Drivers of Human Resource Information System (HRIS) Usage: Evidence from Ceylon Electricity Board (CEB), Sri Lanka

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Abstract

This study examines the determinants of HRIS usage in Sri Lanka with special reference to Ceylon Electricity Board. Based on extant literature, five independent variables namely Perceived Ease of Use, Perceived Usefulness, IT Expertise, Subjective Norm, Top Management Support were identified. Survey questionnaires were distributed among randomly selected employees of Ceylon Electricity Board in Southern Province and 140 completed responses were gathered. Multiple Regression analysis was run to test the impact of five independent variables on the usage of HRIS in CEB . According to the research findings top management support is the most significant factor affecting usage of HRIS application. Moreover, it was also identified that perceived usefulness, IT expertise and subjective norms are significant factors of HRIS usage. These findings would be beneficial to all employees, policymakers and public sector organizations to improve the level of HRIS usage.

Keywords: *HRIS Usage, perceived ease of use, perceived usefulness, IT expertise, subjective norms and top management support*

1. Introduction

Organizations have been forced in the competitive business environments to think promptly to innovate and excel for their existence (Tidd, & Bessant, 2018). The mode people communicate (Blau, & Hameiri, 2017), live, (Quamar, Schmeler, Collins, & Schein 2019), work (Cascio, & Montealegre, 2016) and also the way a business is conducted (Elia, Margherita, & Passiante, 2020) have been reshaped by the technology. Information systems

have made a profound effect on procedures and performance of human resource management (HRM) (Galanaki, Lazazzara, & Parry, 2019). Human Resource information systems (HRIS) are implemented globally and locally to minimize the administrative burden for human resource (HR) managers and to deliver better services to firm's stakeholders (Bondarouk, Parry, & Furtmueller 2017). As the whole world is in globalized arena, HRIS systems make a robust support for sustenance of a well performing organization.

HRIS supports HR departments in making the HRM process faster, easier, cheaper, and more effective as well as benefits the organizational success (Ruel at al. 2004). If an HRIS system is adopted in an organization accurately and more effectively, all the above-mentioned benefits can be achieved (Bonarouk & Ruel, 2009). However, while implementing and adopting HRIS, almost every organization faces several challenges such as employee resistance to use, technological incompatability and incurring cot on installation and training employees (Kashive, 2011). At present, most of the organizations use HRIS applications for their HR activities in achieving organization's requirements.

Almost all HR processes can be done by using HRIS on a daily basis which can benefit an organization in several ways (Ruel et al., 2004). For instance, as an implication of HRIS, the automation of tasks and process reduce the use of resources (financial, material and human). Reduction of HR costs; less usage of paper as well as to assist managers in HR process are some of the examples of reduction of resource usages. According to Hendrickson (2003), HRIS benefits an organization in its HR processes by increasing the efficiency, effectiveness and providing HR self-services. (i.e. computer-based training, online recruitment). In addition, HRIS produces data as a by- product and confronts web applications which can transfer some functions to employees/mangers. Also HRIS can be self-performed as a part of HR data management (Ruel, & Kaap, 2012). Thus, employees can enter and update data by themselves which result more accuracy in data and further, it saves time and costs as well.

Numerous studies have discussed HRIS technology and identified the factors that influence the adoption of HRIS application (Ball, 2000; Teo, Lim, & Fedric 2007; Hussain, Wallace, & Cornelius, 2007). Quaosar (2017) found that organizational characteristics such as size of the organization and HRIS expertise influence on determining the extent of HRIS adoption. Yusof and Ramayah (2011) found that perceived ease of use, perceived usefulness, trust, HR roles, and attitudes were the key determinants of successful HRIS usage. Moreover, Teo, Lim, & Fedric (2007) also came up with findings of departmental relative advantage, compatibility, top management support, size of the organization and HRIS expertise as important variables, discriminating adopters and non-adopters of HRIS.

As discussed above, numerous studies discussed the determinants of HRIS adoption. Further,

most of the studies have been done in developed countries to identify the factors that influence the adoption of HRIS systems in recent years. Interest for HRIS has been growing in developed countries and a certain number of HRIS researches have been undertaken by scholars in US and Europeon context (Bondarouk, Ruël, & Roeleveld, 2019). Due to the scarcity of the studies done in developing context, the researcher was able to explore this phenomenon in a developing country. According to the findings of developed countries it is observed that it cannot be generalized in a developing country like Sri Lanka. Considering the differences of economic, social, technological and cultural dimensions between developed and developing contexts (Ashraf, Thongpapanl, & Auh, 2014), it is important to explore the determinants of HRIS adoption in Sri Lankan context. Sri Lanka is different from developed countries in terms of their culture in general and business culture in particular (Ranasinghe, 2018; Azmat, & Zutshi, 2012). Numerous studies discuss HRIS technology, consequences of HRIS, importance of the best HR practices and determinants of HRIS usage in Sri Lanka (Wijethilaka, 2016; Sulochana and Sajeewanie, 2015; Mujeeb, 2012; Wickramarathna ,2011). Most of the studies conducted in Sri Lanka also have described the determinants of HRIS usage in private sector organizations (Wickremasinghe, 2010) and a few researches were carried out in the public sector organizations. Further, findings of private sector cannot be applied to public sector due to differences prevailing in terms of attitudes, culture, technology, awareness changes among the employees in private sector and the public sector organizations (Campbell, McDonald, & Sethibe, 2010). Thus, the purpose of this study is to identify the factors influencing HRIS usage in public sector organizations.

