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An Empirical Study on Employee Readiness as a Predictor of Decision Support Systems (DSS) Adoption in Public Sector Pakistan E-business

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Abstract

Technology brings efficient management techniques to the organization and enhances them. In previous papers, this research established a framework for applying a conceptual model as research to explore the effect of employee readiness for E-business on technology adoption concerning the use of modern technology. Modern tools for enabling the integration of functions in several agencies, which in turn will be useful for better data-driven policy making.. Determining the factors that make or restrict the perceptions of employees towards the implementation of technology is important. This research model is based on the empirical analysis of Lai & Ong and Davis' Technology Adoption Model (TAM) on public sector employee readiness for E-business (EREB). It addresses certain factors that shape the readiness of employees for E-business and allows them the intention to use E-business technologies such as DSS (Decision Support Systems. To collect

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data, a survey questionnaire was used from 214 public sector employees in Pakistan for this cross-sectional analysis. The results of this study show that the EREB model affects DSS's perceived usefulness (PU) and perceived ease of use (PEOU) and contributes to the technology's intention to use (IU).

Keywords: Intention to Use, Employee Readiness, Decision Support Systems, Perceived Usefulness, TAM

INTRODUCTION

The use of their networks together with the creative application of technology to their business routines has become crucial for organizations to manage assets among employees, distributors, representatives, suppliers, and to add value to establish processes, production capacity, and service delivery. Companies are following these lines by rising their pace in carrying out electronic business (Marjanovic et al.), reinforcing the perception of the need for employee readiness to understand the new world at work. As Craig and Jutla (2000) notes in their findings on readiness for E-business, they conclude that earlier studies focus primarily on technology adoption or need a strong hypothesis. Besides, prior research often focuses more on the implementation of technology from the perspective of the customer, the point of view of the company, or the viewpoint of state, in contrast to individual employee readiness for E-business (EREB). As an effort to broaden a new perspective and raise awareness of technological adoption through the concept of preparation for technology.

DSS (Decision Support Systems) is part of the Internet of Things (I.O.T). I.O.T applies to a wide variety of World Wide Web (WWW) interconnected channels, devices, and technologies, including different contact patterns across multiple networks (Alaba et al., 2017). The definition of I.O.T is focused on the interaction between a wide variety of intelligent devices and things, including, but not restricted to, cell phones, RFID (Radio Frequency Identification Devices), sensors, actuators, etc., in order to achieve common goals through distinctive management systems(Gu et al., 2017). DSS is also inherently part of the I.O.T. In the I.O.T, DSS is one of these items that operate via

internal networks, analyze information to produce reports, and interacts through both the intranet and the internet. I.O.T has many field applications ranging from tracking energy usage to linking software applications to optimize traffic routes, to improve fuel quality by reducing traffic jams (Bosch & Olsson, 2017) and to expand biological studies assistance (Giannino et al., 2018). Companies, often because of a paradigm shift, have fallen prey to technological change. An example of a failure during the digital camera transition and associated technologies is Kodak. In addition, several studies have attempted to evaluate the variables affecting the acceptance of modern technology. The backgrounds of this research differ from the vie wpoint of the client, the outlook of the market to the organizational context. However, the knowledge of employees is rather lacking when it comes to academic literature and research in terms of person-level adoption of technology.

Due to its effects on the successful growth of the organization, new technology is a survival concern for E-business companies. Workplace innovation in modern business strategies is highly technical and relies on information systems (Euripidis & Fotini, 2012). This rapid shift in the technological world calls for continuous organizational change management activities to ensure that employees are ready to meet the challenges (Masum et al., 2018). In order to achieve successful business growth, E-business information systems have enormous potential (Euripidis & Fotini, 2012). The goal of this research is to contribute through factors which cause or inhibit employee willingness to improve the management of human resources and effective corporate practices. The recent research focuses on why technology is implemented and used which means paperless offices inherently. In addition, the literature primarily focuses on successful business practices as part of the CSR commitments (Yang et al., 2017). Coordination and encouragement amongst employees at the organizational and strategic levels are required to ensure business maintainability objectives are achieved. The organization must concentrate on the willingness of employees to use them in a common vision of corporate success (Leana et al., 2000). Bigi et al. (2018) have studied ICT from the viewpoint of human survival in workplace computerization, as well as from the point of view of organizational change management practices. They establish that the human viability

of ICT and changes in management depended on whether or not the institutional context was taken into account during the new technology implementation process. In the institutional sense, the position of the employee thus becomes critical.

