SLIIT Business Review, 2022
Vol.02, No. 02, pp. 59-88
https://doi.org/10.54389/WIGQ3904

Impact of the Challenges in Implementing Human Resource Information Systems in Sri Lankan MSMEs

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Abstract

Nowadays, the Human Resource Information System (HRIS) is a trending software that is a highly efficient platform for the HR department to carry out their operations. Still, there are some challenges faced by organisations with regard to HRIS implementation. The primary objective of the research is to explore the impact of the challenges such as the cost of maintenance, technical knowledge, management support and staff training in implementing the HRIS in Sri Lankan micro, small and medium enterprises (MSMEs). The authors collected both primary and secondary data. The primary data have been referred from previous research. To study the impact of the challenges and to obtain secondary data, authors analysed 300 surveys as a sample in the Western Province from a total of 1,017,352 MSMEs population in Sri Lanka. This survey had closed-ended questions to collect quantitative data from the respondents, and the convenience sampling method has been used as the data collection method. As the data analysis tool, the authors have used simple and multiple regression analysis to study the significant impact of the challenges on implementation. Lack of researches have been conducted on HRIS implementation, especially in MSMEs, and a minority of HRIS service providers are focusing on MSMEs to promote their systems. To conclude, this research will boost the demand for HRIS technology among MSMEs, pay attention to the HRIS service providers to focus on MSMEs. Further, it helps to spread HRIS knowledge among HR students and HR industrial people to improve the information technology units in the HR industry.

Keywords: Challenges in Implementing HRIS, Human Resource, Human

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Introduction

Background of the Study

Human resource management problems and restrictions are significance for all the managers from the bottom to the top level in the organisation (Boateng, 2007; Aggarwal, 2012; Alam, 2017). HR departments are under pressure to implement computer technologies to manage employee data more accurately and securely (Aruna, 2013). Thus, the HR department of MSMEs is still slow-paced in implementing HRIS (Arunava, 2014). Currently, in Sri Lanka, HRIS becoming a trending software, but MSMEs have some challenges in implementing HRIS compared to large scale businesses (Chahtalkhi, 2016). The MSMEs are using several paper works, and other stationaries for documentation (Kagehi, 2015; Rassool, 2019). As such, they waste significant amount of money, and working hours of employees for manual documentation process in MSMEs whereas more than two employees are working to handle payroll, attendance management, leave management and board paper works (Sritharakumar, 2015). Inefficient HR technology results in the wastage of employees' shift time and energy (Seo, 2013; Sharma, 2013). Hence, our research focussed on the HRIS implementation challenges faced by MSMEs in Sri Lanka.

Significance of the Study

The study will fil the research gap on the impact of challenges on implementing HRIS in Sri Lankan MSMEs. In this research, we analysed every challenge of implementing the HRIS in Sri Lankan MSMEs. Through this research, MSMEs owners and HR managers implementing HRIS can get a sound knowledge about HRIS, significance; and its. Hence, this research will be useful for all MSMEs owners and HR managers in successful implementation of HRIS. This research will be helpful to future researchers to conduct further research journals related to HRIS technologies.

Scope and Contribution of the Study

The study will be useful for both MSMEs and HRIS service providers in Sri Lanka. The MSMEs managers or owners are able to better understand the impact of each challenge of implementation. HRIS services providers are also able to promote their software by solving those challenges which were stated in the study. This study will lead

to a technical evolution in human resource industry in future because, most Sri Lankan organisations are willing to improve their HR practises from traditional method to cloud based and automated systems such as HRIS. These organisation managers can get an overall idea about the HRIS implementation and its challenges to fulfil their technological development goals. The students who are following human capital management as their degree or master can get an in-depth analysis of HRIS implementation and its challenges.

Research Problem

HRIS is increasingly becoming a critical aspect within HRM by digitising many of the conventional HRM practices and enabling HR information easily accessible, workable and less time consuming for organisations (Normalini, 2012; Alwis, 2010). The major players if not larger corporations in Sri Lanka have fully adapted to HRIS systems and practices (Beulen, 2009; Sandamali, 2019). All of the aforementioned organisations and many like-minded organisations have their own inbuilt HRIS systems. This has enabled these firms to gain greater efficiency as far as managing their human capital is concerned (Rathnaweera, 2019; Mitsakis, 2014). This certainly raises a gap in their knowledge as far as considering the number of research that is carried out. Rathnasir (2014), concluded that many MSMEs had manual processes that disintegrated many of the functions like the payroll and as well as recruitment and when the companies wanted to access the information, none of the information was available in digital formats as many of the information were handled by staff in physical desks (Beulen, 2009; Rathnaweera, 2019; Rathnasir, 2014).