1.1. Research Problem

Ceylon Electricity Board (CEB) is a single island wide institution which is responsible for generation of electricity and distribution island wide and commands the attention of the parliament and the general public. Sri Lankan economy will continue to maintain its growth momentum through new infrastructure set up to cater the country's increasing electricity demand. The total number of consumers stood about 6 million by the end of the year 2018 (Management Information Report of CEB, 2018). CEB consists of around 20,000 employees in many categories such as executive officers, middle level technical officers, employees of other technical services, clerical and allied services etc. (Management Information Report of CEB, 2018).

Although it is such an important institution, the required information of employees has to be collected from particular divisions in order to create the final report. Different divisions maintain basic employee information in different formats according to their necessity and it is necessary to refer the individual personnel files manually to collect information. As a solution for this problem CEB took up the decision to change the manual system in to a

computerized system. In year 2009, an Human Resources Information System was introduced costing a huge amount of package cost, which was more than Rs. 15 million. With the annual ardware and software maintenance cost, the total cost was more than Rs.400 000. The annual renewal fee of the Oracle Database was Rs.2 million (Project Implementation Proposal of HRIS in CEB, 2009).

The tender was awarded to seller in October 2009 and according to the project plan,completion of the implementation should have been over by December 2010. This HRIS package has 13 Modules namely, Employee Information Manager, Employee Life Cycle, Training & Development, Performance Evaluation, Absence Management, Transfers, Manpower planning, Confirmations, Disciplinary Management, Benefit Management, Promotions, Service Extensions, Pay Roll Management, which cover almost all HR activities at CEB. This package had been very successful at a number of institutions including few large government institutions which are very similar to CEB.

HRIS which was developed for CEB and installed in each unit was in a state of underutilization. Even though there are thirteen modules in an HRIS system, CEB uses only two modules. These two modules are also not being used efficiently. However, most of employees still use the manual system to apply, leave and evaluate the performance appraisals. Therefore, it is vital to find the reason for not using an HRIS system in CEB efficiently and effectively.

Table 1: No. of users of HRIS in Ceylon Electricity Board - Southern Province

Year	No. of Employees	No. of users of HRIS		No. of users of HRIS as a percentage (%)	
		Leave Module	Performance Appraisal Module	Leave Module	Performance Appraisal Module
2015	1850	518	233	28	13
2016	1864	560	254	30	14
2017	1879	658	351	35	19
2018	1886	792	390	42	21
2019	1914	842	447	44	23

Source: Management Information Reports of Southern Province in CEB (2015-2019)

As shown in Table 1, HRIS usage among employees of Ceylon Electricity Board in Southern Province is below the expectations of management. At present, about 44% of employees use leave module of HRIS application and 23% of employees use Performance appraisal module in Southern Province. According to the table 2, growth rate of HRIS usage among the

employees in Southern Province is insignificant. Even though HRIS application provides significant benefits to the employees, the usage of HRIS application is almost insignificant. Ceylon Electricity Board has allocated a large budget towards introducing HRIS application to their employees. However, the level of HRIS usage still remains at a low level.

Table 2: Growth Rate of HRIS usage as a percentage (%) in Ceylon Electricity Board - Southern Province

Year	Leave Module	Performance Appraisal Module
2016	2	1
2017	5	5
2018	7	2
2019	2	3

Source: Management Information Reports of Southern Province in CEB, 2015-2019

As evidenced in table 1 and 2, huge amount of investment made for the implementation of HRIS system is under-utilized. Further, underutilization of HRIS is unable to provide timely and diverse information to the management of the organization, based on which it is impossible to make strategic decisions related to human capital and achieve target goals. HRIS supports HR department in making the HRM process faster, easier, cheaper, and more effective, as well as it benefits the organization to greater success (Ruel et al, 2004, Stromier 2007). As shown in Table 1, if the HRIS system is not adopted by the employees in the organization accurately and more effectively all these benefits cannot be achieved perfectly. Thus, it is important to know factors that determine HRIS usage particularly among the employees in Ceylon Electricity Board. A better understanding of these influential factors that are associated with adoption of HRIS applications might be extremely useful for top management. Thus, the research question addressed in the present study is *what factors influence towards using HRIS among employees of Ceylon Electricity Board in Southern Province.*

2. Litereture Review

2.1. Definitions of HRIS

Various authors have published articles related to HRIS and information technology, it is visible that there are interchangeable terms used to refer HRIS. For instance, Electronic Human Resource Management (e-hrm) (Bondarouk & Ruël, 2009), HR intranet, web-based HR (Ruël et al., 2004), computer based human resource management systems (Strohmeier,

2007), virtual HR (Lepak & Snell 1998), and HR portals (Marler, Fisher, & Ke, 2009).

