#### South Asian Studies

A Research Journal of South Asian Studies Vol. 32, No. 2, July – December 2017, pp.349 – 362

# **Employees' Resistance to Change and Technology Acceptance in Nepal**

#### **Devid Kumar Basyal**

Incheon National University, Incheon, South Korea Jin-Wan Seo

Incheon National University, Incheon, South Korea

#### **ABSTRACT**

When changes are instigated, all employees get affected. As a result, resistance to change often occurs. However, after a decade of implementation, Integrated Tax System (ITS)- a new online system at Inland Revenue Department (IRD) under Ministry of Finance, would have been fairly accepted by employees. Hence, the purpose of the study is to identify the factors and the causal relationships that influence employees' behaviors of using ITS. A modified TAM was introduced and tested empirically by using primary data. A detailed questionnaire with a total of 201 (about 25% of total) respondents was taken into consideration during data collection. Structural Equation Modelling (SEM) using Amos21 was executed as an analytical tool. As a result, most of the hypotheses were statistically significant except third and fourth ones. The findings show that ease of use may not have a positive effect on usefulness and behavioral intention. The findings of this research could provide a guideline for future implementations of online systems in other institutions and other similar developing countries like Nepal who are still struggling in terms of proper implementation of digital government.

**Key Words**: Resistance to Change, Technology Acceptance, E-government

Implementation, Nepal

#### Introduction

Change produces anxiety and uncertainty. When changes are instigated, all employees get affected. Changes threatening the financial security and identity of employees may be resisted (Cooper, 2015). As a result, resistance to change often occurs. Employees' resistance to change is one of the most perplexing and contumacious problems in the majority of the institutions when a new change is introduced. Technological change is mainly related to innovation change where something is new for the organization(s) generating or adopting new products, processes, and practices (Keifer, Hartley, Conway & Briner, 2014). The perceptions on organizational change signify a shift from a mechanistic depiction of it and demonstrate institutional change as a more contingent, embedded, and complex process. And such new ways of rational about change offer significant understandings into the factors that affect ICT-associated organizational change (Barrett, Grant & Wailes, 2006). A research recently done by Basyal and Seo (2016) taking experts' opinion also showed that employees' resistance to change could be the one of the major problems of E-government implementation in Nepal.

Furthermore, some of the senior officers at Inland Revenue Department during indepth interviews mentioned that it was really difficult to motivate employees at the beginning to use new online system. The aim of E-government implementation in Nepal seems a failure, if not, very slow as E-government Master Plan (2007-11) was hugely unsuccessful (Rupakhetee & Heshmati, 2011). In this regards, it was important to check whether the employees' resistance to change towards modern technological changes at workplace was one of the major factors of failure of digital government execution.

Different Information Technology (IT) adoption theories/models have been developed by different scholars. The technology acceptance model (TAM) (Davis 1986, Davis 1989, Davis et al. 1989) is one of the most popular and used models among them. This model is further extended, modified and restructured with other models. The purpose of the research is to test a new TAM model by modifying and combining two models namely Motivation and Acceptance Model (MAM; Seigel 2008) and Perceived Resources and Technology Acceptance Model (PRATAM; Ku 2009) to find out employees' resistance to change after the introduction of ICTs in a government organization in Nepal. Although TAM was tested empirically in different fields, they were largely related to developed countries and often in educational and private institutions. In this regard, a modified TAM model for the evaluation of ICTs implementation in government organization in developing countries like Nepal is again an important study to witness the real situation in public sector. By doing so, it can be helpful to compare with other similar least developed countries' case and in the case of success, it can be a model example for other similar nations. For the purpose, Inland Revenue Department (IRD) under Ministry of Finance (MoF) was selected as a study area where Integrated Tax System (ITS) - a new ICT-based tax administration system is implemented. The study investigates the real situation of E-government application in internal tax administration in Nepal and also provides guidance for such efforts in the future in other different institutions and countries.

#### **Literature Review**

#### **Employees' Resistance to Change**

With the immense advancement in the technology, information systems, and economy, change has been a normal and natural state of any business. And again, resistance to change is also the natural and normal reaction to change. When Kurt Lewin (1947) has explained about resistance to change in his simple yet greatly convenient change management model, other researchers have also extended, criticized and re-conceptualized the understanding of employees' reactions to change initiatives. Change is a transition from present to future. Change and resistance to change move hand in hand. With the initiation of the new program, people automatically try to resist which sometimes may cause a total or partial failure of the program. John Kotter (1995) study tells that only one-third of major

