

MODELING PRECURSORS TO DRIVE GSTN ADOPTION INTENTION IN RURAL INDIA

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Abstract

Envisioning a common tax system in India in 2017, GSTN is a relatively new concept, and businesses in rural areas of the country need to study the adoption of GSTN using the Technology Acceptance Model and UTAUT variables. Rural areas near Lucknow, Uttar Pradesh, were studied exploratorily and conclusively. The findings suggest keeping GSTN's interface and structure simple so users can use it easily. The website is user-friendly and designed for taxpayers, but most respondents use professional help. GSTN is cumbersome, say users. GSTN must protect tax payer privacy. It should protect its users' privacy and train rural Indians to use GSTN. This research paper takes into consideration PS (Perceived Simplicity in usage), PU (Perceived Utility) and RO (Risk Observed) as first variables needed to be achieved in order to drive the intent to adopt GSTN. This research paper was based on the premise that there is a relationship between the Model of Technology Adoption and Model of Use of Technology variables.

Keywords: *Technology Acceptance Model, Goods and Service Tax, Goods and Service Tax Network, Unified Theory of Adoption and Use of Technology, Rural India GST.*

JEL Codes: *H21, O, O3.*

Introduction

The digital era is making sure that the companies and clients employ the usage of the web-based business dealings leading to transactions which are web based for sales and purchase and with this there will be tangible paradigm shifts, leading towards internet technology, where the customary offline systems and practices are moving at a fast pace towards policies and practices based on internet technology.

Across the world, the countries in order to improve the economic conditions, are investing heavily to augment their IT infrastructure especially in India.

The consistent efforts by the Indian government and their policies with reference to promoting the convention of e-commerce in India, there always exists a matter which

raises questions as to how much enthusiastic are the business houses and the consumers in rural parts of the state in India, for adopting the new policies and diffuse it. There are various studies conducted by many researchers, which have shown the effect of transition whether there is diffusion or adoption of the new policies and technologies by the users and consumers.

One of the studies in the domain of Taxation system in Tax office, Indonesia was carried out by J Hendra and H Yudhi, (2021) and aimed to figure out the significance and relevance for the application which was placed with reference to Model of Technology acceptance with reference to system of e-filing compliances by the individual taxpayers in order to

understand the level of awareness and knowledge with regards to taxation procedures. In this study the results highlighted that there existed a significantly positive impact among all relevant variables of the model.

As per various studies and researches, the dissemination of technological advancements is a great multifaceted observable fact. This progression of embracing the new technology in the new system of taxation have shown very high rate of policy drafting and implementation by the government.

GST replaced the previous indirect tax structure of VAT system in India. It was levied in 2017 by government of India to bring in a cohesive tax system in the country. This indirect taxation system on Goods and Services already was functional in 160 more countries prior to its implementation in India. (Kumar, Tyagi, &Vashishat, 2018).

Several existing indirect Taxes which prevailed in India were all subsumed under GST. The government of India had keenly implemented GST structure of taxation as it brings in several benefits into the system like: (1) One Tax One Nation. (2) Brings in lot of transparency into the system. (3) Removal of cascading of tax system in the country. (4) Thereby leading to making goods and services cheaper as stated by Sharma & Saini (2019)

Indian stock markets also showed the impact of technology and GST. This change had definitely led to various acceptance issues which could be seen with levels of volatility in stock returns of listed companies and this volatility and change has been covered by in a number of researches.

In the context of aligning with current GST Payments and Processes, the government has taken the initiative and introduced a portal which is online for GST network popularly known as GSTN. GSTN is a system created by the government of India with the idea of ensuring that GST payments system becomes convenient for the taxpayers registered under GST (Das, 2017).

In view of the same, it is of utmost importance to study about the implementation of GSTN among the Indian manufacturers. Two of the very popular concepts which help us to study and understand the implementation conduct of customers which in case of GST is taxpayers, towards technology include the TAM and UTAUT model. Considering the scaling up of information technology, it is imperative to understand and study the levels of preparation of customers towards the changing systems and the technological advancements.