Several authors have argued about internet or web-based channels as a requieremnt of HRIS (Lengnick-Hall and Morritz, 2009). While some authors preferred to use the term e-HRM over HRIS, many authors agreed that a line cannot be drawn between IT-based information system for HR and internet-based HR applications as these two basically do a similar jobs (Ruel et al., 2012). Reviewing the extant literature, Table 3 summarises the various definitions proposed by several scholors. Considering the similarities and dissimilarities of these definitions present study depicts the definition suggested by Stormier (2007) where HRIS is defined as the use of computer systems, interactive electronic media and telecommunications network to perform HR functions. This definition was selected as it covers the essential elements of HRIS and many previous empirical studies followed this definition in operationalizing HRIS (Heikkilä, 2013).

Table 3: Evolution of HRIS definition

Reference	HRIS Definition
Kavanagh, & Thite (2009).	System used to acquire, store, manipulate, analyse, retrieve, and distribute information regarding an organization's human resources. An HRIS is not simply computer hardware and associated HR-related software. Although an HRIS includes hardware and software, it also includes people, forms, policies and procedures, and data.
Kovach et al., (2002)	Human Resource Information System (HRIS) is a concept concerning the utilization of Information Technology (IT) development and characteristics for effective managing of the Human Resource Management (HRM) functions and applications. HRIS is considered as a systematic procedure for collecting, storing, maintaining, and recovering data required by the organizations about their human resources, personnel activities and organizational characteristics
Hendrickson, (2003)	HRIS is defined as an "integrated system used to gather, store and analyse information regarding an organization's human resources consisting of /comprising databases, computer applications, hardware and software necessary to collect, record, store, manage, deliver, present and manipulate data for human resources function"
Ruel et al. (2004)	A way of implementing HR strategies, policies, and practices in organizations through a conscious and directed support and/or with the full use of web-technology-based channels.
Strohmeier,	HRIS refers to the use of computer systems, interactive electronic

Reference	HRIS Definition
(2007)	media and telecommunications network to fulfil HR functions.
Nenwani & Raj (2013)	A web-based solution that takes advantage of the latest web application technology to deliver an online real-time human resource management solution.

2.2. HRIS Usage

System usage is a successful criterion to measure the frequency of the use of HIRS which has two levels: User level and organization level (Burton-Jones and Straub 2006). Further, Burton-Jones and Straub (2006) contend that at users' level, system usage is a criterion to observe daily operations of the functions in relation to the behaviours of the users. At organization level, system usage is a successful criterion to measure institutionalization and it considers consolidation of behaviours of the users and perspective of the management.

Ngai and Wat (2006) have stated that HRIS usage is decided by the HR strategy of an organization and further described as a matching process between different strategies and different system usages. Ball (2000) revealed that more people are employed in an organization, more likely the HR function holds the information of both on individuals and the organization electronically . Similarly, more people the organization recruit, more likely it tends to use HRIS in information analysis.

As described by Bondarouk, Parry and Furtmueller, (2017) the three major groups that use HRIS include: HR professionals, managers in functional areas, and employees. While HR professionals are relying on HRIS in fulfilling job functions, managers rely on HRIS's capabilities to provide superior data collection and an analysis, especially for performance appraisal and performance management. Employees are the end users of many HRIS applications and of job-related issues/ complexities have augmented the awareness of HRIS functionality among employees.

2.3. Determinants/Drivers of HRIS Adoption

In order to identify the determinants of HRIS usage, an extensive literature review was carried covering both global and local (Sri Lankan) contextual studies. Literature review on determinants of HRIS adoption evidenced that HRIS adoption is being discussed and looked over the span of so many decades until the recent years.

By reviewing previous literature, it was proven that, there are some inconsistencies among

the studies withregard to theories applied, methodology used, analytical tools followed and key findings. Based on the empirical findings and theories of IT adoption which are discussed in next section, indicates that the following constructs have been identified as factors of HRIS adoption for the current study: Perceived Ease of Use, Perceived Usefulness, IT Expertise, Subjective Norm, top Management Support.

2.4. Theories of Technology Adoption

Developing a research model supported by a strong theoretical underpinning is necessary to address the research question of the study as, what are the determinations of HRIS adoption? Thus, in order to identify the most appropriate theory to develop a research model and formulate the hypotheses, this study has reviewed the extant literature on organizational HRIS adoption. As HRIS is treated as technical innovation, both IT adoption/acceptance and technological innovation adoption/diffusion are literary reviewed.