change initiatives are successful. Fear of job loss, skills/training dearth to new technology, fear of unknown future and ability to adapt, low tolerance for the change, violation of personal compacts, competing commitment, non-reinforcing reward systems, peer pressure, climate of mistrust, organizational politics, poor timing, loss of control, loss of support system etc. are some possible reasons for change resistance explained by scholars in the literature. Resistance to change will have normally negative effects in the implementation of projects/programs. Lapointe and Rivard (2005) pointed out employees' perceived loss of power could be the most significant drivers of resistance. Citing Jiang et al. (2000), Laumer and Eckhardt (2015) also vowed that employees' resistance to change was one of the most frequently encountered reasons for the non-use of innovations. Information systems research has identified resistance to change as a major reason for IT project failures (Laumer & Eckhardt, 2015). Acquisition of new technology in any organization may sometimes produce a kind of fear and anxiety in the employees' mindset. Heeks' (2003) study which includes the e-government reports of 40 different developing and transitional countries also states that 85% projects were failure constituting 35% total and 50% partial failure.

# **Technology Acceptance Models (TAM)**

The most used theories associated with technology acceptance are: theory of reasoned action (TRA) (Fishbein & Ajzen 1967), theory of planned behavior (TPB) (Ajzen 1985, Ajzen 1991), the technology acceptance model (TAM) (Davis 1986, Davis 1989, Davis *et al.* 1989), the technology, organization and environment (TOE) framework (Tornatzky and Fleischer 1990) and diffusion of innovation (DOI) (Rogers 1995). And the original TAM model is further extended, restructured and modified as TAM2 (Venkatesh & Davis, 2000), unified theory of acceptance and use of technology (UTAUT) (Venkatesh *et al.* 2003), Motivation and Acceptance Model (MAM; Seigel 2008) and Perceived Resources and Technology Acceptance Model (PRATAM; Ku 2009) and so on gradually in later days in line with different situations and organizational sets up.

Technology Acceptance Model (TAM) first developed by F. D. Davis in 1986 is the most widely applied model of users' acceptance and usage of technology. TAM is the theory which explains how users come to accept and use new technology. The original TAM (1986) by Davis has been extended, restructured and further developed as TAM2 (Venkatesh & Davis, 2000), Unified Theory and Use of Technology (UTAUT; Venkatesh, et al. 2003), Motivation and Acceptance Model (MAM; Seigel 2008), PRATAM; Ku 2009 and others in harmony with the study of technology acceptance and employees' resistance to change. Among all, the present study uses a unified and modified model based on MAM by Seigel (2008) and PRATAM by Ku (2009) to examine the situation of E-government implementation in Nepal. MAM and PRATAM, based on previous research, address the different factors namely; perceived resources, perceived motivation perceived usefulness, perceived ease of use, attitude toward using, behavioral

intention to use and actual system use. MAM (2008) and PRATAM (2009) which were tested in a large Southeastern Public University in Orlando, Florida, USA and proved to be successful significantly. In this regard, the aim of this research is to investigate the critical determinants and provide the causal relationship regarding employees' acceptance behaviors while using ICTs in the Nepalese scenario in order to validate this model in the new environmental setup.

#### **Research Framework and Methods**

The research framework of this study is based on the modified version of the conceptual framework of Ku (2009)'s PRATAM and Seigel (2008)'s MAM which is again profoundly based on the works of original TAM of Davis (1986) and other extended models described above. In this sense, the causal constructs based on the belief-attitude-intention-behavior relationships in the technology acceptance model was adapted in PRATAM (Ku, 2009) and MAM (Seigel, 2008) and the current study also adopted the same research framework.

The purpose of this experimental research was to employ the modified TAM to observe and measure the government employees' beliefs and attitude on using ITS based on the research framework: How does this modified TAM explain the employees' usage behaviors of ITS. We tested following hypotheses in the study:

H1: There is a positive and direct effect of perceived resources and motivation on perceived ease of use.

H2: There is a positive and direct effect of perceived resources and motivation on perceived usefulness.

H3: There is a positive and direct effect of perceived ease of use on perceived usefulness.

H4: There is a positive direct effect of perceived ease of use on behavioral intention toward using ITS.

H5: There is a positive and direct effect of perceived ease of use on attitude toward using ITS.

H6: There is a positive and direct effect of perceived usefulness on attitude toward using ITS.

H7: There is a positive and direct effect of perceived usefulness on behavioral intention to use ITS.

H8: There is a positive direct effect of attitude toward using ITS on behavioral intention to use ITS.

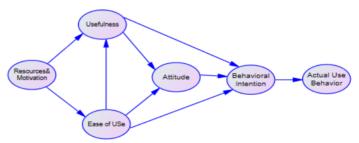
H9: There is a positive and direct effect of behavioral intention to use on actual ITS usage.

