use behav.
Performance expectancy	0.7934						
Effort expectancy	0.4993	0.8064					
Social influence	0.1861	0.1479	0.8511				
Facilitating conditions	0.3866	0.3702	0.5622	0.7649			
Behavioral intentions	0.4619	0.3970	0.5906	0.7251	0.8295		
IT Impact	0.3907	0.1700	0.2128	0.2309	0.2687	0.71	
Use behavior	0.1030	0.0544	0.2779	0.2528	0.2427	0.17	0.8257
Squared correlations; AVE in the diagonal.							

Source: Author's calculations.

Interpretation: Indicators are observed at mark.

Table 5.Loadings

Indicator	Performance expectancy	Effort expectancy	Social influence	Facilitating conditions	Behavioral intentions	IT Imp.	Use behavior
IT Product utility						0.89	
IT Timely service						0.89	
IT Easy Operation						0.75	
PE Overall	0.9252						
PE Traditional	0.8612						
PE ITES	0.8846						
EE Overall		0.9212					
EE Conventional		0.9054					
EE ITES		0.8665					
SI Overall			0.9114				
SI Traditional			0.9259				
SI ITES			0.9302				
FC Pos				0.8696			
FC website				0.8796			
BI Overall					0.9261		
BO Traditional					0.9122		
BI ITES					0.8938		
Use Overall							0.9218
Use traditional							0.9097
Use ITES							0.8943

Source: Author's calculations.

Interpretation: Indicators are observed at mark, being above 0.05.

Table 6.Indicator Reliability

Indicator	Performance expectancy	Effort expectancy	Social influence	Facilitating conditions	Behavioral intentions	IT Imp.	Use behavior
IT Product utility						0.79	
IT Timely service						0.78	
IT Easy Operation						0.57	
PE Overall	0.8560						
PE Traditional	0.7417						
PE ITES	0.7825						

EE Overall		0.8487					
EE Conventional		0.8197					
EE ITES		0.7509					
SI Overall			0.8307				
SI Traditional			0.8573				
SI ITES			0.8654				
FC Pos				0.7561			
FC website				0.7737			
BI Overall					0.8576		
BO Traditional					0.8320		
BI ITES					0.7989		
Use Overall							0.8496
Use traditional							0.8276
Use ITES							0.7997

Source: Author's calculations.

Interpretation: Indicators are observed at mark, being above 0.05.

Table 7.Indicator Multicollinearity

Indicator	Performance expectancy	Effort expectancy	Social influence	Facilitating conditions	Behavioral intentions	IT Imp.	Use behav.
IT Product utility						1.82	
IT Timely service						1.91	
IT Easy Operation						1.61	
PE Overall	3.0121						
PE Traditional	2.3530						
PE ITES	2.0914						
EE Overall		3.3995					
EE Conventional		2.9761					
EE ITES		1.9588					
SI Overall			2.6336				
SI Traditional			3.5212				
SI ITES			3.6780				
FC Pos				1.3906			
FC website				1.3906			
BI Overall					3.2277		
BO Traditional					2.8958		
BI ITES					2.4078		
Use Overall							2.9982
Use traditional							2.7780
Use ITES							2.4312
Variance inflation factors (VIF)							

Source: Author's calculations.

Interpretation: Multicollinearity is only observed between construct and respective variables.

Table 8.R-Squared

Construct	Coefficient of determination (R^2)	Adjusted R^2
Behavioral intentions	0.8112	0.8072
Use behavior	0.3396	0.3229

Source: Author's calculations.

Interpretation: The indicators established by literature have more of impact on behavioral intentions, rather than that of actual usage, i.e. Only 34% actual effect.

Table 9.Path Coefficients

	Dependent variable	
Independent variable	**Behavioral intentions**	**Use behavior**
Performance expectancy	0.2102	-0.0460
Effort expectancy	0.1076	-0.1251
Social influence	0.3330	0.2361
Facilitating conditions	0.4093	0.2312
Behavioral intentions		0.1160
IT Impact	-0.0077	0.2094

Source: Author's calculations.

Interpretation: Social influence, facilitating conditions and IT Impact are found to be highest contributors towards formation of Use behavior. On the other hand, facilitating conditions has been the most effecting construct in determining Behavioral intentions, with social influence and Performance expectancy being the other major contributors, followed by Effort expectancy. Performance expectancy and Effort expectancy had all time negative impact on the end Use behavior. Whereas, IT Impact had the sole inverse (negative) impact on Behavioral intentions.

