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TECHNOLOGY ADOPTION FOR E-FILING: PERCEPTIONS AND INTENTIONS OF TAXPAYERS IN INDIA

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ABSTRACT

The concept and practice of filing and payment of taxes electronically as an e-government service has been introduced in many countries making it possible for millions of taxpayers to file their tax returns conveniently. Despite the growth in the number of assesseees who have adopted this system in India, there still remains a vast segment who are not yet ready to adopt tax compliance through e-filing system on their own but prefer to depend on tax consultants. The present paper postulates that unless behavioural aspects of adoption of the e-filing system are thoroughly explored into and the system designed accordingly, inclusion of all assesseees within the system will be far flung dream. This study therefore aims at investigating the behavioural aspects which influence the adoption intentions of e-filing system in India based on Technology Adoption Model [TAM] and Theory of Planned Behaviour [TPB]. Structural Equation Modelling [SEM] has been used to explore interrelationships between the variables which affect intentions to adopt e-filing system.

KEYWORDS

electronic tax filing, compliance, technology adoption model, theory of planned behaviour, diffusion of innovation.

JEL CLASSIFICATION

H24, H29, H30.

I. INTRODUCTION

When Adam Smith proposed the 'canon of convenience' in his book Wealth of Nations in 1756, it was probably beyond his wildest dreams that a diligent taxpayer could comply with declaration and payment of taxes from the comfort of his home by clicking a few keys. Tax payers can reap multiple conveniences like 'anytime' 'anywhere' filing, correction of errors and saving changes in return forms several times before the final submission of ITR form instant acknowledgement of receipt of returns filed, getting information on current status of verification processing and refunds and reduction in documents handling cost and space. Azmi and Kamarulzaman (2010) states 'It is clear that e-filing can reduce errors in taxpayer self-assessment and the processing of tax returns by revenue authorities; it can also provide increased convenience and flexibility for the taxpayer. Another important advantage identified by Coolidge and Yilmaz (2014) is 'the reduction in face-to-face interactions between taxpayers and tax officials, which should reduce opportunities for corruption' Filing and payment of income taxes as an e-government service has now been introduced in many countries making it convenient for millions of taxpayers to file their tax returns electronically to the tax authorities without handling bundles of papers or depend on tax consultants who often charge substantial amounts to file taxes. The concept and practice of E-filing is however relatively new, just spanning over less than three decades, when compared to the centuries during which tax was paid and collected manually. It was the Inland Revenue Service in USA which could get only 25,000 returns when the system of electronic filing was introduced in 1986. Australia tried to emulate such practice in 1987 by launching the Electronic Lodgment Service in 1987. However, due to certain glitches, the e-filing system could start rolling only in 1999. United Kingdom started with Electronic lodgment of services in 1997 and the final e-filing system came into form with the internet based Self- Assessment in 2000.

India started rather late compared to the other countries. The website of the Income Tax Department was launched only in 2003. Subsequently, the e-filing portal came into being in 2006 for providing an avenue to file their returns on 'anytime' and 'anywhere' basis. However, after the late start, the pace of adoption of e-filing picked up substantially as evidenced from the statistics given below. From assessment year 2007 to 2008, e-filing of income tax return was made mandatory for all companies. For all other categories of income tax assesseees, which include salaried individuals, the use of income tax e-filing service continues to be voluntary. However, after nearly a decade, there exist certain problems in using these systems, specially by individual assesseees.

II. STATEMENT OF THE PROBLEM

The fact that a miniscule percentage of the Indian population pay income taxes is a thorn in the flesh of the public exchequer in India. Only 5.16 crore (4%) among 120 crore Indians, filed Income Tax returns in 2015-16. An even smaller number, only 1.3 crore individuals, in 2014-15, paid income tax. Around 1.7 crore or over 54 per cent of all tax payers who filed returns, had zero tax liability. Due to problems of excluding a large numbers of Indians into the direct tax net, the government has been forced to mobilise revenue through indirect tax collection. In 2015-16, direct taxes contributed only 51 per cent of the tax revenue, lower than in the government's expectations and the lowest since 2007-08. In spite of numerous conveniences provided to taxpayers through introduction of e-filing facilities, such as speedy filing, reducing processing errors, quick and direct deposit refunds, reducing uncertainties of tax filing, a large number of assesseees are yet to adopt e-filing systems. Though there is growth in the proportion of assesseees who are adopting this system, there still remains a vast segment (nearly 34%) who are not yet ready to adopt tax compliance through electronic systems. The table given below reveals that the annual growth rate of e-filing current hovers around 26%.