Inland Revenue Department (IRD), provides its services through 49 field offices,(22 IROs, 26 TSOs (13 inside valley and 13 outside valley)<sup>1</sup> and a Large Taxpayer Office - LTO (IRD, 2016). And presently, 829 employees' are working under IRD (Baral, 2015). Inland Revenue Department (IRD) has undertaken its

\_

<sup>&</sup>lt;sup>1</sup> IROs: Inland Revenues Offices; TSOs: Taxpayers Service Offices;

five-year strategic plan that comprises of policy reform, improvement of taxpayer service and education, optimal uses of modern technology and revitalization of the organization system as objectives (Sharma, 2016). Primary data was collected using questionnaire from the 201 out of 829 government employees (i.e. about 24.25% of total employees) working under Inland Revenue Department, Ministry of Finance who are using new technology (ICTs) named Integrated Tax System (ITS). A detailed questionnaire was prepared based on seven-point Likert scale with 29 questions representing perceptions, attitude, intention and behavior but during data analysis period 6 questions were dropped due to cross-factor-loading. Additionally, 5 more questions related to demographic (namely; gender, age, academic status, occupational status and official status) information were also added in the questionnaire. On top of that, an extensive interview with some experts who were working in this sector since a long time was also taken. Additionally, relevant data was assembled from the different secondary sources. Cronbach's alpha coefficient and KMO and Bartlett's test was tested to check the validity, reliability and sampling adequacy. Similarly, other model fit indicators were also seen to make sure that our proposed model was okay. The researchers employed both descriptive and statistical analysis of data. Data were analyzed using different statistical tools like SPSS22 and AMOS21 as per the necessity and relevancy. Factor analysis (FA) and Structural Equation Modeling (SEM) - a multiple regression analysis, was executed to analyze the results.



As seen in the above framework, perceived usefulness (U) is influenced by perceived ease of use (EoU) and perceived resources & motivation (RM). Similarly, attitude (A) toward using any technology is related to these three factors and this attitude will again influence to behavioral intention to use (BI). Lastly, the actual system use (AuB) is a result of the influence of all these factors mentioned in above figure.

As seen in the model, the variable names in the circles are latent variables. Perceived Resources & Motivation(RM), Perceived usefulness (U), Perceived Ease of Use (EOU) and Attitude Toward Using (A), Behavioral Intension to Use (IB) and Actual System Use (USE) are all the latent variables. Since these are latent variables cannot be observed directly, we have developed the questionnaire creating indicators based on 7-point Likert scale ranging from strongly disagree to strongly agree and via the confirmatory factor analysis (CFA), we have quantified each of these factors.

## **Data Analysis and Interpretation**

### **General Characteristics of Data**

A total of 201 government employees working under Inland Revenue Department (IRD), Ministry of Finance (MoF) were considered for data collection out of which 130 (64.7%) were male and 71 (35.3%) were female<sup>2</sup>. Similarly, in terms of age, the majority (82.6%) fall between 25 to 45 years of age. Only about 14% were the age between 45-55. The respondents above 55 and less than 25 years were negligible. The education qualification of a majority of employees seemed excellent as 134 (66.7%) were Masters graduate and 50 (25%) were Bachelor graduate. Similarly, 180 (90%) were permanent and 21 (10%) were temporary. Looking at the employees' position at the workplace, majority 121 (60.2%) were section officer followed by Na. Su. 63 (31.3%) and Under-Secretary 13 (6.5%). Three Khardar and one Joint-Secretary were also considered during data collection<sup>3</sup>.

#### **Model Verification**

In course of analyzing the data as per the proposed model, degree of freedom was taken care of and the model was over-identified (i.e.198) as a number of distinct sample moments calculated to be 253 and number of distinct to be estimated 55. Cronbach's alpha coefficient for reliability, KMO and Bartlett's test for sampling adequacy, Principal Component Analysis (PCA) for factor analysis and structural equation modeling (SEM) were tested to see whether the model was fit or not. The overall reliability of the 22 items in the model was 93% (i.e. alpha value ( $\alpha$ ) = . 937) and each of the component's alpha value was also not less than .85.

The recommended Kaiser-Merver-Olkin of Sampling Adequacy (KMO) value should be greater than 0.5 for acceptance. Similarly, Bartlett's Test of Sphericity (BTS) value is also smaller than 0.001 which means the correlation matrix is not an identity matrix. In this analysis, the value of KMO is 0.887 which is rationally higher than the recommended value. Similarly, BTS significance level is also 0.000 which again supports that correlation matrix is not an identity matrix.