This research focuses primarily on the determinants of employee conduct in E-business environments against technology use. As the technology in question, the emphasis is narrowed down to DSS. In essence, DSS is a software or application connected to information systems of more than one type. Ruggiero, Kwag, Kunnamo, Cinquini, Capobussi, Vespignani, Liberati, Moja, Passardi, Mangia, Nyberg, Grimshaw, Bonovas, Gonzalez-Lorenzo, Nanni, and Bertizzolo (Lorenzo Moja et al., 2016), have been researching computer-based DSS related to patient health records. Masum et al. (2018) studied when combined with KDD (Knowledge Discovery in Database), how HRIS (Human Resource Information Systems) execute DSS functions for structured, unstructured, and semi-structured, and HR-related decisions. Therefore, DSS can combine one or more applications of software or features, such as SCM (Supply Chain Management), WBIS (Web-based Information System), SMIS (Sales Management Information System), CRMS (Customer Relationship Management System), GDS (Global Distribution Systems), specific to the travel industry, systems, and integrated Online/E-Payment Systems. These information systems can have various levels of employee access, defined by the hierarchical levels. The ultimate aim of these innovations is to help employees and executives to make educated and specific decisions about successful technological changes.

The goal of this study is to contribute in different ways. Firstly, the relationship between the two models is combined and analyzed, i.e. EREB & TAM, Pakistan's first public sector employee perspective. Secondly, this study focuses on the attitude of the employees as a user and their connection to public sector perceptions of ease and usefulness. Thirdly, it examines the aversion to job security issues of employees that may hinder the use of technologies such as DSS. Fourth, it is to contribute to the present literature by adding the relation of the constituent factors of employee e-business readiness to the knowledge base. Job benefits, job security, certainty, and collaboration with perceived ease of use and perceived usefulness for DSS, which is not yet available in the sense of employees in the public sector in Pakistan.

LITERATURE REVIEW

Decision Support Systems

Decision Support System is an IT-based software program that provides employees with simple, workable recommendations or smart management alternatives to help make appropriate decisions (L. Moja et al., 2016). It is a state-of-the-art update to various previous applications such as email, talk, database, MIS (Management Information System), EIS (Executive Information System), and compilation and sales reports of payment. With technical advancements, the DSS is also changing day by day. The term DSS was first properly described by it seeks to deal with less well-structured and underspecified issues faced by top management. The hybrid use of models or analytical methods is attempted by DSS. It provides traditional functions for accessing and retrieving data. Burstein and Holsapple (2008) established that IDSS (intelligent decision support systems) are called DSSs that perform selected cognitive decision-making functions and are based on AI (artificial intelligence). In pre-defined circumstances, IDSS is capable of making pre-programmed decisions, such as medical diagnostic systems; supply chain management; expert scheduling systems in manufacturing companies; agricultural production systems; fraud detection and prevention of transaction delays; and intelligent systems are all focused on web-based advisory systems (Power, 2007).

E-business Internet of Things and Readiness of Employee

In all technology-intensive organizations, an increasing fundamental challenge is the successful implementation of networks and distributed information technology to connect resources between employees, organizations, vendors, and suppliers. Transitioning into E-business is a transformative adventure from introductory to final phases for most organizations. This type of transition may include the acquisition of new technologies, process flow improvements, the updating of business types, and improvements in hierarchy or administration (Craig & Jutla, 2000). A large number of stakeholders, including consumers, suppliers, and particularly employees, must support the change (Craig & Jutla, 2000). A broad range of studies has been carried out to analyze the readiness of organizations to implement E-business and to

formulate useful management solutions and implications. Though, they either lack clear theoretical frameworks or primarily concentrate on consumer, organizational or geographical adoption of technology (Erdoğmuş et al., 2011; Park et al., 2014), as opposed to the very few uncommon studies focusing on employee preparation at the individual level for e-technology (Erdoğmuş et al., 2011; Park et al., 2014) .