TABLE 1: TOTAL INCOME TAX ASSESSEES AND ASSESSEES USING E-FILING IN INDIA

Financial Year	Total Number of Assesseees	Total Number of E-Filing	Percentage of E-Filing to total no. of Assesseees	Annual % Growth Rate of E-filing
2007-2008	33662801	2169367	6.44%	
2008-2009	32650627	4830122	14.79%	122.67
2009-2010	34085426	5073977	14.89%	5.05
2010-2011	33739124	9050242	26.82%	78.37
2011-2012	43637486	16433684	37.66%	81.58
2012-2013	47267582	21486807	45.46%	30.43
2013-2014	52093324	29681794	56.98%	33.15
2014-2015	51673822	34173994	66.13%	15.13
2015-2016	56866690*	43343737	76.22%	26.83
2016-2017 [up to 31-7-2016]	N.A.	18944706		

Source: The table has been compiled from data sourced from reports and websites of Income Tax Department, Central Board of Direct Taxes and Department of Revenue, Government of India and Centre for Monitoring of Indian Economy database. (Note: *2015-16 no of assesseees figures are provisional).

The percentage of assesseees who use the e-filing system have gone up during the course of years. However, it has to be kept in mind that e-filing is mandatory for companies, but voluntary for individuals. It is worthwhile to mention here that in India, individuals having Income from salaries, income from one house property, income from other sources file their returns in form ITR 1 and individuals and HUFs not having income from business or profession, but having capital gains file their return in ITR 2. For Assessment year 2016-17 ITR 2A has been introduced for Individuals and HUFs not having Income from business or profession and capital gains and who do not hold foreign assets.

A large number of individual assesseees do not file their returns electronically. This is evident from the following table:

TABLE 2: PERCENTAGE OF INDIVIDUALS WHO FILE RETURNS ELECTRONICALLY

Financial Year	Total Individual assesseees	Cumulative ITR-I & ITR-II E-Filing	% of E-Filing to Number of assesseees
2009-2010	30101300	1616928	5.37%
2010-2011	31384100	3023900	9.64%
2011-2012	31035400	6212660	20.01%
2012-2013	33189600	8650876	26.06%
2013-2014	34849660	13889866	39.85%
2014-2016	30407330	16625556	54.67%
2015-2016	34730440	20182765	58.11%
2016-2017 [up to 31-7-2017]	N.A.	12589357	N.A.

Source: The table has been compiled from data sourced from reports and websites of Income Tax Department, Central Board of Direct Taxes Government of India and Centre for Monitoring of Indian Economy database.

The table shows that the percentage of individual assesseees who use e-filing has increased, but nearly half of the assesseees are still outside the purview of this system. Though this is laudable, it is a hard truth that the majority of individual tax payers who have used e-filing systems have done it through tax consultants and have not ventured to file returns themselves. This defeats the basic canon of 'convenience' in taxation as e-filing systems are made user friendly of the taxpayers themselves. The question naturally emerges that why are these people shying out of the system when the avowed objective of the system is to gear up more convenience for the tax payers. Is there a hesitation or fear to use the system? The *Diffusion of Innovation (DOI) Theory* advanced by Everett Rogers in 1962 describe the patterns of adoption of technology, explaining the mechanism of the adoption and further predicting whether and how a new invention or innovation will be successful. Rogers, (2003) stated that the stages through which a technological innovation passes involves certain steps which follow a sequence in a time-ordered manner. First an individual acquires knowledge of the existence of the innovation, understands it's functioning and seeks information on how to use it correctly and then may develop a favorable or non-favorable attitude to the use of technology/innovation and finally decide to adopt or reject the innovation. In India, the e-filing system has been introduced and is continuing without assessing whether the taxpayers are aware of the system, whether they are adopting to the system on their own or are they dependent on the tax consultants, and whether they are finding the technological aspects of the system to be convenient or risky. Unless the behavioral aspects of adoption of the e-filing system are thoroughly explored into and the system designed accordingly, inclusion of all assesseees within the system will be a far flung dream.

This study therefore aims at investigating into the behavioral aspects which influence the adoption of e-filing in India.