-

<sup>&</sup>lt;sup>2</sup> As a rule of thumb, 201 respondents (i.e. 24.24% of total population) is highly acceptable number for analysis purpose. Additionally, by acknowledging a number of assumptions of SEM, a reasonable sample size is one of them to be considered to ensure trustworthy results. Stevens (1996) said that a good general rule for sample size was 15 cases per predictor in a standard ordinary least squares multiple regression analysis. Similarly, Bentler and Chou (1987) noted that researchers might go as low as five cases per parameter estimate in SEM analysis and Loehlin (1992), concluded that for this class of model with two to four factors, the investigator should plan on collecting at least 100 cases, with 200 being better (if possible). By considering the fact of consequences of using smaller samples include more convergence failures, improper solutions and lowered accuracy of parameter estimates, we tried to increase the number of data as far as possible which met the standard of SEM.

<sup>&</sup>lt;sup>3</sup> Na. Su. stands for Nayeb Subba which literally means Non-gazetted first class employee who is junior than section officer. And Khardar is again a post which is one rank junior than Na. Su.

Although this study adopted the tested TAM model with some modification, Confirmatory Factor Analysis (CFA) under PCA was carried out to see whether the constructs formed were factorable or not. The extraction method was PCA and rotation method was Promax with Kaiser Normalization.

**Table 1: Pattern Matrix** 

	Component								
	1	2	3	4					
RM1		.94							
RM2		.86							
RM3		.74							
RM4		.78							
RM5		.81							
U1				.89					
U2				.91					
U3				.87					
U4				.70					
EOU1			.86						
EOU2			.91						
EOU3			.77						
EOU4			.77						
EOU5			.67						
A1	.78								
A2	.74								
A3	.69								
BI1	.69								
BI2	.77								
BI3	.87								
BI4	.88								

After factor analysis, the pattern matrix clearly showed that there would be four major constructs, however, we separated attitude (A) and behavioral intention (BI) as per structure of the original TAM. Hence, five constructs were finally formed to analyze the data<sup>4</sup>. As the value of each of the factor within all latent variables is almost equal or greater than .70, it showed that there was no issue of discriminant validity. The total variance explained was about 72%.

At the last stage of data analysis, Structural Equation Modelling (SEM) was carried out to test the hypotheses that we had set earlier. To address the model fit issue, different model-fit-indices are being used in the literature (Campbell, 2016; Blunch, 2008; Schmacker & Lomax, 2004, Hu & Bentler, 1999; Hoyle, 1995; Hatcher, 1994). Just looking absolute fit indicator Chi-square value of 260.361 with 198 degrees of freedom giving P-value of 0.002, the model does not seem to

\_

<sup>&</sup>lt;sup>4</sup> Measurement of five constructs and their related items (factors) for factor analysis was studied using SPSS24. As a result, the Cronbach alpha coefficient of 'Perceived resources & motivation (RM)' was .98 which included 5 factors. Similarly, alpha coefficients of the constructs named 'Perceived usefulness (U)' with its 4 factors and 'Perceived ease of use (EoU)' with 5 factors were .89 and .90 respectively. Lastly, the reliability of 'Attitude instruments (A) and 'Behavioral Intention instruments (BI)' came to be .87 and .85 in order.

hold and it is really hard to reject the null hypothesis (H0) if the sample size exceeds 200 or so. Within keeping in mind that Chi-square is impacted by sample size and given that SEM technique such as CFA tends to be large sample technique, it is not uncommon for Chi-square to be statistically significant whereas other indicators show good fit. Therefore, Blunch (2008), Scholderer et al. (2004), Dr. Moss (nd) and others recommended other fit indices such as CMIN/DF, RMR, TLI, CFI, GFI, RMSEA, PCLOSE. Relative chi-square (CMIN/DF in Amos) also called the normed chi-square- might be less sensitive to sample size and the criterion for acceptance varies across researchers, ranging from less than 2 (Ullman, 2001) to less than 5 (Schumacker & Lomax, 2004) as cited by Dr. Moss (nd.). In this respect, the value of CMIN/DF which is 1.315 is pretty lower than the recommended thresholds. Similarly, Root Mean Square Residual (RMR) represents the square root the average or mean of the covariance and its value should be less than .08 (Browne & Cudeck) and ideally less than .05 (Stieger, 1990) or the upper confidence interval of RMR should not exceed .08 (Hu & Bentler, 1999). In this regard, RMR value in this model is .022 which is also remarkably lower than the suggested value. Likewise, as a rule of thumb, Root Mean Square Error of Approximation (RMSEA) should also be less than .05. However, Hu and Bentler (1999) recommend RMSEA values below .06 and Blunch (2008) suggests values larger than .10 should not be accepted. RMSEA in this analysis becomes .04. For Goodness-of-fit (GFI), Comparative fit index (CFI) and Tucker-Lewis index (TLI), higher values represent better fit, with values greater than .900 is the minimum threshold for model acceptance (Campbell, 2016; Bryne, 1994), however, these criteria are only guidelines. Dr. Moss (nd.) citing Bollen (1989) mentions sometime a CFI value of .85 can represent a progress if prior models produce CFI values of .70 only. Since the value of GFI, CFI and TLI in this model are .90, .96 and .95 respectively, the model fits well according to the descriptive measures of fit. p for the test of close fit (PCLOSE) provides a onesided test of the null hypothesis is that the RMSEA equals .05. Becoming p greater than .05 (i.e. not statistically significant) means that the fit of the model is "close". The value of PCLOSE in this model is .91 which is greater than .05 again justifies the model fit. Jointly, above statistics indicate that the model is suitable for structural modeling.