Technology Acceptance Model (TAM)

The TAM (Technology Acceptance Model) is the combination of the fundamental principles of the TRA (Theory of Reasoned Action) and the TPB (Theory of Planned Behavior). "The TRA was developed by Fishbein and Ajzen (1977), which has been shown to be one of the most frequently used models for the study of intention and is considered sufficient" to make clear virtually any human behavior" (Fishbein et al., 1980). The main variables in TAM have perceived usefulness (PU), perceived ease of use (Ahmad et al., 2020), and intention to use (IU). TAM is one of the most competent, vigorous, and parsimonious user acceptance prediction models, especially in the IS setting (Ahmed et al., 2018). For this review, the reasoning behind selecting TAM was that TAM was checked and upheld through validations, applications, and replications (Fishbein & Ajzen, 1977). Many studies in the literature assess technology readiness and acceptance of technology (Ahmed et al., 2018; Joo, 2015), but there are not several studies that illustrate employee readiness. Besides, no such studies for Pakistan have been identified.

EREB Employee Readiness for E-business Model

The focus of this research is on the E-business readiness (EREB) level of an employee as the predictor of employee expectations of the ease of use and usefulness of DSS primary to intent to use; it includes four dimensions, i.e. Job Benefits, Job Security, Certainty, and Collaboration (Lai & Ong, 2010).

Job Benefits (B): this attribute notes that employees expect that higher productivity and increased performance will be included in the benefits of E-business. It will be useful to him/her in the job; that the employee still uses E-business functions and that it helps them to be more successful in their work.

Job Security (S) refers to an employee's state of mind about job security. He/she is not worried about losing the job, altering the job, losing their control in the work atmosphere, or losing their strength.

Collaboration (C) is the ability of employees to engage with each other, to share information, to work in a team with their peers, and to advise and offer a helping hand to colleagues in the use of E-business technologies (Lai & Ong, 2010).

Certainty (T) refers to the certainty of the employee's mind about the objectives of E-business and the role of the technologies involved in the activities of electronic business. Also, the employee assumes that his company can incorporate E-business innovations effectively. In further, certainty here relates to the 'confidence' that employees have in their managers (Lai & Ong, 2010).

HYPOTHESES AND RESEARCH MODEL

Intention to Use Perceived Usefulness and Ease of Use

PU is the biased probability of a person using any given modern technology to focus on their expectation that the technology in question would lead him/her to improved results at work. Therefore, PU is the probability of increased productive capacity expected to arise from the use of modern technology in an organizational environment. PEOU is the degree of ease in the use of a specific technology, as the name of the construct implies. The use of the target technology requires whether it is free of effort or a minimum effort. The less time it takes, the greater the perceived ease of use. PEOU is essentially the presumption of the future user that the new technology is free of charge and no effort needs to use (Venkatesh & Davis, 2000). For user acceptance prediction, TAM has stood the test of time. It stands out as a robust and psychological model, especially in information system studies (Bueno & Salmeron, 2008). A significant number of researchers have repeatedly verified the findings of TAM through various studies, tests, validations, and replications (Venkatesh & Davis, 2000).

The primary narrative of the Technology Acceptance Model (TAM) is that the internal beliefs of a person are the determining factor in actual usage concerning the ease of use and usefulness of any given technology. PU has been studied as the subjective opinion of a prospective consumer about the usefulness of a particular technology

that can in turn contribute to individual goals being met (Davis, 1989). PEOU is included as an exogenous variable that has an indirect impact on the attitude towards use or intention to use through PU, which has been shown to have a direct impact on attitude in numerous studies and is a direct determinant of continued intentions for IS use (Lin & Hsieh, 2007). This study hypothesizes a significant route from PEOU to PU and from PEOU to IU. The goal is to use a DSS as a structure that is predicted by PU and PEOU. Social science and information management studies have stated uncritically that the intention to use technology sometimes leads to actual use (Shropshire et al., 2015). It has been well founded that the predictor of actions is intention (Venkatesh et al., 2003). Likewise, Fishbein and Ajzen (1980) note that "intention is the immediate determinant of actions." Therefore, as a measure of actual usage, we will also use IU. The following theories are thus suggested:

H1: Perceived usefulness (PU) of DSS has a positive impact on Intention to use (IU)
H2: Perceived ease of use (PEOU) of DSS has a positive impact on Intention to use (IU)
H3: Perceived ease of use (PEOU) of DSS has a positive impact on its perceived usefulness (PU)

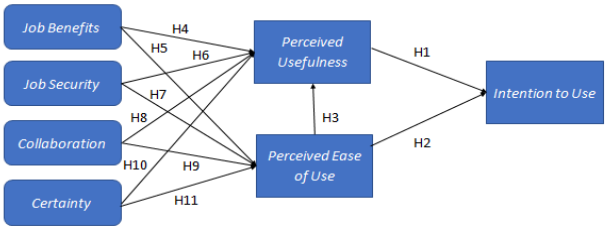

Figure: Conceptual Model

Job Benefits

The benefits here mean all the positive results that an employee might interpret as resulting from the use of any given technology. This includes the views of employees that E-business and connected technologies can lead to changes in their everyday job outcomes in terms of efficiency, quality, speed, and general ease. Employees take

positive note of the usefulness of the functions of E-business and related technologies and this confident conviction to help them to be more competitive in their employment (Lai & Ong, 2010), thereby generating self-efficacy. Previous research on software and information systems has shown that thus creating self-efficacy. Prior research on technology and information systems has shown that self-efficacy and PEOU have a positive relationship (Venkatesh & Davis, 2000). The motivating factors for employees are the benefits of E-business and DSS, similar to what has been developed in the Expectancy theory. It focuses on the premise of a correlation of behavior with a certain expected result. If they accept and use DSS, employees will expect such benefits. With increased self-efficacy more perceived advantages of DSS are anticipated to promote employees (PEOU):

H4: Job Benefits of DSS have a positive connection with its perceived ease of use (PEOU)
H5: Job Benefits of DSS have a positive connection with its perceived usefulness (PU)

Job Security

Job Security relates to employees fear of losing their job or changing their position or losing control or power at their job (Lai & Ong, 2010), including anger, apprehension, and fear. This is because an employee who is not sufficiently creative or is not up to the present technological developments might feel threatened by the implementation of new technology and fear. Software acknowledgments have found that PEOU is significantly negatively impacted by computer anxiety (Bueno & Salmeron, 2008). Nam and Change (2019) has researched employee attitudes towards technology adoption and has found that his latest insight into work insecurity is highly linked to technical utilization. Jobs insecurity is often correlated with changes in the organization, uncertainty in the job, and reception of information on organizational issues (Ashford et al., 1989). Technology brings in change and is thus connected with employee protection. Earlier research found that fear leads to retreat and damages employee efficiency and affective involvement (Ashford et al., 1989; Ruokolainen et al., 2014). Better protection and reliability help employees see the introduction of a modern system as a transition that increases efficiency, leading to

positive system aspirations and a positive system attitude (Susarla et al., 2006). Negative affective reactions to the use of such modern integrated Decision Support Systems can have negative effects on perception and use of the system. It is therefore expected:

H6: Job Security related to using a DSS has a negative association with its perceived ease of use (PEOU)
H7: Job Security related to using a DSS has a negative association with its perceived usefulness (PU)

Collaboration

Lai et al. (2013), assert that user involvement not only enhances connectivity and allows better use of information, besides also enhance work skills and employee comprehension. The benefits of participation are linked to increased confidence, power, greater organizational identity, and higher expectations. The social impact element of compulsory technology use is captured by collaboration. The implementation of technology is not a one-man task. In order to introduce new policies, it requires the entire workforce to join hands. Where the use of technology is a primary concern during daily job activities, it is even more critical for organizations to have employees working together for fast learning and adoption (Yang et al., 2017). As noted by Agarwal and Karahanna (2000), the frequency of use and acceptance of any given technology can be enhanced during the initial compulsory use stage of its begin in a place of work settings. This can only be accomplished through employee involvement and cooperation, which essentially "enhances trust and leads to a sense of ownership and power, increases system acceptance and commitment" (Lai et al., 2013). As observed by Yang et al. (2017), the usage of technology can be increased during an organization's mandatory usage requirement at the initial stage of implementation, whereas external constraints emerging from managerial and social aspects may adversely influence the user's intention to use certain technology in the future. It suggests the following hypothesis:

H8: Collaboration has a positive affiliation with its perceived ease of use (PEOU) of the system.