Research Objectives

Primary Objective

This research aims to explore the significant impact of the challenges to implementing HRIS in MSMEs in Sri Lanka.

Secondary Objectives

- To examine the impact of maintenance cost on implementing HRIS in Sri Lankan MSMEs.
- To examine the impact of technical knowledge on implementing

HRIS in Sri Lankan MSMEs.

- To examine the impact of management support on implementing HRIS in Sri Lankan MSMEs.
- To examine the impact of staff training on implementing HRIS in Sri Lankan MSMEs.

Literature Review

Introduction

The ability, passion, and overall effectiveness of the human enterprise determines every component of a firm's operations. Since all depends on how well everything is handled, handling the human aspect is the most important and central function of management (Jahan, 2014). Human resource planning encompasses all aspects of human resource management in a business (Stewart, 2011; Paauwe, 2009).

Sri Lankan MSMEs

MSME includes the organisations those are under the category of micro, micro, small and medium scale businesses. Various nations utilise various definitions for MSMEs dependent on their degree of improvement. In the Sri Lanka setting, the MSME strategy structure characterises MSMEs dependent on the quantity of workers and yearly turnover. MSMEs are businesses that maintain income, assets, or a number of employees below a certain threshold. Certain size criteria must be met and sometimes the industry in which the company operates is also taken into account (Gunawardana, 2016). The Ministry of Industry and Commerce has introduced comprehensive definitions for MSMEs by considering two border criteria namely; annual turnover and number of employees. According to their definitions, the ceiling on employment and annual turnover for manufacturing MSMEs are respectively 300 employees and Rs 750 million and for MSMEs in service sector, ceiling on employment are 200 employees. (Nisahantha, 2018).

The reports from the Department of Census and Statics of Sri Lanka (DCS) and the Ministry of Industry and Commerce of Sri Lanka have the accurate data of the population of MSMEs in Sri Lanka. This report was published in 2014 by the Sri Lankan Government. and contains

establishments by major economic activities, number of establishments by the legal organisation and number of establishments by the district. (Satharasinge, 2014; Gunawardana, 2016). Total of 1,017,352 MSMEs are registered in Sri Lanka, according to the report from the DCS. It shows that 945,530 establishments are registered as micro-scale businesses, 65,056 establishments are registered as small-scale businesses and 7,709 establishments are registered as medium-scale businesses. According to the DCS, majority of the establishment are operating in Western Province; in the Colombo, Gampaha and Kalutara districts. The sole-possession stays as the primary legitimate status of the foundations constantly in every one of the locales all through the nation; it is most noteworthy the highest rate (93.5%) is reported from the Gampaha District, and the lowest of 76.9% from the Killinochchi District. In terms of the number of businesses, the service sector comprises 41% of the economy. Health, Education, Transportation, and Accommodation & Food Services are some of the key sectors of the economy of the service sector, contributing respectively for 1.6%, 4.4%, 3.5%, and 8.9% of the total number of establishments in the country. Mining and quarrying account for 0.9% of industrial establishments, whereas manufacturing accounts for 23.6%. Construction establishments accounted for 0.8% of all sectors (Satharasinge, 2014).

Implementation of HRIS in Sri Lankan MSMEs.

In comparison to larger organisations, in the Sri Lankan context often MSMEs have informal HR activities and are less inclined to follow HRIS. If MSMEs follow HRIS practices, their productivity and chances of survival can improve (Boxall, 2003; Briscoe, 2004). The following HR management roles are vital to every company's performance (Gomes, 2017; Gupta, 2013). Employee recruiting and termination, as well as finding and maintaining high-quality staff, are important (Haeruddin, 2017). Employees are often seen as bureaucratic and time-consuming by MSMEs' managers and shareholders. Hiring and dismissing workers are both significant HRIS roles. These would now be covered in more in-depth (Deci, 2007; Elragal, 2013). In the Sri Lankan context, MSMEs are more fragile in the early stages of development because they face numerous challenges due to a lack of capital (Suharti, 2018). Up to 63% of South Africans are believed to be illiterate. MSMEs only last into their second year of service. HRIS practices that work are more

likely to succeed (Vhatkar, 2016) to job turnover and absenteeism rates, as well as improved capability growth and retention 2012. For MSMEs, HRIS may be a strategic benefit (Wickramasinghe, 2010) since skilled and enthusiastic workers are in high demand regarded as important (Sanjeev, 2014). Services can have a major effect on a company's overall results (Kayagusuz, 2016).