# Findings and Interpretation of the result

The proposed model by the study was tested conducting AMOS21. SEM - which is a flexible and powerful extension of the general linear model, does not only see a causal relationship between exogenous and endogenous but also can calculate the relationship between or among the exogenous, endogenous, mediating, manifest and latent variables at the same time. The values associated with each path are

356

unstandardized regression coefficients(URC)<sup>5</sup>. Each URC denotes change in the dependent or mediating variable for each one unit change in the variable predicting it. All the goodness-fit-indices except P-value validated that our proposed model fit the data (CMIN/DF:1.315; GFI: .90; CFI: .96; TLI: .95; RMR: .022; RMSEA: .040; PCLOSE: .91).

Almost hypotheses were significant except hypothesis 3 and 4. Among the relationships, relationship between resources and motivation (RM) & usefulness and attitude & behavioral intention seemed to be stronger.

Table 2: Regression Weights:										
			Estimate	S.E.	C.R.	P	Label			
EoU	<	RM	.880	.146	6.041	***	par_17			
U	<	RM	.475	.214	2.216	.027	par_15			
U	<	EoU	.037	.174	.212	.832	par_16			
A	<	U	.285	.110	2.588	.010	par_21			
A	<	EoU	.550	.088	6.238	***	par_24			
BI	<	A	.892	.142	6.273	***	par_20			
BI	<	U	.255	.122	2.089	.037	par_22			
BI	<	EoU	.111	.111	1.003	.316	par_23			
RM5	<	RM	1.000							
RM4	<	RM	.870	.146	5.947	***	par_1			
RM3	<	RM	1.006	.161	6.269	***	par_2			
RM2	<	RM	1.106	.203	5.448	***	par_3			
RM1	<	RM	1.064	.192	5.541	***	par_4			
EoU5	<	EoU	1.000							
EoU4	<	EoU	1.113	.137	8.104	***	par_5			
EoU3	<	EoU	1.269	.145	8.743	***	par_6			
EoU2	<	EoU	.903	.119	7.600	***	par_7			
EoU1	<	EoU	.984	.125	7.864	***	par_8			
U1	<	U	1.000							
U2	<	U	.779	.167	4.670	***	par_9			
U3	<	U	.898	.173	5.194	***	par_10			
U4	<	U	.911	.174	5.219	***	par_11			
BI1	<	BI	.797	.074	10.706	***	par_12			
BI2	<	BI	1.000							
BI3	<	BI	.635	.070	9.124	***	par_13			
BI4	<	BI	.768	.088	8.750	***	par_14			
A1	<	A	1.000							
A2	<	A	1.150	.094	12.282	***	par_18			
A3	<	A	1.097	.101	10.911	***	par_19			

<sup>&</sup>lt;sup>5</sup> The use of standardized estimates comes into picture when independent variables are expressed in different units. For example, suppose there are three predicting variables namely; weight, height and age - then it is unfair to use a single unit to all of them. However, in this study, the nature of data set is in Likert scale. As a result, any variable whether it is exogenous or mediating or latent - does have similar unit. Hence, it is more scientific to see the particular change in the dependent variable(s) due to per unit change in the predicting variable(s). Standardized estimates were also done and standardized coefficients were also taken into consideration. By doing that, it seemed some changes in the values of estimates but the path and nature of results remained same.