Table 10.Effect Overview

Effect	Beta	Indirect effects	Total effect	Cohen's f2
Performance expectancy ->Behavioral intentions	0.2102		0.2102	0.0808
Performance expectancy -> Use behavior	-0.0460	0.0244	-0.0217	0.0010
Effort expectancy ->Behavioral intentions	0.1076		0.1076	0.0273
Effort expectancy -> Use behavior	-0.1251	0.0125	-0.1126	0.0103
Social influence ->Behavioral intentions	0.3330		0.3330	0.2396
Social influence -> Use behavior	0.2361	0.0386	0.2747	0.0278
Facilitating conditions ->Behavioral intentions	0.4093		0.4093	0.2645
Facilitating conditions -> Use behavior	0.2312	0.0475	0.2787	0.0191
Behavioral intentions -> Use behavior	0.1160		0.1160	0.0038
IT Impact ->Behavioral intentions	-0.0077		-0.0077	0.0002
IT Impact -> Use behavior	0.2094	-0.0009	0.2085	0.0371

Source: Author's calculations.

Interpretation: We observe that although Performance expectancy has a negative total effect on Use behavior, but it has a fractional positive indirect effect in the relationship. Same applies on Effort expectancy effect on Use behavior. As a different case although IT impact has a substantial positive effect on Use behavior, but it has a slink negative indirect effect measured in the relation.

Table 11.Inter-Construct Correlations

Construct	Performance expectancy	Effort expectancy	Social influence	Facilitating conditions	Behavioral intentions	IT Imp.	Use behav.
Performance expectancy	1.0000						
Effort expectancy	0.7066	1.0000					
Social influence	0.4314	0.3846	1.0000				
Facilitating conditions	0.6218	0.6085	0.7498	1.0000			
Behavioral intentions	0.6796	0.6301	0.7685	0.8515	1.0000		
IT Impact	0.6251	0.4123	0.4613	0.4805	0.5184	1.01	
Use behavior	0.3209	0.2332	0.5272	0.5028	0.4927	0.41	1.0000

Source: Author's calculations.

Interpretation: FC-BI and SI-BI are Strongly (.75) held causal relationships. SI-FC, PE-EE, PE-BI, EE-BI, PE-II, PE-FC, EE-FC, SI-UB, BI-II and FC-UB are Highly (.5) held causal relationships. BI-UB, FC-II, SI-II, PE-SI, EE-II, II-UB, PE-UB and EE-SI are Moderately (.25) held causal relationships. EE-UB is Minimally (.01) held causal relationship.

Hypothesis Testing

H1a: Performance expectancy causes Behavioral intention

Directional**:** Positively, as Performance expectancy being the other major contributors in determining Behavioral intentions.

Attitudinal**:** Highly (.5), as **PE-BI have** Highly (.5) held causal relationships.

H1b: Performance expectancy cause Use behavior

Directional**:** Negatively, as Performance expectancy had all time negative impact on the end Use behavior.

Attitudinal**:** Moderately (.25), as **PE-UB have** Moderately (.25) held causal relationships.

H2a: Effort expectancy causes Behavioral intention

Directional**:** Positively, as Effort expectancy being slightly affecting Behavioral intentions.

Attitudinal**:** Highly (.5), as **EE-BI have** Highly (.5) held causal relationships.

H2b: Effort expectancy cause Use behavior

Directional**:** Negatively, as Effort expectancy had all time negative impact on the end Use behavior.

Attitudinal**:** Minimally (.01), as **EE-UB is** Minimally (.01) held causal relationship.

H3a: Social influence cause Behavioral intention

Directional**:** Positively, Social influence being the other major contributors in determining Behavioral intentions.

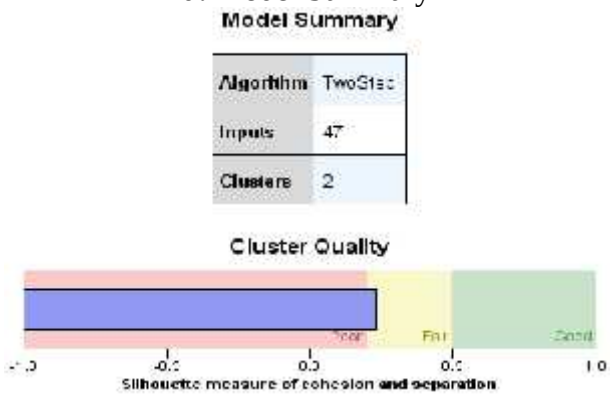
Attitudinal**:** Strongly (.75), as **SI-BI have** Strongly (.75) held causal relationships.