Challenges of Implementing HRIS in Sri Lankan MSMEs

For every Sri Lankan MSME sized organisation, choosing to introduce a modern HRIS is a major and exciting move (Kalwala, 2019). Effective business process automation will enhance operating performance and reduce risk, enabling employers to concentrate on their core business (Rotenstan, 2007; Venkatraman, 2016; Truss, 2002). With the right implementation and funding, such a scheme will make everyone's job much simple but in Sri Lankan MSMEs, some challenges are impact on implementing HRIS (Kandivali, 2013).

Cost of Maintenance

Most of the MSME owners and HR managers are concerned about the cost factor, therefore, are not interested on technological investments. MSMEs owners are aware of every expenditure in their business (Kandivali, 2013). They have that limited mind set to run the business without trying or implementing new strategies. Therefore, in their perspective HRIS is an unwanted expense and it is not affordable to implement in their HR department (Farukbhuiyan, 2014). The findings show that the cost identification and estimation procedure is difficult for both implementers and MSMEs, which is consistent with the literature on HRIS cost estimation. Due to unexpected expenditures and timetable delays, all target cases have exceeded their budgets. Many cost elements are obscure, and many are hidden or overlooked (Haddara, 2011). Furthermore, vendors, implementation partners, and consultants could benefit from the expansion of this research, as it would help them provide more accurate overviews and estimates to their clients while taking into account all aspects regarding cost. The list may also aid in the development of a cost estimation model based on ERP-relevant cost components and weights (Haddara, 2011).

Technical Knowledge

Most of the MSMEs owners don't have any idea about HRIS. Most of the MSMEs do not have specific HR department and accountant has been handling the HR operations also (Monirah, 2017). The problem is when the accountant handles the HR operations as he or she is not having knowledge in HRIS and HR technology. Most of the MSMEs owners are not well educated, whereas they are still stuck with old generation and traditional operating methods (Kandivali, 2013). Seo, (2013) According to the study the HRIS adoption entails more than just updating software and infrastructure. HRIS deployment, in theory, can assist an organisation achieve higher levels of efficiency and performance by reengineering business processes. An organisation cannot totally rely on technology websites or software to address all HR challenges. A website will never be able to take the position of a qualified professional. Staffs might not be able to gain understanding of options based on the internet and may need to speak with HR specialists or professionals in person if they have any doubts (Banerji, 2013).

Management Support

Management should allocate enough resources for the deployment and maintenance of the HRIS, according to the study. Managerial and employee communication should be fostered. HR managers' most important responsibility is to be more proactive in facilitating the full HRIS adoption process in their firms. The findings of the study clearly shown that senior management commitment and support play a significant role in HRIS adoption in enterprises, which is backed by HRIS adoption literature (Haniff, 2017). Participation and dedication from all management levels of the company are essential for a successful HRIS adoption. The firm's executive management – the project's sponsors – is the first to be considered in commitment. Given the magnitude of change that such a project will bring about, some areas will be resistant to its execution. Executive management support is critical for ensuring that new business procedures are implemented efficiently, funding the project, and staffing the project team appropriately. Without this assistance, the new HRIS' pay-out will most certainly be jeopardised, resulting in service delays for employees. The senior management must appoint a guiding group made up of stakeholders from all of the HRIS's affected areas (Khatri, 2013).