H9: Collaboration has a positive affiliation with its perceived usefulness (PU) of the system.

Certainty

TAM (Technology Acceptance Model), TPB (Theory of Planned Behavior), and TRA Theory of Reasoned Action are models that work based on user preference of intention to use (Caison et al., 2008). As management offers assistance to people at work, such as training, instruction, and counseling, their ability to adopt new strategies can be improved based on their level and degree of help (Caison et al., 2008; Lai & Ong, 2010) . Certain situational variables, including institutional support, may thus be critical in deciding an employee's attitude and protection to the systems. Employees would feel more secure if management raises the amount of such assistance. Thus, an improved PEOU and PU (Lai & Ong, 2010), of the system show the assurance of the application of technology in the mind of employees.

H10: Certainty has a positive relationship with its perceived ease of use (PEOU).

H11: Certainty has a positive relationship with its perceived usefulness (PU).

METHODOLOGY

Samples and Data Collection

For the purposes of this analysis, data was collected from Punjab Pakistan, a public sector employee who has already used internet communication technologies and some form of office support software such as DSS, MIS (Management Information Systems), ERP (Enterprise Resource Planning), SCM (Supply Chain Management), EIS (Executive Information Systems) CRS (Customer Relationships system) and WBS (Web-based Systems). Therefore, it concluded that all respondents were experienced in the use of technology and had undergone a change phase at some stage of their careers with the implementation of new application technologies.

A total of 300 questionnaires have been submitted and 258 have been returned, resulting in an 86 percent overall response rate. Ultimately, 214 responses remained available after reviewing missing

values, outliers, and unusable responses data, generating an effective response rate of 71.3 percent. In our study, the sample size of 214 is considered reasonable. The minimum sample size is 10 times the number of independent variables, in line with the common implementation of the "ten times thumb rule" (Sarstedt et al., 2014). Some questions were included in the questionnaire to classify the forms of information systems familiar to respondents within the sense of workplace use. Although different names have defined the information systems, by implication, all these systems are synonymous with the DSS meaning because their common function is the production of reports for decision-making.

Table 1 Demographics and descriptive statistics

	Freq.	%age
Gender		
Male	168	78.50%
Female	46	21.50%
Age (Years)		
20-29	29	13.55%
30-39	109	50.94%
40-49	56	26.17%
50-59	13	6.07%
60 & above	7	3.27%
Experience (Years)		
01 to 02	26	12.15%
03 to 05	67	31.31%
06 to 08	52	24.30%
09 to 10	31	14.48%
More than 10	38	17.76%
Education		
High School	28	13.08%
Bachelor Degree	113	52.81%
Master Degree		
P	73	34.11%
Designation		
CEO/M.D	6	2.80%
Manager	14	6.54%
Assistant Manager	33	15.42%
Senior Officer	57	26.64%
Officer	85	39.72%
Clerk	19	8.88%

Measures

For this study, measurement techniques from many previous studies have been modified ensuring no validity or reliability of the instruments used problems. For the purposes of this analysis, the existing questionnaire is adapted from many different surveys. The data collection questionnaire was divided into two major components: demographic questions and items specific to each of the models. Clarification was provided to the respondents regarding the term DSS (Decision Support System), which includes the information systems commonly recognized as ERP, MIS, EIS, or DSS and produced and analyzed for decision-making purposes. In this research, the survey instruments have been based on and revised (Lai & Ong, 2010), from the original E-business readiness of (Lai & Ong, 2010), employees to include 18 items, divided into four dimensions: job safety (04 items), a job benefit (05 items), certainty (05 items) and collaboration (04 items). Perceived ease of use, usefulness, and intention to use was calculated by updated statements (Davis, 1989) and (Venkatesh & Davis, 2000) each containing five PEOU and PU statements and three IU statements. A 5-point Likert scale was used, both of which were self-assessment measures. The questionnaire explained study goals, assured anonymity and confidentiality of the respondents as well as the nature of voluntary involvement in a declaration. At the beginning of the questionnaire, all acronyms used in the questionnaire were listed.