III. THEORETICAL FOUNDATIONS AND REVIEW OF LITERATURE

The study is based basically on two models, Technology Adoption Model (TAM) and Theory of Planned Behaviour (TPB). TAM was advanced by Davis in 1989 and essentially is an adaption of Theory of Reasoned Action (TRA) which was proposed by Martin Fishbein together with Icek Ajzen in 1980. TAM has been continuously studied and upgraded to TAM 2 by Venkatesh & Davis (2000) and Venkatesh (2000) and the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003). TAM has been recognized by researchers as a useful theoretical model to comprehend and explicate users' behavior to adopt and use an information system (IS). According to this model, two factors, i.e., Perceived usefulness (PU) and perceived ease of use (PEOU) influence an individual's intention to use a new technology or system. PU is defined as the degree that a person trusts that adoption of a specific system will augment his work accomplishment. Research works by Hasim (2008), Jahangir and Begum (2008) showed that perceived usefulness has a direct influence on behavioral intention to adapt online shopping, web-based training, electronic banking, e-commerce, and e-government services like e-filing. PEOU refers to extent of easiness that an individual feel to operate the new technology or information system. According to Davis (1989) perceived ease of use is an individual's assessment of the extent to which interaction with a specific information system or technology is free of mental effort. According to TAM, perceived usefulness is also influenced by perceived ease of use because, other factors being same, the easier the system is to use, and the more useful it can be. In addition, TAM has been used many studies to explain the relationship between the usage perception and information technology. These two main TAM variables have been found to be highly related to adoption of e-filing systems in several countries and have constituted the base for some researches carried out with regard to e-filing systems. Researchers such as Agarwal and Prasad (1999), Jackson et al (1997), Wang (2002), Azmi and Bee (2010) have provided evidence of the significant effect of perceived of usefulness and perceived ease of use on behavioral intention of users. Fu, Farn and Chao [2006] using integrated theory of TAM and TPB, have discussed the effect of perceived ease of use, perceived usefulness, subjective norms, self-efficacy, resource facilitating conditions, and technology facilitating conditions on the behavioural intention to use e-filing system in Taiwan. Boone, (2012) confirmed that with regard to perceived ease of use, the more that an individual feel that a particular filing method (between the e-filing and manual method) is easier to use, the more likely they are to use that particular filing method to file their state tax return. E-filing system offers many conveniences to assesseees, but all depend on the motivation to accept and use the electronic systems.

The Theory of Planned Behaviour (TPB) was proposed by Icek Ajzen in 1985 and 1991. The theory was also developed from the Theory of Reasoned Action. This is a theory which connects attitudes and behavior. The theory states that the attitude, subjective norm and perceived behavioral control, together shape an individual's behavioral intentions. Attitude and behavioral intentions are often based on 'Perception of Credibility' and security of the system.

Udo (2001) stated 'Perceived Credibility' to be the quality of the e-filing system being trusted by the users in terms of ability to protect the user's personal information and security. Intention to adopt the e-filing application depends on perceived credibility of tax e-filing systems since it involves the disclosure of personal

financial information. Wang [2002] found that 'perceived credibility' variable have a strong influence on behavioural intention than traditional 'perceived usefulness' variable. Ambali (2009) found that a large number of the taxpayers are reluctant to use this alternative medium of filing their tax returns because the security violations in internet-based systems. Schupp, Carter and McBride [2010] examined the effects of perceived risk, online trust, and optimism bias on intention to use e-filing system and concluded that, the citizens' acceptance of e-filing is significantly influenced by their trust on the e-filing provider.