H3b: Social influence cause Use behavior

Directional**:** Positively, as social influence is found to be one of the highest contributors towards formation of Use behavior.
Attitudinal**:** Highly (.5), as **SI-UB have** Highly (.5) held causal relationships.
H4a: Facilitating conditions cause Behavioral intention
Directional**:** Positively, as Facilitating conditions has been the most effecting construct in determining Behavioral intentions.
Attitudinal**:** Strongly (.75), as **FC-BI have** Strongly (.75) held causal relationships.
H4b: Facilitating conditions cause Use behavior
Directional**:** Positively, as Facilitating conditions is found to be one of the highest contributors towards formation of Use behavior.
Attitudinal**:** Highly (.5), as **FC-UB have** Highly (.5) held causal relationships.
H5a: IT impact cause Behavioral intention
Directional**:** Negatively, as IT Impact had the sole inverse (negative) impact on Behavioral intentions.
Attitudinal**:** Highly (.5), **BI-II has** Highly (.5) held causal relationships.
H5b: IT impact cause Use behavior
Directional**:** Positively, as IT Impact is found to be one of the highest contributors towards formation of Use behavior.
Attitudinal**:** Moderately (.25), as **II-UB have** Moderately (.25) held causal relationships.

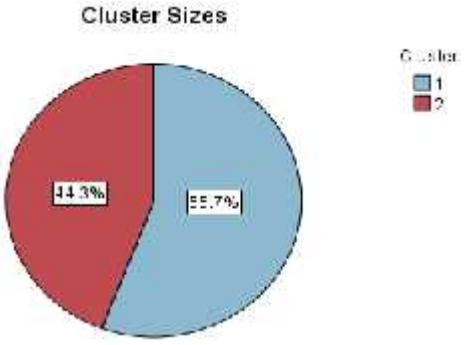
Two Way Cluster Analysis

Figure 3. Two Way Cluster Analysis:
a. Model Summary



Source: Author's calculations.

b. Cluster Sizes



Source: Author's calculations.

Interpretation: Whereas Cluster 1 is mostly observed as the active and positive feedback segment, other hand Cluster 2 confronts passive, lesser using and neutral feedback. Given the data characteristics, Cluster 1 is named as Active Positivists Users and Cluster 2 is named as Passive Neutrals Users.

Conclusions

Indian postal service is the largest postal network in the world. The organization has grown multiword with its core strength and focus of expansion in rural India. Today India is the country with maximum number of post offices all over the world, is most widely distributed postal system in the world. Because of this far-flung reach and presence in remote areas, it is also involved in small-savings banking and financial services. The big challenge today for India Post is to sustain in this market and retain the existing customers by delivering high level of satisfaction through its services. In this modern era, the customer expectations as well as their preferences have changed. The customers have plenty of other alternatives at a single click. Coming forth to the study in particular, understanding individual acceptance and use of information technology is one of the most mature streams of information systems research (see Benbasat and Barki 2007; Venkatesh et al. 2007). There have been several theoretical models, primarily developed from theories in psychology and sociology (for a review, see Venkatesh et al. 2003), employed to explain technology acceptance and use. There have been many applications and replications of the entire model or part of the model in organizational settings that have contributed to fortifying its generalizability (e.g., Neufeld et al. 2007). However, our review of this body of work revealed that most studies using UTAUT employed only a subset of the constructs, particularly by dropping the moderators (see Al-Gahtani et al. 2007; Armida 2008). Building on the past extensions to UTAUT, the objective of our work is to pay particular attention to the consumer use context and develop UTAUT application in postal research. Against this backdrop, the study of the boundary conditions and extensions to UTAUT in a consumer context represents an opportunity to make an important theoretical contribution. Specifically, in the context of technology adoption, detractors and proponents of models, such as the technology acceptance model (TAM), have noted the need to expand the space of theoretical mechanisms (see Bagozzi 2007; Benbasat and Barki 2007; Venkatesh et al. 2007). A Public Survey of Commune across India, on its Opinion and Preferences towards India Post was floated in Late 2021, which completed by first quarter of 2022. A Public Survey of Commune across India, on its Opinion and Preferences towards India Post was floated in Late 2021 and completed by first quarter of 2020. State Representation is from all parts of the country as such. The survey was based on random sampling, where survey was randomly circulated among individuals at social media. Given the convenience, respondents responded upon. **Unified Theory of Acceptance and Use of Technology** (**UTAUT**) Equation Analysis observe that the indicators established by literature have more of impact on behavioral intentions, rather than that of actual usage, i.e. Only 34% actual effect. Social influence, facilitating conditions and IT Impact are found to be highest contributors towards formation of Use behavior. On the other hand, facilitating conditions has been the most effecting construct in determining Behavioral intentions, with social influence and Performance expectancy being the other major contributors, followed by Effort expectancy. Performance expectancy and Effort expectancy had all time negative impact on the end Use behavior. Whereas, IT Impact had the sole inverse (negative) impact on Behavioral intentions. It depicts that the Indian environment, especially for the products and services offered by India Post varies and hence is the impact of different indicators regarding the UTAUT Model. Multicollinearity is only observed between construct and respective variables. We observe that although Performance expectancy has a negative total effect on Use behavior, but it has a fractional positive indirect effect in the relationship. Same applies on Effort expectancy effect on Use behavior. As a different case