According to TAM, PS is perceived simplicity and PU which is perceived utility or usefulness and these are the two main variables which affect customer's adoption intention towards any technology. In order to study how easy it is for the customers to handle the new innovation or invention, we use the former to study and analyse the extent with which it will affect customer's performance due to technologically advanced procedure.

Several studies have replicated and implemented the TAM model and this has been witnessed in the Literature as well, that in depth study has been conducted using one of the features of TAM which is the psychometric feature. This is done by application of TAM in a various domain which can be in finance domain, marketing domain, domain of financial marketing, domain of strategic management, domain of logistics and several others but conversely, due to advancements in technology, the researchers have squabbled for a need of modification or extension of the TAM Model, to keep a steady pace with changing times.

Various researchers are of the view and give emphasis to the necessity of several more factors in the TAM Model so that we can get an all-inclusive image while studying adoption intention despite TAM being considered as a suitable model in order to measure the intention of customers towards adoption of technology. UTAUT is an extended part of various theories & is well thought-out to be more vigorous when

compared with former theories by combining some theories which are related to adoption of technological advancements.

Conceptual Framework And Hypothesis Development

It has been one of the most frantic changes brought in the Country by the Indian Government to establish the system of GSTN which is Goods and Service Tax Network which falls under the category of digitalization. This has been brought in the system so that refund claims can be done automatically and also it smoothenes the flow of cash. This has enabled transparency and lucidity within the systems and also to provide clarity and transparency with regards to flow of funds and collection of revenue (Singh, Sharma, Sharma, & Juneja, 2019).

The offline system of tax filing in India came with a lot many disadvantages and drawbacks. The online system which is now GST in India has been brought in system with expectations of providing many advantages like low compliance and procedural costs, seamless and hassle-free free online registration processes, harmonization and fair distribution of tax fund among the state government and the Central government, and thereby leading to proficient administration.

GSTN is in lookout for firm for procuring accounting software like SAP and Tally in order to assist businesses in filling of taxes using Clear Tax Portal at one end government of India is working hard and is ready to strategizing the policies headed towards bringing all processes online, and on the other side there exists and occurs a need to judge and evaluate as to how much ready are the organizations in order to adopt

GSTN. Important sub constructs are as follows:

Perceived Simplicity in Usage

It is the perceived belief that a particular system is simple and easy to understand and use.

The citizens of India specially rural India are mostly unaware about the GSTN concept. This concept is easy to use but demands transparency from the government and also on the contrary, the government should ensure that the platform is user friendly and efficient, and with this it can certainly lead to its adoption & implementation and usage by the tax payers.

H01: PShas no association with the intention of adopting GSTN

Perceived Utility

It indicates the extent to which people believe that using the system has a great utility and will make them more effective and efficient. Perceived Utility may be indefinite in nature because every individual person in the sample from the rural areas have their own expectations, hope and desire from the GSTN portal which is very new to them and its usage is not very clear to them.

H02:PU has a no association with intention to adopt GSTN

Risk Observed

Risk Observed means “During online transactions being made by customers there exists risk of various kinds like, financial, product performance, social, psychological, physical, or time risk” (Venkatesl., 2003).

H03:ROhas no association with intention to adopt GSTN

Table 1. Variables used

Perceived Simplicity in usage	
Learning to use GSTN is simple	PS1
Finding anything on GSTN is simpler than previous ways	PS2
GSTN is simple and easy to use	PS3
Perceived Utility	
It is easier to transact online using GSTN	PU1
It has far more services and applications available online.	PU2
Risks Observed	
Usage of GSTN for financial transactions has more safety	RO1
I believe that to file the returns is safer using GSTN	RO2

Research Methodology

A mix of exploratory and Conclusive study was used in order to achieve set out research objectives. The sample consisted of respondents from retail garment traders from rural parts of neighbouring areas of Lucknow District in state of Uttar Pradesh.. Non probability sampling in the form of Convenience sampling was employed to ensure that the data is collected in a seamless

manner. A schedule is prepared covering two sections including their demographic profile and questions asking pertinent perspectives towards GST framework. The schedule was well framed and enumerated and caution was taken to while explaining the questionnaire items to the respondents. Further care was taken to ensure that the sample is a representative one and only those respondents are considered for data collection who are liable to pay to GST.