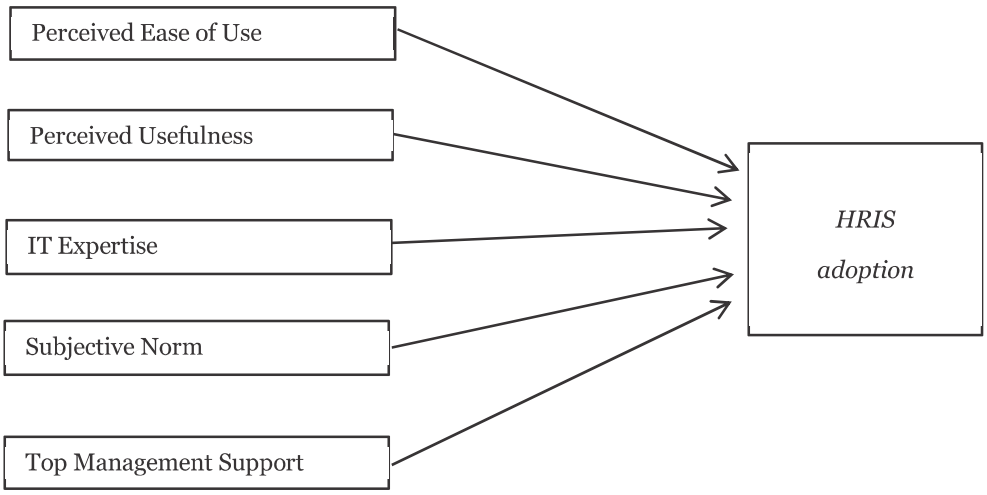

Figure 1: Research Model

Source: Developed by the researcher based on literature

Currently, researches on /technology/IT/innovation adoption cover a lot of business fields and industries at both organizational and individual levels. A variety of theoretical frameworks have been applied such as The theory of reasoned action (TRA) (Fishbein & Ajzen, 1975), Theory of Planned Behaviour (TPB) (Ajzen, 1991), Social Cognitive Theory (Bandura, 1986), Technology Acceptance Model (TAM) (Davis, 1989), Perceived Characteristics of Innovations (Moore & Benbasat, 1991), Decomposed TPB (Taylor & Todd,

1995), and Unified Theory of Acceptance and Use of Technology (Venkatesh, Morris, Davis, & Davis, 2003). These theories suggest that the individuals' perceptions (attitude and beliefs) regarding use of IT innovations affect their intention to use (behavioural intention), which in turn leads to actual usage (behaviour). However, these theories vary from each other with respect to the key constructs included in the respective theories. As the constructs included in the theories of TPB and TAM are appropriate to explain HRIS adoption, the present study developed the research model shown in Figure 1 by integrating the two theories namely Theory of Planned Behaviour (TPB) and Technology Acceptance Model.

2.5. Hypothesis

2.5.1. Perceived Ease of Use

Perceived Ease of Use (PEOU) refers to the degree to which a person believes that using a particular system would be free from physical and mental effort (Davis, 1989). TAM suggests that when potential adopters perceive that ease of use of the innovation is high, they are more likely to adopt the innovation.

Prior to making innovation adoption decision, potential adopters strive to make a trade-off between benefits of the innovation and complexities of using it (Premkumar & Potter, 1995). Due to the complexity of technology, greater uncertainty is created among potential adopters, particularly in making innovation adoption decisions (Lin, 2011). Since HRIS applications are combined with IT, there is a possibility of higher levels of uncertainty and complexity among potential adopters.

It is necessary to possess adequate knowledge and skills to use or operate IT-related innovations. Such innovations require advanced knowledge and experience of IT to operate (Dunivan, 1991), in order to work effectively with some applications of HRIS employees, who should possess an understanding of IT. With some basic HRIS modules such as attendance and leave systems, employees are required to periodically generate, update, and retrieve their profiles (Grant & Newell, 2013). Moreover, with performance management modules, managers are supposed to generate and access performance data about employees (Grant & Newell, 2013). To deal with these tasks and responsibilities employees and managers need to be equipped with basic to advanced levels of knowledge and competencies of IT. Since some non-technical managers and employees have difficulties in understanding and using such IT-related HRIS innovations, they take a relatively long time to adopt such innovative systems.

When potential adopters believe that it is rather complicated to learn, use, and operate HRIS applications, this creates negative attitudes towards HRIS, resulting a discpuragement in its

adoption (Normalini, Ramayah, & Kurnia, 2012). On the other hand, when employees perceive that HRIS is easy to understand, learn, and use, they form a positive attitude. These observations lead to the hypothesis 1.

H 1: Perceived ease of use is positively related to HRIS usage

2.5.2. Perceived Usefulness

Perceived usefulness (PU) refers to the degree to which a person believes that using a particular system could enhance his or her job performance (Davis, 1989). This definition suggests that potential adopters of an innovation (HRIS) are involved in evaluating favourable and unfavourable consequences of the innovation (HRIS) against their use of traditional products or system (manual HRM system). TAM suggests that when an adopters' perception on usefulness of technology (HRIS) is higher, individuals are more likely to adopt (Davis, 1989).

Individuals intend to adopt innovations in order to overcome performance gaps and deficiencies, or to exploit new opportunities (Premkumar & Potter, 1995). As HRIS is considered an innovation, HRIS applications should be able to address the performance-related issues that experience by the employees when dealing with manual system. Since HRIS applications are related to IT, most of the positive and negative outcomes are associated with IT adoption applicable to HRIS adoption.