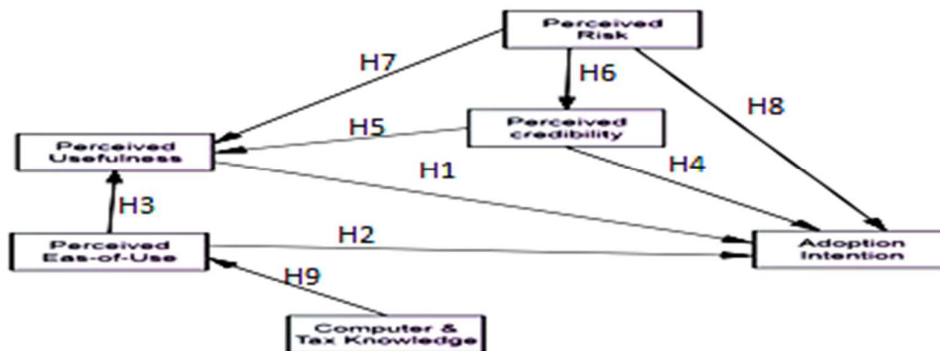
Intentions for adoption of e-filing systems also depend on the perception of security of the system. According to Valacich and Schneider (2012), 'system security is a precaution to keep the system from unauthorized access and use while perceived information security is defined as the subjective probability with which consumers believe that their personal information will not be viewed, stored or manipulated during transit or storage by inappropriate parties, in a manner consistent with their confident expectations'. Compliance efforts through e-filing may be hindered if assessee perceive that the information about the bank details provided in the returns may be used for purposes not conducive to the users' interests. Belanger *et al.* (2002) stated that the biggest challenges presented for trusting electronic information transfers were related to privacy and security issues. Ambali (2009) stated that when assessee use e-filing, they are concerned about their security information required in the system. Iqbal and Bagga (2010) also pointed out that there is personal sensitivity on individual data when a taxpayer files the information. Kamarulzaman and Azmi [2010] highlighted the importance of perceived risk to the adoption of e-filing system and attempted to provide insights into performance risk and revealed that perceived ease of use influences the performance risk of the e-filing system. Moorthy *et al.* [2014] argued that perceived ease of use and perceived usefulness influences the e-filing adoption intentions more than perceived credibility and security. Apostolou, Dorminey and Schaupp [2016] attempted to understand the impact of one's trust and commitment towards e-file and in the tax software and showed that the antecedents of intention to e-file include trust in tax software, affective commitment, calculative commitment, and quality of alternatives.

Intentions to adopt e-filing also depend on the knowledge of the user of computer and internet systems and knowledge about tax computations. Kamarulzaman (2010) found that 'a feeling of increased anxiety and stress due to lack of experience or comfort with using technology or feeling threatened by technology could prevent a customer from being inclined to change to a technology delivered service'. Wang [2002] suggested that users who have higher computer self-efficacy are likely to have more positive usefulness and ease of use beliefs. Carter and Schaupp [2008] suggests that web-specific self-efficacy have significant impact on intention to e-file. They also found that effort expectancy and previous use of e-file system did not have direct impact on ones' intention to use e-file system but on the contrary, those who e-filed last year were less likely to e-file in the future. Brahmhatta [2012] argued that lack of experience and knowledge of e-filing and lack of digital certificate/PIN, technology obtuse, and inability to successfully e-file while attempted, are the reason for not using e-filing. Mustapha and Obid [2014] examined the influence of technology characteristics i.e., ease of use, usefulness and personal innovativeness on an online tax system and showed that technology characteristic has a significant positive relationship on online tax system adoption.

IV. OBJECTIVE OF THE STUDY AND RESEARCH MODEL

The primary objective of this study is to find out how the variables such as Perceived Usefulness, Perceived Ease of Use, Perceived Credibility, Perceived Risk, Technical knowledge influence the intention to adopt e-filing systems. It is hypothesized on the basis of earlier studies and pilot surveys carried out that e-filing adoption intention of an individual taxpayer gets influenced by perceived risk, perceived usefulness, perceived ease-of-use, perceived credibility, and computer and tax knowledge. The proposed model is given below:

FIGURE 1: PROPOSED RESEARCH MODEL



The specific hypotheses related to the diagram are listed below:

- H1: Perceived Usefulness (PU) of e-filing will have a positive effect on the Adoption Intention (AI) of e-filing.
- H2: Perceived Ease of Use (PEoU) of e-filing will have a positive effect on the Adoption Intention of e-filing.
- H3: Perceived Ease of Use of e-filing will have a positive effect on the Perceived Usefulness.
- H4: Perceived Credibility (PC) will have a positive effect on the Perceived Usefulness of e-filing
- H5: Perceived Credibility will have a positive effect on the Adoption Intention of e-filing.
- H6: Perceived Risk (PR) will have a negative effect on Perceived Credibility
- H7: Perceived Risk will have a negative effect on Perceived Usefulness
- H8: Perceived Risk will have a negative effect on Adoption Intention of e-filing
- H9: Computer and Tax knowledge (C&TK) will have a positive effect on Perceived Ease of Use