Staff Training

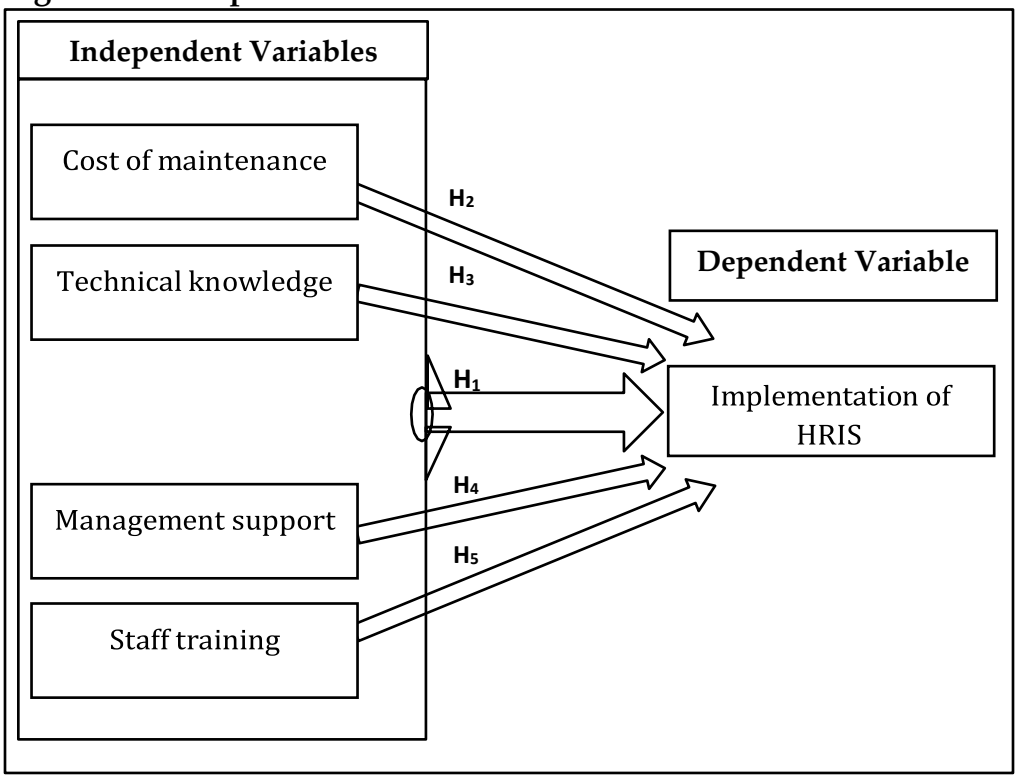
The model received considerable support in the research, which demonstrated that organisational performance while adopting HRMI systems was favourably associated with training. Even the most successful HRIS will not give a business a competitive advantage if the HR department's culture of personnel role does not change. The information gathered from the system is not fully utilised because users have difficulties reading the report created by the system and are unsure of how to apply best to bring value (Haniff, 2017). Employee orientation, managerial skills, and operational skills are the foundations of a successful employee training program. These concepts serve as the foundation for any employee development program (Khawaja Jehanzeb, 2013). Organisations that are migrating to a computerised HR system sometimes face a scarcity of people who can administer and operate the system. While having a technical background is necessary for an HRIS, many managers believe that with proper training, present employees with the right ability from human resources, information technology, or any other divisions can migrate to HRIS. An excellent HRIS specialist should be well-versed in not only information technology, but also all aspects of human resource management, from payroll to recruitment (Khatri, 2013).

Methodology

Conceptual Framework

For the current analysis, the following conceptual framework was developed. It is made up of two main variables. Specifically, the independent variables are cost of maintenance, technical knowledge, management support, and staff training the dependent variable is implementation of HRIS. These two dependent and independent variables measure the restriction of implementing HRIS on MSMEs in Sri Lanka. The relationship between the dependent and independent variables will be explored in this study.

Figure 1: Conceptual framework.



Source: Based on Haniff, (2017) and Banerji (2013).

Hypothesis

This research contains the hypothesis test in the relationship between depended variable and independent variables.

H_1: There is a significant impact of challenges on the implementation of HRIS in Sri Lankan MSMEs;

H_2: There is a significant impact of maintenance cost on the implementation of HRIS in Sri Lankan MSMEs;

H_3: There is a significant impact of technical knowledge on the implementation of HRIS in Sri Lankan MSMEs;

H_4: There is a significant impact of management support on the implementation of HRIS in Sri Lankan MSMEs;

H_5: There is a significant impact of staff training on the implementation of HRIS in Sri Lankan MSMEs;

Sampling

MSMEs owners and HR managers are included in the researcher's understanding of population. The selection of samples must represent the intentions of the whole population, which is a required condition. If it isn't taken into account, the study's conclusions may be skewed or inaccurate. In this study, the population of this study includes the entire Sri Lankan MSMEs on a wider prospect. Therefore, for manageability of the study, the researchers collected data only from the Western Province of Sri Lanka. The reason is that, according to the DCS and the Ministry of Industry and Commerce in Sri Lanka, most of the MSMEs are established in the Western Province. As target group, authors collected 300 surveys from MSMEs in the Western Province (Gunawardana, 2016; Satharasinge, 2014).

All components that share certain common features and considered part of the universe for research purposes are grouped together as a study population. The study population is those who have registered as MSME under the Sri Lankan law. According to the reports from the DCS and the Ministry of Industry and Commerce in Sri Lanka, 1,017,352 are registered as a MSME in Sri Lanka (Gunawardana, 2016; Satharasinge, 2014). According to DCS and the Ministry of Industry and Commerce in Sri Lanka, the reports emphasise that 322, 917 MSMEs which represents the 31.7% from the population of MSMEs are established in WP compared to other provinces in Sri Lanka (Gunawardana, 2016; Satharasinge, 2014). As the target group, 300 MSMEs responded to the survey from Western Province. A convenience sample is an attempt to acquire a sample of items that are easily accessible. As a result, the convenience sampling approach was used for this study's sample collection. This sample is appropriate for focus groups, pre-testing questionnaires, and pilot projects.