Table 2. Questionnaire Items

Independent Variable	Items	Scale
Perceived Simplicity in usage	PS1, PS2, PS3	5 Point Rating Scale
Perceived Utility	PU1, PU2	5 Point Rating Scale
Risk Observed	RO1, RO2	5 Point Rating Scale

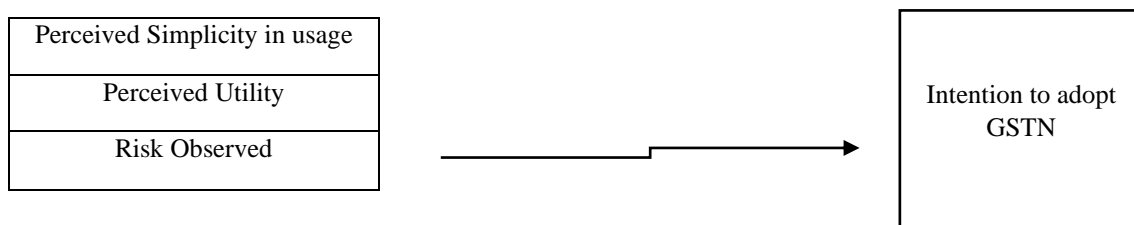


Figure 1. Model Framework adopted from Navneet Guleria (2020)

Data Analysis

The questions covering in the first section of the questionnaire are covered in the demographic details as shown in Table 3. Out

of the total data collected from the sample(n=200), it is found that most of the respondents were males accounting for the textile business in rural parts of neighbouring

areas of Lucknow District in state of Uttar Pradesh. Majority of the respondents are undergraduate and intermediate as their education levels. More than 70% of the total respondents believe that GSTN has been for the better in context of businesses and are also aware regarding the GSTN framework.

Further, most of the businesses fill their GST via a professional help than themselves which indicates there is a requirement of knowledge based sessions on the usage of GSTN as this system is designed specifically so that businesses can use it themselves which are falling under the perview of composition scheme.

Table 3. Section A – Data Analysis

Demographic Factors	Items	Responses (out of 200)	Percentage (%)
Gender	Male	132	66
	Female	68	34
Education	Intermediate or Less	49	24.5
	Undergraduate	122	61
	Post Graduate	29	14.5
Awareness about GSTN	Yes	179	89.5
	No	21	10.5
Mode of Filing GST	Self	78	39
	Others	122	61
Difficulty in getting GSTN	Yes	158	79
	No	42	21
Has GSTN affected businesses for the better?	Yes	38	19
	No	141	70.5
	Not sure	21	10.5

Reliability Of Measures. The values of Cronbach alpha for each of the sub factors are greater than 0.5 emphasising the reliability of the scale.

Table 4. Section B – Reliability Analysis

Variable	Items	Cronbach Alpha
Perceived Simplicity in usage	PS1	0.66
	PS2	0.71
	PS3	0.72
Perceived Utility	PU1	0.67
	PU2	0.66
Risk Observed	RO1	0.63
	RO2	0.67
Intention to adopt GSTN	IA1	0.75
	IA2	0.79

Regression Analysis

The model framework explained previously is then validated using the Regression approach.

This research employs multiple regression to determine if the intention to adopt GSTN can be predicted based on sub constructs such as Perceived Simplicity in usage [PS], Perceived Utility [PU] and Risk Observed [RO].