More specifically, some HRIS modules such as leave and performance appraisal enable organizations to enhance the effectiveness and efficiency of an HRM department through automating administrative tasks (Wen, 2013), reducing paperwork (Ruël et al., 2004), and simplifying work processes (Francis et al., 2014). Moreover, it facilitates to connect different parts of the organization (Strohmeier & Kabst, 2014); strengthen the collaboration and communication among HR personnel, line managers, and employees (Bissola & Imperatori, 2014; Ensher et al., 2002); and enhance remote access to HR information (Parry & Tyson, 2011).In general, HRIS adoption helps to reduce environmental, social, and economical waste. Environmental waste can be reduced through the minimized use of papers, files, and staples, mean while social waste is reduced by minimizing the process time involved in searching for documents and making decisions (Yusoff et al., 2015). As HRIS implementation has the ability to minimize the cost of preparing documents and minimizing wages for overtime work, organizations can also reduce economical waste (Yusoff et al., 2015).

On the contrary, several negative consequences of HRIS adoption have been identified. These include invading personal privacy (Wen, 2013); information overload; segmentation of HR

roles (Hailey et al., 2005); distancing of the function from employees and managers; ethical consequences of reduction in face-to-face relationships between HR specialists, line managers, and employees (Francis et al., 2014); and resistance to change.

As HRIS adoption is associated with numerous positive outcomes with respect to individual employees, HR departments, and organizations as a whole, employees who hold positive impressions of e-HRM are more likely to have positive intentions to implement e-HRM systems with their organizations. On the other hand, employees with negative perception will not be willing to adopt HRIS. Based on this reasoning, the hypothesis 2 is proposed.

H 2: Perceived usefulness is positively related to HRIS usage

2.5.3. IT Expertise

IT expertise is identified as employees' knowledge and technical competence regarding IT (Thong, 1999). IT expertise has received considerable attention in the technological innovation adoption literature, and previous studies have found that IT expertise is positively related to technological innovation adoption (Jeyaraj et al., 2006). When technological innovation is matched with organizational skills and capabilities, individuals quickly embrace the innovation (Thong, 1999). In contrast, lack of required technological knowledge, skills, and capabilities discourage potential adopters from implementing new technology as they tend to postpone adoption decisions until they are able to acquire adequate prerequisites (Esen & Özbağ, 2014).

HR personnel, line managers, and employees are the three main end-users of HRIS applications (Ruël et al., 2004). Thus, they are required to possess at least basic IT knowledge and competencies to gain maximum potential from HRIS applications.

With HRIS, employees are asked to navigate information and update their personal profiles electronically (Ngai, Law, Chan, & Wat, 2008). In addition, they need to communicate electronically with internal and external parties (Hailey et al., 2005). Moreover, performance management module allows managers and employees to conduct performance appraisal electronically (Payne et al., 2009), while training module enable them to search for, register for, and undertake appropriate training programs (Panayotopoulou et al., 2007; Wen, 2013). There is no doubt that effective use of these applications enable employees to require a certain level of IT expertise.

TPB suggests that when individuals perceive that there are internal or external barriers (perceive behavioural control) that discourage them from executing a target behaviour, they

are less likely to perform that behaviour (HRIS adoption) (Ajzen, 1991). When it comes to HRIS adoption (target behaviour), perceived assessment of individual resources, such as IT expertise of employees, can be considered one of the key elements of perceived behavioural control. This means that when organizations do not have the IT expertise required it can be regarded as perceived behavioural control that discourages the target behaviour (actual HRIS adoption). Thus, the present study hypothesizes that if potential adopters perceive that they are equipped with a high level of IT expertise; they are more likely to adopt HRIS. In contrast, a low level of HRIS adoption is exhibited by potential adopters when they perceive that organizational IT expertise is not up to a standard level. This rationalization leads to the hypotheses 3.

H 3: IT Expertise is positively related to HRIS usage

2.5.4. Subjective Norm

Subjective norm" refers to the perceptions of people who are important to individuals think he or she should or should not perform a certain behavior (Venkatesh et al., 2003).TPB suggests that when an important social reference groups which are attached to an individual's network, encourage performing a certain behaviour. Individuals are more likely to form a positive behavioural intention and behave as expected (Ajzen, 1991). Perceptions of colleagues are an important source of IT and innovation adoption decisions in organizational settings (Taylor & Todd, 1995).

HR personnel (colleagues) employed in HR departments and employees getting their services are the immediate beneficiaries or victimized group of HRIS implementation (Ruel *et al* , 2004). Thus, their perceptions and suggestions regarding HRIS adoption are of paramount importance. HRIS primarily enable HR personnel to gather, store, and analyse workforce data and to increase the flow of HR information (Grant & Newell, 2013). In addition, one of the objectives of HRIS adoption is automation and devolution of many routine administrative HR functions, that were traditionally accomplished by HR departments, to the hands of employees and line managers (Bondarouk et al., 2009). As a result HR personnel are free from administrative HR tasks, and can utilize the resulting spare time on a strategic level HRM activities that will affect profitability—for instance, staff development, talent management, targeted training programs, and change management (Ruël et al., 2004). In other words, their role in the organization will shift from administrator to business partner, where they can play an increasingly more meaningful and strategic part in the organization (Hussain et al., 2007). As these changes in their role lead to an enhanced recognition of their position in the organization, it is likely that the majority of HR personnel would be willing to

implement HRIS.