The first hypothesis named "Perceived resources and motivation will have a positive direct effect on perceived ease of use" was statistically significant (p <.001; C.R. 6.04;) and the regression coefficient was .880. This shows that there is a positive relation between resources and motivation and ease of use, meaning changing 1 unit in resources and motivation will have .893 unit change in the ease of use in a positive way. The result appeared to be quite reasonable as having sufficient resources to use and proper motivation at workplace makes ease of use. Again, hypothesis 2 which stated "Perceived resources and motivation will have a positive direct effect on perceived usefulness" was also significant at 5% level of significance and estimated coefficient was .475. This indicated that there is the role of resources and motivation in terms of usefulness of the technology but it is weaker than the relation between resource-motivation and ease of use.

But on the contrary, hypotheses 3 and 4 which purposed a positive and direct effect of perceived ease of use on perceived usefulness' and behavioral intention toward using ITS seemed insignificant respectively.' Looking at third hypothesis it seemed to be statistically insignificant (p>05; CR: .832). However, the regression weight is positive .037. This means that ease of use and usefulness are not related each other or in other words, the usefulness of a technology is not associated with its ease of use. The reason may be government officials at Inland Revenue Offices are using the current ICTs system not because of their own will; rather because of the mandatory provision that was imposed by the government. Similarly, fourth hypothesis also seemed to be insignificant as P-value became .316 and CR value 1.003. Again the reason could be that only becoming easy to use any technology may not be the primary reason for using ITS IRD in Nepal. Further, employees' behavioral intention can be directed by the work environment necessity and compulsion.

The fifth hypothesis named 'a positive and direct effect of perceived ease of use on attitude toward using ITS' was statistically significant (p < .001; CR: 6.238) and predicting value was .550. This is a clear indication that employees' attitude to use the ITS in Inland Revenue Department is highly associated with its ease of use. That means easier its use higher the attitude of employees to use it. Similarly, hypothesis six 'a positive direct effect of perceived usefulness on attitude using ITS' was statistically significant at 5% of significance level with CR 2.588 and regression weight was .285. We can here predict that if the implemented technology is highly useful that may impact positively on the attitude of the officials. Hypothesis 7, 'a positive direct effect of perceived usefulness on behavioral intention to use ITS' was statistically significant at 5% and CR was 2.089 where the regression coefficient was .255. The result indicates that although there is the direct positive impact of the usefulness of technology on the behavioral intention of the people, it has a weak association. In the same way, eighth hypothesis 'Attitude toward using ITS will have a positive direct effect on behavioral intention to use ITS was also statistically significant (p < .001; CR: 6.273) and .892 of regression weight indicate that attitude is one of the major

factors to behavioral intention while using any ICTs at workplaces. And it seems quite convincing that as an attitude of people is positive towards any technology, their behavioral intention also becomes positive.

Finally, actual use behavior of any technology by the people is an outcome of the behavioral intention towards it. However, this might not be the prime reason at all time. Sometimes, people can use any available technology due to the demand for the job and forceful implementation by the top order. This question(s) was not in the form of Likert scale as the nature of the question was asking - how often and how long the employees in the ILOs were using ITS at office hours, we saw the median and mode value and frequency of each question. The result of the question, asking how often you use the system, showed that 185 (92%) officials were using on daily basis. And remaining officials also answered that they were using once in a day. Similarly, in the other question posed how long they spent on the computer every time they log in on ITS, 179 (89%) answered they were spending more than one hour. Hence, we can state that actual use behavior of the employees in IROs in Nepal is quite high.

## **Concluding Remarks**

'We believe that successful digital transformation comes not through the choice of particular technology stack or IT system but through the work of people and teams', writes Harbott (2017). Change comes with a price, says one joint-secretary of Inland Revenue Department, Nepal by telling the past history of how difficult it was at the first time when the new online system was introduced in the tax administration. He further reiterated that at the initial stage when we tried to implement ProTax<sup>6</sup>, we literally were on the verge of failure of the program and it was not because of the inaccessibility of the necessary technical resources, rather employees' indifference and resistance to change. Resistance to change is a common phenomenon while introducing new technology or system. A recent study by Basyal and Seo (2016), using Analytical Hierarchy Process (AHP) where data were taken from experts, also revealed that employees' resistance to change was one of the major reasons of digital government implementation in Nepal. Egovernment adoption is more than technological matter as it is influenced by many factors, including organizational, human, economic, social, and cultural issues (Chen &, Thurmaier: 2005; Kumar et al.: 2007; Shareef, Kumar, Kumar & Dwivedi: 2011). So, it was again a customary to see whether employees' resistance to change was still a grave problem for the implementation of Egovernment in Nepal. In this connection, this research was a test to justify the above-mentioned statement.