Results

In this analysis, SmartPLS 3.2.8 (Hair et al., 2011) and IBM SPSS Statistics 22 were used. However, data analysis was performed via SmartPLS mainly because PLS-SEM is the preferred choice over factor-based SEM for its better predictive power. Other CB-SEM methods encouraged the selection of PLS as the smart-PLS can simultaneously estimate the correlation between several independent and dependent variables and many observed or unnoticed latent variables within the measuring model. PLS is also considered a preferable solution to decision-making and management-oriented issues; it is also preferable when a forecast is being examined (Lai et al., 2013).

Measurement Model

The evaluation of the measurement model was carried out on the basis that the indicators were valid and reliable. Internal coherence reliability has been established by CR, which scholars suggested to be a more representative reliability measure compared to previous Cronbach alpha processes because for each indicator PLS does not require equal reliability (Hair et al. 2013), which is a weakness in other software. While most of the items shown in Table 2 have an external load above 0.70 in order to determine the reliability of latent variables we have preserved some weaker indicators with loads from 0.474 to 0.677 due to their contribution to the validity of the content (Hair et al., 2011).

Considering that the minimum amount of 0.40 is an appropriate value for loading items, neither of the items had to be omitted as all loadings were higher than 0.40. In addition, high composite reliability scores above 0.8 were seen in all the constructs. The alpha and rho A values of the Cronbach were both reasonably high and well above the literature benchmarks. Proposals were followed by (Hair et al. 2013) the value of the extracted average variance (AVE) was determined to assess the validity of the structure by measuring both converging and discrimination and 0.5 or higher (Hair et al. 2013). The AVE values of all the constructs were greater than 0.5.

Structural model

The authors followed a three-stage approach to test the structural model (Solano Acosta, 2018); first, for each latent variable, the R-square value was obtained. Secondly, the Q2 redundancy check was determined using the Blindfolding feature to assess the predictive significance of the consistency. Thirdly, the bootstrap function was used to assess if the path coefficients of the structural model are significant or not, and if the effects were large enough. A one-tail test was used because of the predetermined direction of interaction between all hypothesized variables in the theoretical method. The meaning coefficient of ' the determinant 'R-square is a representation of how much variance is explained by the effect size of independent variables in a target variable related to it (Hair et al., 2011). Benchmark values for R-square were suggested by researchers as 0.67 for major, 0.33 for moderately strong, and 0.19 for poor.

Table 2 Item Loadings

Constructs		BEN	COL	SEC	CER	PEU	PU	IU
Job Benefits (BEN)	B1	0.82						
	B2	0.66						
	B3	0.54						
	B4	0.65						
	B5	0.82						
Collaboration (COL)	C1		0.75					
	C2		0.81					
	C3		0.83					
	C4		0.75					
Job Security	S1			0.89				
	S2			0.47				
	S3			0.87				
	S4			0.67				
Certainty (CERT)	T1				0.647			
	T2				0.716			
	T3				0.862			
	T4				0.717			
	T5				0.623			
Perceived Ease of Use	PEU					0.78		
	PEU					0.73		
	PEU					0.88		
	PEU					0.72		
	PEU					0.76		
Perceived Usefulness (PU)	PU1						0.72	
	PU2						0.79	
	PU3						0.73	
	PU4						0.53	
	PU5						0.71	
Intention to Use (IU)	IU1							0.76
	IU2							0.93
	IU3							0.86

Table 3 Reliability and Convergent Validity

	Cronbach's Alpha	rho_A	C.R	AVE
JOB BEN	0.747	0.764	0.829	0.511
CERT	0.754	0.783	0.834	0.523
COL	0.814	0.819	0.862	0.626
IU	0.834	0.822	0.884	0.776
PEOU	0.856	0.847	0.877	0.614
PU	0.742	0.744	0.841	0.515
JOB SEC	0.735	0.757	0.845	0.567