V. RESEARCH METHODS

The sample for this study was individual income tax assessee who filed returns in Income Tax Return forms ITR 1 and ITR 2 at least once in the Assessment Years 2013-14, 2014-15 and 2015-16 himself /herself. ITR 1 is used by individual assessee who have income from Salaries, one house property and other sources. ITR 2 is used by individual assessee who have income from Salaries, one house property and other sources and income from short term and long term capital gains. Assessee using ITR 2A was not considered for determining the population because it was introduced only in the Assessment Year 2016-17. Initially responses were sought from more than 1000 individuals working in different offices, schools, colleges and universities in Siliguri, Darjeeling, Gangtok, Jalpaiguri and Coochbehar as to whether they filed their income tax returns themselves or through consultants. Only 66 individuals replied that they filed their tax returns themselves electronically. Snowball sampling was used to reach other respondents through the initial respondents who had filed e-returns. The total respondents were 236 to whom questionnaires were administered, out of whom 203 were usable. The final sample size stood at 203.

35 variables were used to determine the latent variables shown in the proposed research model. The 35 observable variables for this study were measured using a list of 35 items adapted and developed from past studies, multiple pilot surveys and discussions with experts in income tax matters. All the observable variables were measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Structured Equation Modelling [SEM] was used to evaluate how well the proposed model fits the collected data. A SEM represents causal relationships among measured and latent variables both graphically and as a set of linear equations, that define the interactions among the variables. In the graphical representation of a SEM, which has been used in this study a variable with an arrow pointing to it is termed an endogenous variable, which is similar to a dependent variable in regression analysis. An endogenous variable is causally affected by the state of at least one other variable in the model. A variable without an arrow pointing to it is termed an exogenous variable, which is similar to an independent variable in regression analysis. The measurement items were refined and validated using a reliability test. They were then re-validated using confirmatory factor analysis (CFA), with the help of a structural equation modeling (SEM) software, AMOS 20.0. SEM was used to evaluate how well the proposed conceptual model of e-filing adoption, containing observed indicators and hypothetical constructs, explains or fits the collected data.

VI. FINDINGS OF THE STUDY

EXPLORATORY FACTOR ANALYSIS

To test whether the sample undertaken for the study was adequate for the further analysis and fitness of the statistical data collected we conducted Kaiser-Meyer Oklin [KMO] test. The result was indicative that further analysis can be performed with KMO=.821 which is above the threshold value of .60. In order to check the existence of inter correlation Bartlett’s Test of sphericity was carried out. The Chi-square value of 5925.779 with DF=300 and Sig value=0.00 were adequate to consider that factor analysis is relevant to identify the influencing factors in this analysis.

TABLE 3: EIGEN VALUES AND TOTAL VARIANCE EXPLAINED

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.508	34.03	34.03	3.767	15.069	15.069
2	4.834	19.337	53.367	7.163	28.654	43.723
3	2.12	8.481	61.848	2.955	11.819	55.542
4	1.872	7.489	69.338	1.939	7.755	63.297
5	1.494	5.975	75.312	1.144	4.577	67.874
6	1.114	4.454	79.767	1.589	6.355	74.229

The figures in the table shows that items were loaded onto their factors as predicted by us with the Eigen values above the threshold of 1 and the overall variance explained is 79.767% which further validates that the data was appropriate for further analysis.

Maximum Likelihood estimation with promax rotation was performed to maximise the obtain values of the criterion to predict the variables and to investigate the fundamental relationships between the items and the theoretically defined constructs. We first tested the individual item reliability by looking at their loadings to their related constructs and their cross loadings with other constructs. Eight items with loadings below the standard and acceptable value of .50 were dropped from the scale because of weak loading on their factor. All other items were found to have high loading on their specific construct which indicates the construct validity [Table 5]. Additionally, internal consistency of sub construct was assessed using Cronbach’s alpha [Table 4 below]. For all the constructs the value of alpha was above the acceptable value of .70 which strongly provides the evidence that the constructs demonstrate good measurement properties. The item –total correlation for all the constructs were examined and the correlation pattern shows that an item posited to form the given sub-construct has stronger correlation with the intended construct than other constructs. This occurrence provides evidence of discriminant and convergent validity.