However, human behaviour is not identical across individuals, as people are different in terms of their abilities, personality, perceptions, and work-related attitudes (Robbins, 2003). Therefore, it is common in an organizational setting for some employees to be unwilling to implement HRIS as they wish to maintain status-quo. As HRIS implementation gives rise to changes in the role of employees, their expected tasks, duties, and responsibilities will change in parallel (Grant & Newell, 2013). Under these circumstances, employees who are not capable of dealing with such roles may protest against HRIS implementation. Based on above rationalization, it can be claimed that when colleagues who are important to potential adopters believe that it is wise to implement HRIS it leads to positive intentions towards adopting HRIS vice versa. This rationalization leads to the hypothesis 4.

H 4: Subjective norm is positively related to HRIS usage

2.5.5. Top Management Support

Top management support has been identified as a key organizational-level variable in both IT and innovation adoption literature (Jeyaraj et al., 2006). If top management is aware of the IT-related innovation and its benefits, they will be willing to implement it and encourage others to use it (Premkumar & Roberts, 1999). Premkumar and Potter (1995) contended that active involvement and support of top management establish a powerful strategic vision and direction to organizational stakeholders, compared to providing passive support by means of highlighting certain signals about the importance of innovations. Such an active involvement and support are characterized by creating a supportive climate and allocating adequate resources for innovation adoption (Teo et al., 2007).

Similarly, most of IT-related innovations, HRIS applications are expensive, and organizations have to wait for a considerable time to experience its benefits. However, if top management believes that HRIS adoption is essential to ensure the quality of HR service delivery and improve the efficiency and effectiveness of HR functions, there is a high possibility that they will take the necessary actions to establish a supportive culture that encourages its adoption. HRIS adoption changes the organizational structure, and the way people work, communicate, and interact within and across the organization (Lin, 2011), which means that a high degree of employee resistance could occur. Under these circumstances, to obtain the maximum benefits from HRIS implementation, top managers are responsible for designing and implementing appropriate change-management strategies before and after HRIS adoption. This demonstrates the importance of top management support throughout HRIS

implementation projects.

TPB suggests that when individuals perceive several barriers (perceived behavioural control) they are less likely to perform the target behaviour (Ajzen, 1991). In the context of HRIS adoption (target behaviour), perceived top management support can be considered as one of the key elements of perceived behavioural control. This means that when organizations do not receive substantial top management support for implementing the HRIS, it can be regarded as perceived behavioural control that discourages the target behaviour (actual HRIS adoption). Based on this, the present study claims that when potential adopters experience a high level of top management support they are more likely to adopt HRIS. On the other hand, a low level of HRIS adoption can be exhibited when potential adopters receive the low level of top management support with respect to HRIS adoption endeavours. Hence, hypotheses 5 is postulated.

H 5: Perceived Top management support is positively related to HRIS Usage.

3. Methods

The aim of this study is to identify the significant factors influencing on HRIS adoption among employees in CEB particularly deployed in southern province. The descriptive research design was used as the purpose of the present study is to describe the phenomenon of the antecedents of HRIS usage (Zikmund et al, 2010). The research question of the present study is to identify the key factors explaining the HRIS adoption behaviour of the selected respondents of CEB. Thereby, the respondents of the survey research were the employees working in the CEB. Thus, the unit of analysis for the present study is "individual".

Most of the previous studies on antecedents of HRIS adoption have been conducted in the context of developed economy. Compared to the developed economy context, relatively few studies were undertaken by the countries in the developing and emerging economies as they are lag lagging far behind in adopting HRIS. Further it is challenging to generalize findings of the studies in the developed context to the developing and emerging context as these contexts are varying in terms of the technological infrastructures, national and organizational culture, individual ICT awareness and expertise etc. Thus, with the purpose of filling this gap in the extant literature, Sri Lanka has been selected as the research context in the present study. Further, the public sector is selected for the current study as no previous empirical studies were carried out in exploring HRIS adoption,behaviour pertaining to the public sector and it was assumed that relatively,public sector is the most difficult segment to adopt new technology.

CEB was selected as it is a large scale public sector organization, where at present there are more than 20,000 employees working in different categories. Further, in year 2009, CEB introduced the HRIS incurring extensive initial cost and annually they spend significant cost particularly for marinating of hardware and software. However, the usage of HRIS applications is in a state of underutilization. Southern province employees were focused as they are away from metropolitan area and HRIS usage rate of the employees in this region is reported a relatively low rate.