Table 4 Discriminant Validity - Fornell-Larcker Criterion

	BEN	CERT	COL	IU	PEU	PU	SEC
JOB BEN	0.715						
CERT	0.511	0.723					
COL	0.421	0.684	0.791				
IU	0.434	0.562	0.443	0.881			
PEOU	0.449	0.633	0.737	0.561	0.783		
PU	0.473	0.628	0.623	0.683	0.558	0.718	
JOB SEC	-0.318	-0.147	-0.149	-0.139	-0.168	-0.267	0.753

*Square root of AVE values are given in diagonal in italics

The job benefits had a major positive impact on both PU (t = 2.888, p = 0.026) and PEOU (t = 4.485, p=0.001). Employee job security issues showed an insignificant (though negative) PEOU relationship (t = 0.463, p=0.121); but, as initially hypothesized, it proved to have a significant negative PU relationship (t = 5.195, p = 0.001). There was an important positive relationship between certainty and PEOU (t = 4.204, p<0.001) and PU (t = 4.421, p<0.001). There was also an important positive impact of collaboration on both PEOU (t = 13.487, p<0.001) as well as PU (t = 5.673, p<0.001). In addition, both PEOUs (t = 5.511, p<0.001 and PUs (t = 14.447, p<0.001) had a major positive impact on the intent to use.

By using a two-tailed estimation, the t-value test for significance level was estimated (Hair et al. 2013). Table 5 shows the t-values and p-values showing that there was no significant negative association between Job Security and PEOU (t=0.463, p=0.121) and PEOU did not have any significant impact on PU (t=1.765, p=0.109). With t-values far above the 1.96 threshold and p-values of less than 0.05, all other direct relationships proved to be important. Holding this in mind, all the hypotheses were endorsed based on the t-value thumb rule for interpretation, with two exceptions, namely H3 and H7.

Table 5 Results of the Structural Model

Hypotheses	Original Sample (O)	Sample Mean (M)	Std Dev. (SD)	T-Value (|O/SD|)	P Values	Results
H4= BEN -> PU	0.078	0.093	0.027	2.889	0.026	Supported
H5 = BEN -> PEOU	0.148	0.162	0.033	4.485	0.001	Supported
H11 = CERT -> PEOU	0.227	0.233	0.054	4.204	<0.001	Supported
H10 = CERT -> PU	0.252	0.249	0.057	4.421	<0.001	Supported
H9 = COL -> PEOU	0.526	0.532	0.039	13.487	<0.001	Supported
H8 = COL -> PU	0.278	0.283	0.049	5.673	<0.001	Supported
H2 = PEOU -> IU	0.237	0.24	0.043	5.512	<0.001	Supported
H3 = PEOU -> PU	0.12	0.113	0.068	1.765	0.109	Not Supported
H1 = PU -> IU	0.549	0.56	0.038	14.447	<0.001	Supported
H7 = SEC -> PEOU	-0.019	-0.025	0.041	0.463	0.121	Not Supported
H6= SEC -> PU	-0.213	-0.12	0.041	5.195	0.001	Supported

DISCUSSION

First of all, in our study, as Lee et al. (2018) argue, employees need to develop capabilities and expertise in today's competitive job market to be of job benefit to their employer, that is why employees value any learning opportunity to develop their skills more. One such opportunity is the implementation of new technologies in the workplace that benefits employees and leads to satisfaction with the effects of learning achievement and job success, resulting in a perception of usefulness leading to the decision to use DSS.

Secondly, this research indicates that Certainty's positive relationship with PEOU and PU shows that employee confidence in management generates better readiness. A prior study carried out from an employee perspective (Lai et al., 2013), also found similar results where trust had a major impact on the development of value for E-business. Whenever employees have access to a training and support infrastructure, it builds trust in management and provides clarity in their understanding of the implementation and use of DSS; employees get it well with the knowledge that the organization and management have the ability (Lai & Ong, 2010) to effectively introduce DSS. Employees who demonstrate greater trust about the capabilities of management and trust that E-business readiness would be advantageous, such employees encourage change programs, including technological change such as DSS, while at the same time creating the intention to use DSS.