Data Collection Method

This study includes both primary and secondary data. Secondary data collected from past journal articles, pieces of literatures, reports, news

articles and internet. Further, this research highly depends on primary data for the empirical investigation and these are collected through closed-ended structured questionnaire. The data collected through online web-based questionnaires (Google form). Implementation of HRIS is assessed through its four independent variables: cost of maintenance, technical knowledge, management support and staffing training through five-point Likert scale.

Researchers distributed the survey to 300 respondents who is an owner or working as a manager in a registered organisation in the Western Province – Sri Lanka. Researchers did not remove any responses from those 300 respondents. SPSS tool has been used by the researchers to measure the results from the respondents.

Results and Discussion

Distribution of MSMEs Division

The researchers have presented the number of MSMEs responded according to the distribution of MSMEs division which are registered in the Western Province. The researchers categorised the distribution of MSMEs division, into three main divisions: micro scale businesses, small scale businesses and medium scale businesses.

Table 1 : Distribution of MSMEs Division

MSMEs Division	Responds	Percent
Micro scale businesses	89	30%
Small scale businesses	141	47%
Medium scale businesses	70	23%
Total	**300**	**100%**

Table 1 shows the divisions of MSMEs who responded to the survey. According to the result, 89 micro scale, 141 small scale and 70 medium scale businesses responded to the survey and Table represents majority of the contributions are from small scale businesses in Western Province.

Descriptive Statistics

Table 2: Descriptive statistics

Variables	Frequency	Mean	Median	Std. Deviation
Cost of maintenance	300	20.1567	21.0000	3.77531
Technical knowledge	300	19.4133	20.0000	3.98188
Management support	300	18.9400	20.0000	3.93123
Staff training	300	19.8867	20.0000	3.73188
Implementation of HRIS	300	19.9600	20.0000	3.83851

Descriptive statistics are the statistical approaches used to describe data and summarise sets of numerical data (Richard, 2008). Descriptive statistics have been analysed by the researchers to summarise the frequency table of the respondents includes the measures of central tendency such as mean, median, and standard deviation with frequency of respondents. Table 2 shows the central tendency of those five variables (Cost of maintenance – mean 20.1567, median 21.0000 and std. deviation 3.77531; Technical knowledge – mean 19.4133, median 20.0000 and std. deviation 3.98188; Management support – mean 18.9400, median 20.0000 and std. deviation 3.93123; Staff training – mean 19.8867, median 20.0000 and std. deviation 3.73188; Implementation of HRIS – mean 19.9600, median 20.0000 and std. deviation 3.83851).

Data Analysis

Data analysis part contains multicollinearity test, reliability test, validity test, regression analysis and hypotheses test. Those tests have been explained broadly by the researchers.

Reliability Test

The reliability test means when the research is performed under the identical conditions, the amount to which the outcomes can be replicated. The reliability test indicates good internal consistency among the items within each variable in this study.

Table 3: Reliability test result

Constructs	Cronbach's Alpha	No. of Items
Cost of maintenance	0.798	05
Technical knowledge	0.886	05
Management support	0.922	05
Staff training	0.907	05
Implementation of HRIS	0.927	05

Validity Test

The validity test means the degree to which the outcomes accurately reflect what they have been designed to reflect. According to Table 4, the validity test indicates that the variables are accurately reflected.

Table 4: Validity test result

Constructs	KMO Value	Bartlett's Test of Sphericity		
		Chi-square	df	Significance
Cost of maintenance	0.799	484.957	10	0.000
Technical knowledge	0.858	824.609	10	0.000
Management support	0.878	1102.981	10	0.000
Staff training	0.862	960.211	10	0.000
Implementation of HRIS	0.891	1135.082	10	0.000

Inferential Statistical Analysis

Inferential statistical analysis includes regression analysis and hypothesis test. Under the regression analysis researchers tested both multiple and simple regression analysis. In this study the primary objective is to test the hypothesis 1 and at the same time the secondary objectives are to test the hypothesises from 2 to 5.

Regression Analysis

Multiple regression test has been carried out for testing the hypothesis 1 and simple regression analysis has been done for testing the hypotheses from 2 to 5. The researchers explained broadly about the results of the analysis.

Multiple Regression

Primary objective: The aim of this research is to explore the significant impact of the challenges to implementing HRIS in MSMEs in Sri Lanka.

Hypothesis 1: There is significant impact of challenges on the implementation of HRIS in Sri Lankan MSMEs.