The theoretical population of the study includes all employees of CEB in Sri Lanka,as it is challenging to reach the theoretical population the employees in southern province was taken into account as the study population. There are seven areas pertaining to the Southern Province, namely, Galle, Matara, Tangalle, Hambantota, Akuressa, Ambalangoda and Baddegama. 200 respondents were selected for the sample using simple random sampling while employee payroll system registering was taken as the sampling frame. First, employee list of the aforementioned seven areas were taken from the payroll system. Secondly, members of the population were put in an order based on each area. Consequently, a starting point was selected at random, and every 10th member was selected to be in the sample.

Survey questionnaire tool was selected due to cost effectiveness, possibility of assuring anonymity of the respondent, absence of any interviewer bias, and ability to use standardized, structured and undisguised questions (Hair, Money, Samouel, & Page, 2007). The questionnaire was designed with several sections, (Churchill, & Iacobucci, 2002) where the first section dealt with the demographic factors of the respondents, section two comprised of all the questions associated with independent variables (drivers of HRIS usage) and the third section of the questionnaire included questions pertain to the dependent variable of HRIS usage.

Two techniques were adopted in administering the survey questionnaire in this study: e-mailing and personal contacting. In first method hard copies of the questionnaires were personally delivered to the respondents and collected back. Follow-up telephone calls were given to the responding unit heads to increase the response rate. In the second method a web-based questionnaire was sent to the respondents though an email message as a web link. Two reminding e-mails were sent to increase the response rate of the respondents. Ultimately 140 questionnaires were preceded to the data analysis. Variables were operationalized based on the extant literature and used empirically validated scales with slight modification so as to compatible with the context. Both dependent and independent variables of the study were measured using five point Likert scale where 1 = strongly disagree and 5 = strongly agree.

4. Results

Demographic profile of the respondents was first analysed and results are shown in Table 4. The sample consists of 83 percent (n = 116) executives while remaining 17 percent (n = 24) belongs to executive category. Majority of the respondents (49%) belongs to age category of 35 to 44 years. Least number of respondents (1%) is reported with 18 to 24 years' age group. Almost half of the respondents (48%) possess the Advanced levels education qualification. Most importantly it reveals that more than half (54%) of the respondents having more than 7 years of experience with computer usage.

Table 4: Demographic profile of the sample

Variable	Operationalization	Frequency	Percentage (%)
Position	Executive	24	17%
	Non-Executive	116	83%
Age	18-24	1	1%
	25-34	31	22%
	35-44	68	49%
	45-54	30	21%
	55 Above	10	7%
Educational level	Advance Level	67	48%
	Bachelor's Degree	28	20%
	Master's Degree	18	13%
	Doctoral Degree	1	1%
	Others	26	19%
Experience of Computer Usage	<1 Year	3	2%
	1 - 3 Years	9	6%
	3 - 5 Years	21	15%
	5 - 7 years	32	23%
	> 7 Years	75	54%

Source: Survey Data, 2019

In order to establish the reliability of the data, the Cronbach Alpha values were tested and results shown in Table 5. All the variables met the threshold values of 0.6 confirming the reliability of the measures (Zikmund et al, 2003). Consequently, correlations among independent variable were tested using person correlation and results are shown in Table 6. As shown in correlation matrix linearity among variables was ensured and multi-collinearity among independent variables was not observed as all correlation reported less that 0.7 (Zikmund, 2010).

Table 5: Reliability of the Measures

Variables	Cronbach's Alpha	Number of Items
Perceived Ease of use	0.937	7
Perceived Usefulness	0.896	6
IT Expertise	0.807	8
Subjective Norm	0.876	4
Top Management Support	0.818	4

Source: Survey Data, 2019

Table 6: Correlations, Means and standard Deviations

Variables	Mean	Std. Deviation	1	2	3	4	5
1.Perceived Ease of use	3.318	0.647					
2.Perceived Usefulness	3.209	0.627	0.631				
3.IT Expertise	3.298	0.448	0.647	0.666			
4.Subjective Norm	3.267	0.594	0.666	0.615	0.667		
5.Top Management Support	3.239	0.640	0.590	0.536	0.599	0.686	

Source: Survey Data, 2019

4.1. Hypotheses Testing

Hypotheses testing are based on regression analysis using SPSS version 22. H1-H2 test the causal relationships demonstrated in TAM while H3-H5 tests the causal relationship exhibited in TPB. Table 7 provides the results of hypothesis testing with R2, standard coefficient, and significance. The Adjusted R Square value amounts to 0.707 (Table 7). Thus, the regression model explains 70% of the variance in the HRIS adoption among respondents with the five independent variables specified the research model. As indicated in the ANOVA table the regression model is statistically significant (F = 68.209, P= 0.000).

In sum, this study confirms the results of TPB while partially supporting the TAM. Supporting H2, perceived usefulness (PU) had significant effects on behavioural intention to use (β=.170 p = 0.041). IT expertise had a significant positive impact on HRIS adoption, supporting H3 (β=.162, p = 0.037). Subjective norm had a significant positive impact on HRIS adoption supporting H4 (β = 0.191, p = 0.034). Top management support was found to

have a significant effect on HRIS Adoption, supporting H5 (β = .270, p = 0.001). Perceived ease of use were not found to have a significant effect on user's HRIS Adoption, not supporting H1.