TABLE 4: DESCRIPTIVE STATISTICS

Construct	Items	Mean	Item Mean	SD	Cronbach's Alpha
AI	AI1	4.42	4.34	0.495	0.75
	AI2	4.58		0.495	
	AI3	4.5		0.592	
	AI4	4.29		0.562	
	AI5	3.91		0.585	
C&TK	C&TK1	4.48	4.247	0.501	0.813
	C&TK2	4.44		0.497	
	C&TK3	4.11		0.612	
	C&TK4	4.14		0.555	
	C&TK5	4.07		0.7	
PC	PC1	4.04	3.994	0.659	0.728
	PC2	4.11		0.327	
	PC3	4.24		0.459	
	PC4	4.11		0.561	
	PC5	3.48		0.706	
PEoU	PEoU1	3.65	4.246	0.995	0.711
	PEoU2	4.09		0.577	
	PEoU3	3.95		0.595	
	PEoU4	4.53		0.5	
	PEoU5	4.28		0.686	
	PEoU6	4.66		0.476	
	PEoU7	4.6		0.557	
PR	PR1	4.25	3.479	0.849	0.786
	PR2	4.29		0.894	
	PR3	3.97		0.744	
	PR4	2.69		1.167	
	PR5	2.63		1.052	
	PR6	2.77		1.099	
	PR7	3.76		1.166	
PU	PU1	4.68	4.488	0.468	0.765
	PU2	4.62		0.486	
	PU3	4.33		0.471	
	PU4	4.46		0.5	
	PU5	4.49		0.501	
	PU6	4.34		0.507	

TABLE 5: FACTOR LOADINGS

	Pattern Matrix ^a					
	Factor					
	1	2	3	4	5	6
AI2	0.975					
AI5	0.962					
AI3	0.954					
AI1	0.942					
AI4	0.746					
PR4		0.997				
PR6		0.991				
PR7		0.926				
PR3		0.866				
PR2		0.804				
CTK1			0.937			
CTK2			0.849			
CTK5			0.732			
CTK4			0.571			
PC1				0.846		
PC2				0.821		
PC3				0.786		
PU1					0.984	
PU2					0.835	
PU5					0.624	
PU3					0.578	
PU6					0.526	
PEU1						0.973
PEU2						0.93
PEU3						0.826
PEU4						0.748
PEU7						0.536

Confirmatory Factor Analysis [CFA] was performed to confirm the exploratory factor model and to evaluate how well the proposed model fits the sample data collected for the study and to estimate the proposed structural model. CFA is basically a SEM technique which is used to determine the goodness of fit between a hypothesised model and the sample data. In order to examine the proposed structural model a set of fit indices were estimated and then we proceed to examine the path coefficients of the structural model. Among the fit indices estimated Goodness of Fit Index [GFI], Adjusted Goodness of Fit Index [AGFI], Comparative Fit Index [CFI] was used to evaluate how well the proposed model fits the sample data collected and Root Mean Square of Error Approximation [RMSEA] to measure the discrepancy per degree of freedom. The standard threshold value for GFI should be greater than or equal to .90 [Hoyle 1995], for AGFI it should be greater than or equal to .08 [Chin 1995], for CFI which is one of the stable and robust fit indices it should be greater than or equal to .90 [Hoyle 1995] and an RMSEA value between .08 to .10 indicates a mediocre fit and that below .08 shows a very good fit [Brown and Cudeck 1993]. AMOS 20.0 statistical package was used to perform confirmatory factor analysis in this study.

STRUCTURAL EQUATION MODELLING RESULTS

The research model and the hypothesis present earlier was tested to examine the structural relationships between the constructs and the e-filing adoption intention [as shown in the figure-1] using Structural Equation Modelling [SEM] techniques. Table 6 and 7 shows the total number of variables in the initial model and the revised model respectively.

TABLE 6: VARIABLES COUNTS IN THE INITIAL MODEL

Total Number of variables in initial model:	Number of observed variables	Number of unobserved variables:
80	35	45