Model Summary:

Table 5: Model summary of implementation of HRIS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.894[a]	0.800	0.797	1.72982

Predictors: (Constant), Cost of maintenance, technical knowledge, management support and staff training.
Dependent variable: Implementation of HRIS

Under the multiple regression, the model summary has been tested to evaluate the strength of the data that presented in the study. The results show the R Square value between dependent and independent variables. According to Table 5, the R square value is 0.800 represents that the challenges have 80% of the variance in implementation of HRIS. The results emphasise that the R square value is greater than 0.5 so, the regression model is adequate.

ANOVA:

Table 6: ANOVA test of implementation of HRIS

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3522.802	4	880.700	294.326	0.000
Residual	882.718	295	2.992		
Total	4405.520	299			

Predictors: (Constant), Cost of maintenance, technical knowledge, management support and staff training.
Dependent variable: Implementation of HRIS

According to Table 6, the regression model is significant with F statistics coefficient which is 294.326 in the result while the significant value is about 0.000 (Sig. value is less than 0.05). That means, all of the models have been tested are adequate. As such, the regression model illustrates

the impact of independent variable on the dependent variables.

Table 7: Coefficients of implementation of HRIS

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.315	0.592		2.222	0.027
Cost of maintenance	0.021	0.040	0.021	0.529	0.597
Technical knowledge	-0.029	0.053	-0.030	-0.535	0.593
Management support	0.146	0.053	0.150	2.771	0.006
Staff training	0.805	0.047	0.782	17.262	0.000
Predictors: (Constant), Cost of maintenance, technical knowledge, management support and staff training. Dependent variable: Implementation of HRIS					

The coefficient Table 7 shows the cost of maintenance and technical knowledge are not significant (Sig value is greater than 0.05) and the management support and staff training are significant (Sig value is less than 0.05). As a result of the preceding discussions, the (H_1) has sufficient evidence to reject the null hypothesis (H_10) at 0.05 significance level while the alternative hypothesis (H_11) has been accepted. The decision has been made by the researchers is the challenges have a significant positive impact on implementation of HRIS.

Simple Regression

Secondary objective 1: Examine the impact of maintenance cost on implementing HRIS in Sri Lankan MSMEs.

Hypothesis 2: There is a significant impact of maintenance cost on the implementation of HRIS in Sri Lankan MSMEs.

Table 8: Model summary of maintenance cost

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.633[a]	0.400	0.398	2.97722

Predictors: (Constant), Cost of maintenance
Dependent variable: Implementation of HRIS

Under the simple regression, the model summary has been tested to evaluate the strength of the data that presented in the study. The results show the R Square value between dependent and independent variables. According to Table 8, the R square value is 0.400 represents that the cost of maintenance has 40% of the variance in implementation of HRIS. The results emphasise that the R square value is less than 0.5.

ANOVA:

Table 9: ANOVA test of maintenance cost

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1764.089	1	1764.089	199.020	0.000
Residual	2641.431	298	8.864		
Total	4405.520	299			

Predictors: (Constant), Cost of maintenance
Dependent variable: Implementation of HRIS

According to Table 9, the regression model is significant with F statistics coefficient which 199.020 in the result while the significant value is about 0.000 (Sig. value is less than 0.05). That means, all of the models have been tested are adequate. As such, the regression model illustrates the impact of independent variable on the dependent variable.

Table 10: Coefficients of maintenance cost

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	6.991	0.935		7.476	0.000
Cost of maintenance	0.643	0.046	0.633	14.107	0.000

Predictors: (Constant), Cost of maintenance
Dependent variable: Implementation of HRIS

The coefficient Table 10 shows the independent variable is significant (Sig value is less than 0.05) and if a unit increase in the cost of maintenance, the implementation of HRIS will rise by 64.3%. As a result of the preceding discussions, the (H_2) has sufficient evidence to reject the null hypothesis (H_20) at 0.05 significance level while the alternative hypothesis (H_21) has been accepted. The decision has been made by the researchers is the cost of maintenance has a significant positive impact on implementation of HRIS.

Secondary objective 2: Examine the impact of technical knowledge on implementing HRIS in Sri Lankan MSMEs.

Hypothesis 3: There is a significant impact of technical knowledge on the implementation of HRIS in Sri Lankan MSMEs.

Table 11: Model summary of technical knowledge

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.724[a]	0.524	0.523	2.65204

Predictors: (Constant), Technical knowledge
Dependent variable: Implementation of HRIS

The results show the R square value between dependent and independent variables. According to Table 11, the R square value is 0.524 which represents the technical knowledge has 52.4% of the variance in implementation of HRIS. The results emphasise that the R square value is greater than 0.5 therefore, the regression model is adequate.