Table 7: Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Ease of use	.146	.085	.166	1.716	.089
Usefulness	.153	.076	.170	2.004	.041
IT Expertise	.193	.094	.162	2.053	.037
Subjective Norm	.180	.086	.191	2.089	.034
Top Management Support	.277	.079	.270	3.491	.001
Adjusted R2	0.707				
ANOVA	F = 68.209, P= 0.000				

Source: Survey Data, 2019

5. Discussion

The results indicated that HRIS adoption was largely influenced by perceived top management support, subjective norms and IT expertise. Top management support positively influenced on HRIS adoption. The relationship between top management support and HRIS adoption has been documented and the results confirmed the importance of the link between them. This findings indicate that when top management creates a conducive environment by allocation adequate resources and other initiative, such as training and awareness workshops it leads to increase the degree of HRIS adoption among employees. This is consistent with the findings of the Teo et al (2007).

The findings also suggested that subjective norm has a significant positive effect on HRIS adoption. This implies that if employees feel that when others who influence their decisions (colleagues, supervisors) are recommending them to use, they are confident in using HRIS. This also confirms the similar results of previous studies (Compeau and Higgins, 1995). Moreover consistent with previous findings this study found that IT expertise has a significant effect on HRIS adoption. This findings means that when employees are confident on their level of IT expertise they are more likely to use HRIS. This attempt of adopting TPB into the investigation of employees, HRIS adoption decision was successfully demonstrated

in this study. The importance of subjective norm and perceived behavioural control (IT expertise and top management support) in predicting employees HRIS adoption behaviour confirms the validity of TPB model.

This study also found empirical support for the relationship between perceived usefulness and HRIS adoption. This means that employees are willing to use HRIS as they are aware of the usefulness of adopting HRIS. This confirms the similar results of the previous studies (Teo et al, 2007, Normalini et al, 2012). However, we did not find statistically significant relationship for the ease of use and HRIS adoption. This result is not consistent with theory proposed in TAM. This may imply that employees' feelings about HRIS usefulness will not be an influencial factor in comparison to the other factors in determining HRIS adoption. The attempt of applying TAM to explain the HRIS adoption behaviour is not successfully exhibited in the recent study. Possible reasons for these inconsistent findings would be some contextual factors such as the organizational culture of the CEB.

5.1. Implications

The present study has many important implications for HR practitioners and top managers in Ceylon Electricity Board. The findings of this study will help management to implement the required changes within their organizations for the purpose(s) of either to improve to the level of improvements of HRIS applications or to encourage employees to adopt the HRIS application. The study found that perceived usefulness as a significant factor in explaining HRIS Adoption behaviour of the employees. Thus, management should design appropriate interventions to make employees aware about benefits of the HRIS. Further present study found that top management support is the most influential factor in determining employees HRIS adoption. This has clear implications for managers as it is their responsibility to create conducive atmosphere particularly to encourage employees to use HRIS.

The present study also found subjective norm of the employees is a significant driver in predicting HRIS adoption behaviour. The implication of this research is apparent as it is necessary for managers to think about designing and implementing motivational program to stimulate employees' network including superiors and colleagues. Moreover, this study found that IT expertise significantly influence on HRIS Adoption. Thus, it emphasizes the importance of implementing adequate IT training workshops before and after implementing HRIS.

5.2. Limitations and Future Research

Although the findings of this study display an insight into the factors that influence the

adoption of HRIS among employees in Ceylon Electricity Board, as known in many researches, there are limitations of research. The first limitation is the generalizability of the findings. The purpose of this study was to explore the factors influencing on HRIS Adoption. To achieve the objectives of this study, respondent respondents were selected from only one organization representing Sothern province. Hence it limits the generalizability of the findings.

The second limitation pertains to the research design. This study has used a cross-sectional design, through which data were collected at one point at a time. As HRIS adoption decision is viewed as psychological related construct where longitudinal empirical studies are required to gain in-depth understanding in this phenomenon. Future studies with a longitudinal research design would greatly contribute to the literature.

The third limitation deals with the sample size of the present study. Due to time and financial constraints, the sample was limited to 140 respondents. A larger sample would increase the statistical power and offer rigorous findings (Hair et al., 2010). Future studies with a larger sample size are therefore required. The fourth limitation is related to the data-collection tools. The present study used questionnaire survey to collect primary data about the phenomenon of interest. Alternative mechanisms, such as interviews would facilitate in-depth understanding of the HRIS adoption and its determinants. Thus, future studies that employ interviews and qualitative analysis of interview data would generate important insights about this phenomenon. The fifth limitation relates to the inclusion of independent variables in the research model. The study has used only five factors based on TAM and TPB. Additional variables specified in other theories such as Unified Theory of Acceptance and Use of Technology (UTAUT), Diffusion of Innovation Theory might have impact on HRIS Adoption.

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