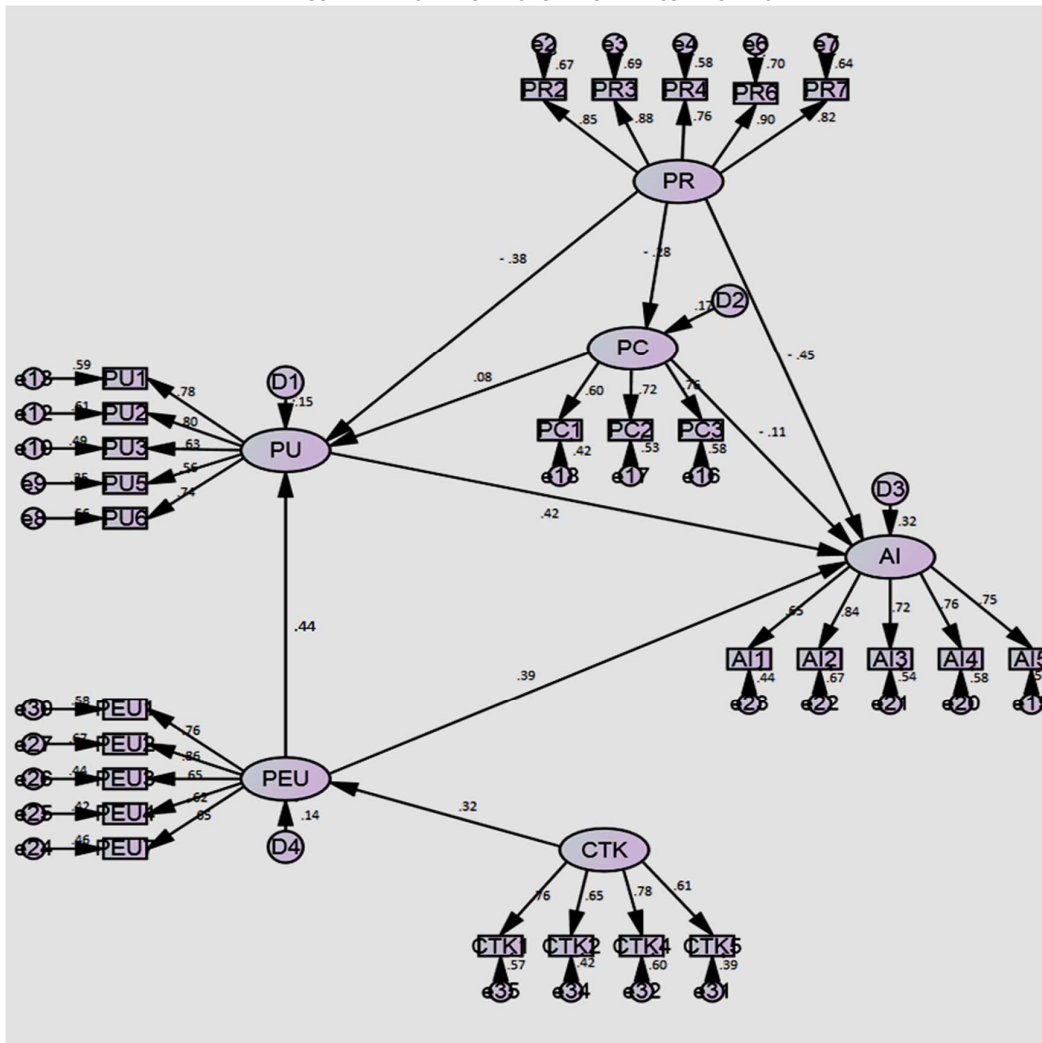
In the initial measurement model analysis, it was found that the, Chi-square [CMIN]=2304.61, P=0.000, DF=551, GFI=.841, CFI=.824, RMSEA=0.89 and CMIN/DF=4.18, were not up to the standard criterion and showed a low value fit, so we suggested for modification expecting a better model fit from the fit indices and to fit data in the model effectively. As stated before eight items with loadings below the standard and acceptable value of .50 were dropped from the scale because of weak loading on their factor. Therefore, the variable count in the revised model stands as below.

TABLE 7: VARIABLES COUNTS IN THE REVISED MODEL

Total Number of variables in revised model:	Number of observed variables	Number of unobserved variables:
64	27	37

The revised model [figure 2] showed a significant value of Chi-square [CMIN]=984.463, P=0.073, DF=341, GFI=.901, CFI=.918, RMSEA=.069, and CMIN/DF=2.89. In comparison with the initial analysis the new fit indices displayed a relatively better fit. The revised model is given below.