ANOVA:

Table 12: ANOVA test of technical knowledge

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2309.597	1	2309.597	328.380	0.000[b]
Residual	2095.923	298	7.033		
Total	4405.520	299			
Predictors: (Constant), Technical knowledge Dependent variable: Implementation of HRIS					

According to Table 12, the regression model is significant with F statistics coefficient which is 328.380 in the result while the significant value is about 0.000 (Sig. value is less than 0.05). This means, all of the models have been tested are adequate. Hence, the regression model can be illustrated the impact of independent variable on the dependent variable.

Table 13: Coefficients of technical knowledge

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	6.410	0.763		8.398	0.000
Technical knowledge	0.698	0.039	0.724	18.121	0.000
Predictors: (Constant), Technical knowledge Dependent variable: Implementation of HRIS					

The coefficient Table 13 shows the independent variable is significant (Sig value is less than 0.05) and if a unit increase in the Technical Knowledge, the implementation of HRIS will rise by 69.8%. As a result of the preceding discussions, the (H_3) has sufficient evidence to reject the null hypothesis (H_30) at 0.05 significance level while the alternative hypothesis (H_31) has been accepted. The decision has been made by the researchers is the technical knowledge has a significant positive impact on implementation of HRIS.

Secondary objective 3: Examine the impact of management support on implementing HRIS in Sri Lankan MSMEs.

Hypothesis 4: There is a significant impact of management support on the implementation of HRIS in Sri Lankan MSMEs.

Table 14: Model summary of management support

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.747[a]	0.558	0.556	2.55730

Predictors: (Constant), Management support
Dependent variable: Implementation of HRIS

The results show the R square value between dependent and independent variables. According to Table 14, the R square value is 0.558 which represents the management Support has 55.8% of the variance in implementation of HRIS and the results emphasise that the R square value is greater than 0.5 thus, the regression model is adequate.

ANOVA:

Table 15: ANOVA test of management support

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2456.664	1	2456.664	375.649	0.000[b]
Residual	1948.856	298	6.540		
Total	4405.520	299			

Predictors: (Constant), Management support
Dependent variable: Implementation of HRIS

According to Table 15, the regression model is significant with F statistics coefficient which is 375.649 while the significant value is about 0.000 (Sig. value is less than 0.05). This means, all of the models have been tested are adequate. As such, the regression model illustrates the impact of independent variable on the dependent variable.

Table 16: Coefficients of management support

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	6.150	0.728		8.452	0.000
Management support	0.729	0.038	0.747	19.382	0.000

Predictors: (Constant), Management support
Dependent variable: Implementation of HRIS

The coefficient Table 16 shows the independent variable is significant (Sig value is less than 0.05) and if a unit increase in the management Support, the implementation of HRIS will rise by 72.9%. As a result of the preceding discussions, the (H_4) has sufficient evidence to reject the null hypothesis (H_40) at 0.05 significance level while the alternative hypothesis (H_41) has been accepted. The decision has been made by the researchers is the management Support has a significant positive impact on implementation of HRIS.

Secondary objective 4: Examine the impact of staff training on implementing HRIS in Sri Lankan MSMEs.

Hypothesis 5: There is a significant impact of staff training on the implementation of HRIS in Sri Lankan MSMEs.

Table 17: Model summary of staff training

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.890[a]	0.792	0.791	1.75551

Predictors: (Constant), Staff training
Dependent variable: Implementation of HRIS

The results show the R square value between dependent and independent variables. According to Table 17, the R square value is 0.792 which represents staff training can influence 79.2% of the

variance in implementation of HRIS. The results emphasise that the R square value is greater than 0.5 Hence, the regression model is adequate.

ANOVA:

Table 18: ANOVA test of staff training

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3487.144	1	3487.144	1131.528	0.000[b]
Residual	918.376	298	3.082		
Total	4405.520	299			
Predictors: (Constant), Staff training Dependent variable: Implementation of HRIS					

According to Table 18, the regression model is significant with F statistics coefficient which is 1131.528 while the significant value is about 0.000 (Sig. value is less than 0.05). This means, all of the models have been tested are adequate. So, the regression model can be illustrated the impact of independent variable on the dependent variable.

Coefficients

Table 19: Coefficients of staff training

Model	Unstandardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.762	0.550		3.200	0.002
Staff training	0.915	0.027	0.890	33.638	0.000
Predictors: (Constant), Staff training Dependent variable: Implementation of HRIS					

The coefficient Table 19 shows the independent variable is significant (Sig value is less than 0.05) and if a unit increase in staff training, the implementation of HRIS will rise by 91.5%. As a result of the preceding discussions, the (H_5) has sufficient evidence to reject the null

hypothesis (H_50) at 0.05 significance level while the alternative hypothesis (H_51) has been accepted. The decision has been made by the researchers is the staff training has a significant positive impact on implementation of HRIS.