Thirdly, based on the findings, collaborative initiatives build a learning and information sharing atmosphere that fosters the perception of ease of use and usefulness through shared employee experiences. It means that participatory conduct facilitates perceptions of ease and usefulness. Lai et al. (2013) also found that employee involvement in the development of E-business readiness was important. Management can therefore inspire employees both emotionally and practically through a structured approach (Spears & Barki, 2010). Education on E-business processes involving the application of DSS can be used for the collaboration and involvement of the employees. This, in turn, would improve E-business readiness and the use of technology in the alignment of business goals with employee satisfaction.

Fourth, findings have also shown that the impact on job security on PEOU for DSS is not important, largely because of the fact that in the sense of job security risks, an employee is not concerned whether or not a technology is easy to use as he is more concerned about keeping his job role played. The opinions of employees regarding job insecurity are closely related to their conduct against the use of technology (Nam & Change, 2019). For employees, it is a stressor and can induce anxiety and other negative results. Once employees see technology as a risk or feel vulnerable, the emphasis changes from technology to their survival and long-term fear of unemployment (Ruokolainen et al., 2014).

When the latest technology is disturbed by an employee will not be beneficial to him or her, the focus is on job security. It can be argued that anxiety and tension arising from contemporary workplace technology make an employee unaware Whether or not it's easy to use. The same line of reasoning also applies to the insignificant path between PEOU and PU. If it's easy to use, the employees will use it; they won't stress whether or not it's beneficial. Employee insecurity contributes to feedback-seeking employee behaviour, the usefulness of technology may not depend on whether it is simple to use or not, and an employee's technology behavior stays stable if the new techniques do not intimidate their job security (Nam & Change, 2019).

THEORETICAL AND PRACTICAL IMPLICATIONS

The current research explored the relationship between the readiness of employees and the adoption of an advanced new version of the DSS (Decision Support System), which is intrinsic to the public sector employee's task, i.e. DSS is an important way of achieving task goals. In three ways, the present study contributes. Firstly, the relationship between the two models is integrated and analyzed, i.e. TAM & EREB not previously achieved in Pakistan's public sector. Secondly, this research examines the degree of employee E-business readiness and its connection with technology adoption. Besides, it studies the resistance of employees to DSS in the field of job security. Thirdly, the above results suggest that three of the attributes of the EREB affect positively the perceived usefulness and the perceived ease of use for the use of DSS. This research will, in addition to the perspective of organizational change in Pakistan's public sector, add to the knowledge base on the employee e-business and technology implementation model.

CONCLUSIONS

In short, this research not only confirms the results from the past for the core constructions of the TAM model. PEOU and PU; it presents four EREB constructs as PEOU and PU predictors. It researched PU and PEOU exclusively from an employee's point of view as a technology user. The findings indicate that perceived technical advantages have a positive influence on PEOU and PU. The predicted advantages of using DSS establish a positive intention to use DSS through perceived use. Certainty and coordination between employees in the capacity of management to execute DSS efficiently can lead to a positive view of the PEOU and PU and a positive intention to use DSS. Management plays a key role in generating optimistic views of the EREB aspects, i.e. Job benefits, certainty, job security, and collaboration. This can be accomplished by instilling regular training, reviews, incentives, and a secure job environment. In addition, employee security concerns are inversely linked to DSS PEOU and PU. Both hypotheses were not supported, i.e. of Job security with PEOU and PEOU with PU both show that if an employee feels anxious to lose power and authority in

his or her job position or even fears unemployment led to the advent of new technology.

LIMITATIONS AND FUTURE RESEARCH

This research is limited as well. The study adopted a cross-sectional study design first of all; while the standard practice is popular in similar research, scientists regard it as limited. Secondly, this paper examined the impact of the employee's job benefits, E-business, certainty, job security, and collaboration as a TAM history. These are not the only factors evaluating employee readiness for the business technologies of the organization; one such illustration is the Technology Readiness Index. Thirdly, the sample of this study is restricted to only one state government employee province; it does not include the other Pakistani provinces. Given the above limitations, we recommend potential research by using a broader variety of businesses with a wide range of fields including all other private and private-public partnerships including other digital advertisements including services companies. This study sample is only one province in Pakistan and can be expanded to other provinces. Also, future studies may be conducted to determine the moderating impact of TTF on the relationship between the EREB and TAM dimensions.

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