although IT impact has a substantial positive effect on Use behavior, but it has a slink negative indirect effect measured in the relation. FC-BI and SI-BI are Strongly (.75) held causal relationships. SI-FC, PE-EE, PE-BI, EE-BI, PE-II, PE-FC, EE-FC, SI-UB, BI-II and FC-UB are Highly (.5) held causal relationships. BI-UB, FC-II, SI-II, PE-SI, EE-II, II-UB, PE-UB and EE-SI are Moderately (.25) held causal relationships. EE-UB is Minimally (.01) held causal relationship. Based on Two Way Cluster Analysis results, two clusters were formed. Whereas Cluster 1 is mostly observed as the active and positive feedback segment, other hand Cluster 2 confronts passive, lesser using and neutral feedback. Given the data characteristics, Cluster 1 is named as Active Positivists Users and Cluster 2 is named as Passive Neutrals Users.The changing postal environment presents an enormous challenge for traditional postal businesses, but it also creates a vast array of new business options and opportunities, as the interest rate compared to other schemes provided by the Postal schemes are higher. The study will be helpful to identify the profile of present customer segment of India Post and device improved solutions to better serve the customers.

Recommendations

The compilation provides us a comprehensive account of the characteristics of the study and the interpretation of results was made using the facts. The study results are useful to departments of posts and its such other competitors and contemporaries in India and abroad. Specific recommendations are:
The big challenge today for India Post is to sustain in this market and retain the existing customers by delivering high level of satisfaction through its services. In this modern era, the customer expectations as well as their preferences have changed. The customers have plenty of other alternatives at a single click.

Our review of the past work revealed that most studies using UTAUT employed only a subset of the constructs, particularly by dropping the moderators (see Al-Gahtani et al. 2007; Armida 2008).

Equation Analysis observe that the indicators established by literature have more of impact on behavioral intentions, rather than that of actual usage, i.e. Only 34% actual effect.It is recommended to explore alternative ways to work on enhancing actual end usage of such products, in addition to merely holding behavioral intentions to use such products in future, Social influence, facilitating conditions and IT Impact are found to be highest contributors towards formation of Use behavior. On the other hand, facilitating conditions has been the most effecting construct in determining Behavioral intentions, with social influence and Performance expectancy being the other major contributors, followed by Effort expectancy. This recommends a stress on such aspects for technology-based products of India Post.

From the comparative perspective, the results as a whole are observed inverse to the past text.It depicts that the Indian environment, especially for the products and services offered by India Post varies and hence is the impact of different indicators regarding the UTAUT Model.

We observe that although Performance expectancy has a negative total effect on Use behavior, but it has a fractional positive indirect effect in the relationship. Same applies on Effort expectancy effect on Use behavior. A focus on looking advantages here is also suggested.

FC-BI and SI-BI are Strongly (.75) held causal relationships. SI-FC, PE-EE, PE-BI, EE-BI, PE-II, PE-FC, EE-FC, SI-UB, BI-II and FC-UB are Highly (.5) held causal relationships. Such relationships can be explored to get advantage on product extension and market development.

Based on Two Way Cluster Analysis results, two clusters were formed. Whereas Cluster 1 is mostly observed as the active and positive feedback segment, and is named as Active Positivists Users.It is advised to focus on targeting such set of users for the implications of model results.

Implications

The paper building on the past extensions to UTAUT, pays particular attention to the consumer use context and develop UTAUT application in postal research. It emphasizes on assessing user group behavioral intentions and use behavior, based on certain underlying in-process stimulus. Suggested solutions will also have many positive benefits, including stimulus extraction, scenario assessment, and future planning.

The changing postal environment presents an enormous challenge for traditional postal businesses, but it also creates a vast array of new business options and opportunities, as the interest rate compared to other schemes provided by the Postal schemes are higher. The study will be helpful to identify the profile of present customer segment of India Post and device improved solutions to better serve the customers.

The study depicts that the Indian environment, especially for the products and services offered by India Post, varies and hence is the impact of different indicators regarding the UTAUT Model in Indian postal, banking and insurance sector context. Specific solutions for the India Post technology-based products would be much sought after solutions, instead of the generalized ones.

Limitations

The study results are only confined to department of posts in India with special reference to UTAUT perspectives, or in comparison with the relevant competing industries and sectors in India and abroad, given the similarity of products, users, social environment and such other factors.

Future Research

An extension on demographic and psychographic dimensions with particular reference to individual products in specific regions, circles and national level, using a structured randomized study would be a fruitful extension. Same can be held with the postal and rural finance department of other international economies to test about the similarities and variations.

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