Then, the hypothesized relationship can be stated as:

$$IA = m + \beta_1 PS_1 + \beta_2 PU_2 + \beta_3 RO_3.$$

Where, IA (Intention to adopt GSTN) is dependent variable; the independent variables include PS is Perceived simplicity in Usage; PU is Perceived Utility and RO is Risk Observed. While m is constant term and β_1 , β_2 , β_3 are the coefficient of variable PS, PU and RO respectively. The regression is carried out and results are displayed as follows.

Table 5. Model Summary-1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.641 ^a	0.412	0.435	0.124637

a. Predictors: (Constant), Perceived Simplicity in usage [PS], Perceived Utility [PU], Risk Observed[RO]

Table 6. Coefficients-1

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	0.432	0.128		2.364	0.003
	Perceived Simplicity in Usage	0.312	0.136	0.423	9.591	0.032
	Perceived Utility	0.252	0.114	0.024	1.591	0.046
	Risk Observed	-0.124	0.146	0.223	4.491	0.001

a. Dependent Variable: Intention to Adopt GSTN

From Table given above, the following regression equation is derived.

$$\text{Intention to Adopt GSTN} = 0.432 + 0.312(\text{Perceived Simplicity in Usage}) + 0.252(\text{Perceived Utility}) - 0.124(\text{Risk Observed})$$

The R² value is 0.435 as shown in table 5 which shows 43.5 % of variance in the intention can be predicted by sub constructs underlining reasonable suitability of the model.

The tables show that sub constructs are statistically significant with a T-Test value less than 0.05 indicating that there is a strong relationship between each of the sub constructs and the dependent variable. This indicates that model is statistically significant at a confidence level of 95%.

Results

The model framework is tested using the concept of independent and dependent variables wherein the hypothesis is created among the three independent variables and one final variable used as dependent variable.

The first hypothesis H01 assumed no relationship between Perceived Simplicity in usage [PS] and intention to adopt GSTN. It was found that the value of T Test was less than 0.05 and hence the hypothesis was rejected confirming that there is a positive association between both the variables. There should be efforts to keep the simplicity of the interface and structure of GSTN so that users continue to use it hassle free and make the transition for all its users a seamless one. The overall website is easy to understand and is

created keeping in mind technological know-how of its tax payers.

The second hypothesis H02 assumed no association between variable Perceived Utility [PU] and intention to adopt GSTN. It was found that the value of T Test was less than 0.05 and hence the hypothesis was rejected confirming that there is a positive association between both the variables. It is believed that it has far more services and applications available online. The users observed that it is far easy to use and simpler in comparison to other interfaces.

The hypothesis H03 assumed no relationship between Risk Observed [RO] and intention to adopt GSTN. It was found that the value of T Test was less than 0.05 and hence the hypothesis was rejected confirming that there is a negative association between both the variables. It needs to provide a secure transaction environment and confidentiality of its tax payees. It should ensure that the privacy features of its users are not compromised with.

Further, the model can explain around 40% of the variance which is reasonable enough highlighting the usefulness and relevance of the model in predicting the intention to adopt GSTN.

Conclusion

The entire objective of the research was to base the study on a premise that there exists a relationship between the variables as proposed by Model of Technology adoption and its Usage. Key emphasis has been to find out relevant variables that could be identified as precursors to successful adoption of GSTN and which could drive the intention to adopt GSTN. A Model was created that took into account the relevant assumptions among three independent variables and dependent variable. The hypothesis was then formed and tested using regression. The model proposed consisted of independent variables namely, Perceived Simplicity in usage [PS], Perceived Utility [PU] and Risk Observed [RO].

The data was collected from 200 respondents specifically garment traders in rural parts of neighbouring areas of Lucknow District in state of Uttar Pradesh. According to the results post analysis it highlighted the existence of strong positive relationship between Perceived Simplicity in usage [PS], Perceived Utility [PU]. Also, there exists a strong negative association between Risk Observed [RO] and intention to adopt GSTN.

This study is helpful in order to create a model framework for an easy acceptance and implementation of GSTN in rural parts of the country and will be instrumental for its stakeholders in knowing the bottlenecks in speedy implementation of GSTN in other districts and villages of the country.

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