FIGURE 2: REVISED MODEL SHOWING PATH COEFFICIENTS



The path coefficient [figure 2] clearly indicates that seven out of nine hypotheses are in line with our predicted direction. The path coefficient of .42* between PU and AI [note: * indicates P<.001 and ** P<.005] supports our first hypothesis that PU has a positive significant influence on AI. Similarly, coefficients, .39* between PEoU and AI, .44* between PEoU and PU also supports our second and third hypothesis that there is positive significant relationship between PEoU and AI and PEoU and PU respectively. Further, path coefficients, -.28 ** between PR and PC, -.38* between PR and PU and -.45* between PR and AI supports our sixth, seventh and eighth hypothesis that PR negatively affects PC, PU, and AI respectively. The last hypothesis that CTK will have a positive effect in PEoU is also supported as the coefficient between CTK and PEoU is .44*. The only predicted paths that are not significant are between PC to AI and PC to PU with coefficients -.11 and .08 respectively so H4 and H5 were rejected. Perceived usefulness, perceived ease of use, and Perceived risk were found to have significant relationship with the e-filing adoption intention and they are important factors which influence the adoption intention which is consistency with the earlier research. Computer and tax knowledge also has an indirect influence on the adoption intention. However, perceived credibility has an insignificant impact on e-filing adoption intention and perceived usefulness so it cannot be considered important factor influencing e-filing adoption intention. In the table below the acceptance and rejection of the hypotheses are summarised.

TABLE 8: RESULTS OF HYPOTHESES TESTING

Hypotheses	Results
H1: Perceived Usefulness (PU) of e-filing will have a positive effect on the Adoption Intention (AI) of e-filing.	Accepted
H2: Perceived Ease of Use (PEoU) of e-filing will have a positive effect on the Adoption Intention of e-filing.	Accepted
H3: Perceived Ease of Use of e-filing will have a positive effect on the Perceived Usefulness.	Accepted
H4: Perceived Credibility (PC) will have a positive effect on the Perceived Usefulness of e-filing	Rejected
H5: Perceived Credibility will have a positive effect on the Adoption Intention of e-filing.	Rejected
H6: Perceived Risk (PR) will have a negative effect on Perceived Credibility	Accepted
H7: Perceived Risk will have a negative effect on Perceived Usefulness	Accepted
H8: Perceived Risk will have a negative effect on Adoption Intention of e-filing	Accepted
H9: Computer and Tax knowledge (C&TK) will have a positive effect on Perceived Ease of Use	Accepted

VII. CONCLUSIONS AND POLICY IMPLICATIONS

The findings of the study are in line with earlier studies described in section III of this paper. Perceived ease of use of electronic tax filing and perceived use of the system are related in the sense that the former has an effect on the latter and these two variables have a significant effect on the intention to adopt the e-filing system. However, the risk perceived by assesseees is to be taken into consideration as higher risk perceptions lower the perceptions of usefulness, credibility and ultimately deter the assesseees in adopting the system. However, it is also important that the assesseees have a certain level of digital and tax literacy so as to have ease in handling the system.

However, as stated before the e-filing system in India, has been introduced and is continuing without assessing whether the taxpayers are aware of the system, whether the users are finding ease in understanding and adopting the system, and whether they are finding the system to be convenient or risky. It has to be

emphasised that behavioural aspects of adoption of the e-filing system are to be thoroughly explored into and the system designed accordingly keeping in mind the maxims of Diffusion of Innovation (DOI) Theory advanced by Everett Rogers that first an individual should acquire knowledge of the existence of the innovation, then understands its functioning and seeks information on how to use it correctly and then may develop a favourable or non-favourable attitude to the use of technology/innovation and finally decide to adopt or reject the innovation. Moreover, even if the tax payer uses the system through tax consultants, it surmises that the adoption is partial and dependent on the expertise of a third person. E-filing systems are generally implemented to bring the tax payer closer to the tax authorities by virtue of increasing convenience of the systems and the dependence of taxpayers on others defeats to a large extent the basic purpose of such systems.

The Directorate of Income Tax (Public Relations, Printing Publications & Official Language) has taken up laudable tasks in carrying out the advertisement campaign for the department in print, electronic media, outdoor publicity to bring awareness amongst taxpayers about income tax provisions and statutory timelines. The Directorate has undertaken activities relating to printing of Tax Payer Information Series in the form of booklets/brochures/ pamphlets pertaining to various tax related issues. It has been observed that the directorate publishes instructions for filling up ITR 1 and ITR 2 both in digital and print mode, but a large number of assesseees who file returns electronically do not read them meticulously. The directorate also has come up with videos on the process of e-filing, but as observed many users are not aware of the existence of such videos though it is easily available on the e-filing site of the Income Tax department. Under such circumstances, the Income Tax department needs to launch extensive awareness and training programmes itself or in collaboration with universities and colleges so that assesseees develop knowledge, skill and ease of use in adopting the system. If a large number of assesseees still have to depend upon consultants to file returns, the costs of compliance increases and the efficacy of the objective of introduction of digital technology for increasing convenience for taxpayers remains unfulfilled to a large extent.

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