\_

<sup>&</sup>lt;sup>6</sup> At the initial stage of implementation of online system of tax administration at Inland Revenue Department (IRD) under Ministry of Finance, the name of the program was ProTax with the help of Danish Government. In addition to Denmark, International Monetary Fund (IMF) and Germany's GTZ have also played an important role (IRD, 2016). Later, it was renamed as Integrated Tax System (ITS) with further development of system by combining more taxes in the system.

However, at present, after many years of implementation of the new online system in the IRD of Ministry of Finance in Nepal, we hypothesized that the ITS would be fairly adopted, well-organized and properly implemented. Answering one of the open-ended questions, Ganga Bhandari, an officer at New Road, Kathmandu Branch told, 'no ITS, no work' which showed a clear indication of the smooth operation of online system at the offices under IRD. Keeping in the mind of all constructs (i.e. Beliefs, Attitude, Behavior and Actual Use) of TAM, we tried to test whether the hypotheses we set up were statistically significant. As a result, most of the hypotheses were statistically significant except third hypothesis (H3): a positive and direct effect of perceived ease of use on perceived usefulness and fourth hypothesis (H4): a positive direct effect of perceived ease on behavioral intention toward using ITS. Overall, after checking the validity, reliability, and normality of the data and other model fit indicators, this research validated the influences of modified TAM (our purposed framework) constructs factors to employees' acceptance behaviors toward ITS. Additionally, this theory also helped to advance theories of TAM with reference to government employees' behavior toward online practices in developing countries like Nepal. The aim of Egovernment implementation in Nepal seems a failure, if not, very slow as Egovernment Master Plan (2007-11) was hugely unsuccessful (Rupakhetee & Heshmati, 2011). In this regards, it was important to check whether the employees' resistance to change towards modern technological changes at workplace was one of the major factors of failure of digital government operation. And the results show that, although it was hard initially to launch the new technology at workplace, government employees gradually accepted and adopted as per the need and demand for time. Hence, it is now again important to see the factors responsible to make E-government implementation successful at IRD in Nepal. By studying its reasons of success, it will help to implement digital government in other institutions in Nepal and in other similar developing countries.

[Note: This work was supported by Incheon National University (International Cooperative) Research Grant in 2016].

#### References

- Baral, S. (2015). Human Resource Development of Inland Revenue Department: Situation and Prospects. *Fourth National Tax Day Souvenir*, IRD, Kathmandu.
- Barrett, M., Grant, D. & Wailes, N. (2006). ICT and Organizational Change: Introduction to the Special Issue. *THE JOURNAL OF APPLIED BEHAVIORAL SCIENCE*, 42(1), 6-22. DOI: 10.1177/0021886305285299
- Basyal, D. K. & Seo, J-W. (2016). What Should We Do for E-government in Nepal and How? An AHP Approach. *The Korean Journal of Policy Studies*, 31 (3), 47-74.
- Benter, P. M. & Chou, C. P. (1987). Practical issues in structural modeling. *Sociological Methods and Research*, 16(1), 78-117.
- Blunch, N. J. (2008). *Introduction to Structural Equation Modeling Using SPSS & AMOS* (1<sup>st</sup> ed.). University of Queensland: Sage

- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newsbury Park, CA: Sage.
- Byrne, B. M. (1994). *Structural equation modeling with EQS and EQS/Windows*. Thousand Oaks, CA: Sage Publications.
- Campbell, J. W. (2016). A Collaboration-Based Model of Work Motivation and Role Ambiguity in Public Organizations. *Public Performance & Management Review*, 39:3, 655-675. doi: 10.1080/15309576.2015.1137763.
- Chen, Y. -C., & Thurmaier, K. (2005). Government-to-citizen electronic services: Understanding and driving adoption of online transactions. *The Association for Public Policy & Management (APPAM) conference*, Washington, D.C., November 3–6.
- Cooper, C. A. (2015). Bureaucratic Identity and the Resistance of Politicization. *Administration & Society*, 1-23. DOI: 10.1177/0095399715581046
- Davis, F. D. (1986). A technology acceptance model for empirically testing new end-user information systems: theory and results. Boston, MA: Massachusetts Institute of Technology.
- Harbott, A. (2017). In tech and talented? The government's digital transformation needs you. *Government Digital Service, Cabinet Office*. Retrieved on March 2, 2017, from <a href="https://gds.blog.gov.uk">https://gds.blog.gov.uk</a>.
- Hatcher, L. (1994). A Step-by-step Approach to using the SAS system for Factor Analysis and Structural Equation Modeling. NC: SAS Institute.
- Heeks, R. (2003). Most e-Government-for-Development Projects Fail: How can Risks be Reduced. e-Government working paper series, paper number 14. Institute for Development Policy and Management, Manchester, UK.
- Hoyle, R. (1995). Structural Equation Modeling; Concepts, Issues, and Applications. Thousand Oaks, CA: Sage publication.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling, 6, 1–55.
- IRD (Inland Revenue Department) (2016). Annual Report. Kathmandu, Nepal.
- IRD (Inland Revenue Department) (2015). Fourth National Tax Day Souvenir. Kathmandu, Nepal.
- IRD (Inland Revenue Department) (2016). Fifth National Tax Day Souvenir. Kathmandu, Nepal.
- Kotter, J. P. (1995). Leading Change: Why Transformation Efforts Fail. (Cover Story). *Harvard Business Review*, 73(2): 59-67.
- K, C-S., (2009). Extending the Technology Acceptance Model Using Perceived User Resources in the Higher Education Web-based Online Learning Courses. Unpublished Ph.D. Thesis in Department of Education Research, Technology and Leadership, University of Central Florida, Orlando.
- Keifer, T., Hartley, J., Conway, N. & Briner, R. B. (2014). Feeling the Squeeze: Public Employees' Experiences of Cutback and Innovation-Related Organizational Changes Following a National Announcement of Budget Reductions. *Journal of Public Administration Research & Theory*, 25; 1279-1305.
- Kumar, V., Mukherji, B., Butt, I., & Persaud, A. (2007). Factors for successful egovernment adoption: A conceptual framework. *The Electronic Journal of e-Government*, 5(1), 63–76.
- Lapointe, L. and S. Rivard (2005). A Multilevel Model of Resistance to Information Technology Implementation. *MIS Quarterly* 29(3): 461-491.
- Laumer, S. & Eckhardt, A. (2015). Why Do People Reject Technologies A Review of User Resistance Theories. *Information System Theory*. Bamberg; Germany, pp. 63-86.
- Lewin, K. (1947). Frontiers in Group Dynamics: Concept, Method, and Reality in Social Science; Social Equilibria and Social Change. *Human Relations*, 1:5-41. doi:10.1177/001872674700100103.
- Loehlin, J. C. (1992). Latent variable models. Hillsdale, NJ: Lawrence Erlbaum Publishers.

- Moss, S. (Dr.) (nd.). *Fit Indices for Structural Equation Modeling*. Retrieved on November 18, 2015, from http://www.sicotests.com/psyarticle.asp?id=277.
- Rupakhetee, K. & Heshmati, A. (2011). Rhetorics vs. Realities in Implementation of E-government Master Plan in Nepal. Technology Management, Economics, and Policy Program (TEMEP Discussion Paper No. 2011:75; Seoul National University.
- Scholderer, J., K. Brunsø, L. Bredahl, & Grunets, K. G. (2004). Cross-cultural validity of the
- food-related lifestyle instrument (FRL) within Western Europe. Appetite, 42:197–211.
- Schumacker, R. E. & Lomax, R. G. (2004). *A Beginners' Guide to Structural Equation Modeling* (2<sup>nd</sup> end.). New Jersey: Lawrence Erlbaum Publishers.
- Seigel, D. M. (2008). Accepting Technology and Overcoming Resistance to Change Using the Motivation & Acceptance Model. Unpublished Ph.D. Thesis in Department of Education Research, Technology and Leadership, University of Central Florida, Orlando
- Shareef, M. A., Kumar, V., Kumar, U. & Dwivedi, Y. K. (2011). e-Government Adoption Model (GAM): Differing service maturity levels. *Government Information Quarterly*, 28, 17-35. doi:10.1016/j.giq.2010.05.006.
- Sharma, D. R. (2016). An overview of Revenue Reform in Nepal. *Fifth National Tax Day Souvenir*, IRD, Kathmandu.
- Stevens, J. (1996). *Applied multivariate statistics for the social sciences*. Mahwah, NJ: Lawrence Erlbaum Publishers.
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioural Research*, 25, 173-180.
- Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science* 0025-1909 Feb 2000, 46(2), pp. 186(119).
- Venkatesh, V., Morris, M. G., Davis, G. B. & Davis, F. D. (2003), "User Acceptance of Information Technology: Toward a Unified View", MIS Quarterly 27 (3), pp. 425–478

# **Biographical Note**

**Devid Kumar Basyal** is a PhD candidate at Department of Public Administration, Incheon National University, Incheon, South Korea.

**Prof. Dr. Jin-Wan** is a professor at Department of Public Administration, Incheon National University, Incheon, South Korea.