Hypothesis Testing

Table 20: Hypothesis results

Hypothesis		P-Value	Status
H_1	There is a significant impact of challenges on the implementation of HRIS in Sri Lankan MSMEs.	0.000	Accepted
H_2	There is a significant impact of maintenance cost on the implementation of HRIS in Sri Lankan MSMEs.	0.000	Accepted
H_3	There is a significant impact of technical knowledge on the implementation of HRIS in Sri Lankan MSMEs.	0.000	Accepted
H_4	There is a significant impact of management support on the implementation of HRIS in Sri Lankan MSMEs.	0.000	Accepted
H_5	There is a significant impact of staff training on the implementation of HRIS in Sri Lankan MSMEs.	0.000	Accepted

According to Table 6.20, five hypothesises were designed and tested by the researchers in this study. As a result, those five hypotheses were accepted and not a single hypothesis was rejected according to the P-Value. Those five hypotheses are explained below.

> H_1 – There is significant impact of challenges on the implementation of HRIS in Sri Lankan MSMEs.

H_1 result has been proved that there is a significant impact of challenges on implementation of HRIS in Sri Lankan MSMEs.

According to the ANOVA test, the significance value is 0.000 but according to the coefficients, the significance value of cost of maintenance is 0.597; technical knowledge is 0.593; management support is; 0.006; staff training is 0.000.

Through the multiple regression the cost of maintenance and technical knowledge are not significance but management support and staff training are significance. However, through the ANOVA, overall significance level is 0.000. Therefore, researchers were accepted the hypothesis (H_1).

> H_2 – There is significant impact of maintenance cost on the implementation of HRIS in Sri Lankan MSMEs.

H_2 result has been proved that there is a significant impact of maintenance cost on implementation of HRIS in Sri Lankan MSMEs. Through the simple regression, the hypothesis test result of the maintenance cost is 0.000 which has the adequate significance value. Therefore, researchers were accepted the hypothesis (H_2).

> H_3 – There is significant impact of technical knowledge on the implementation of HRIS in Sri Lankan MSMEs.

H_3 result has been proved that there is a significant impact of technical knowledge on implementation of HRIS in Sri Lankan MSMEs. Through the simple regression, the hypothesis test result of technical knowledge is 0.000 which has the adequate significance value. Therefore, researchers were accepted the hypothesis (H_3).

> H_4 – There is significant impact of management support on the implementation of HRIS in Sri Lankan MSMEs.

H_4 result has been proved that there is a significant impact of management support on implementation of HRIS in Sri Lankan MSMEs. Through the simple regression, the hypothesis test result of management support is 0.000 which has the adequate significance value. Therefore, researchers were accepted the hypothesis (H_4).

H_5 – There is significant impact of staff training on the implementation of HRIS in Sri Lankan MSMEs.

H_5 result has been proved that there is a significant impact of staff training on implementation of HRIS in Sri Lankan MSMEs. Through the simple regression, the hypothesis test result of staff training is 0.000 which has the adequate significance value. Therefore, researchers were accepted the hypothesis (H_5)

Conclusion

Main Empirical Findings

Each objective was broadly discussed with the results of findings by the researchers in this part of the study. According to this study, both primary and secondary objectives and all hypotheses from 1 to 5 also have been accomplished by the researchers.

According to the primary objective, the challenges of implementing the HRIS have the significant impact on HRIS implementation in Sri Lankan MSMEs. The results of hypothesis test shows that there is a positive significant impact which represents 0.000 as P-Value. An in-depth analysis into the result of multicollinearity test shows different values on each challenge. According to the results, cost of maintenance (P-Value = 0.597) and technical knowledge (P-Value = 0.593) are not significant and management support (P-Value = 0.006) and staff training (P-Value = 0.000) are significant. According to the result of hypothesis 1, the study emphasises that these challenges are influencing on HRIS implementation however, management support and staff training are more influencing on the implementation of HRIS than compare to the cost of maintenance and technical knowledge in Sri Lankan MSMEs' context. Through the results, researchers have been accomplished the primary objective in this study.

According to the secondary objective 01, the MSMEs owners need to consider about the maintenance cost. They can do several analyses to allocate budget for implementing HRIS in their human resource department. The HRIS service provider also can extend analysis to set appropriate pricing system to the MSMEs in Sri Lanka. Because maintenance cost play major role in HRIS implementation especially in

Sri Lankan MSMEs' context.

According to the secondary objective 02, considering more about technical knowledge can be reduce the restriction on installing the HRIS in business process. MSMEs can focus more on technical knowledge, as this is a critical concern with regard to installation and maintenance. Without the necessary knowledge, it will be more difficult to handle a successful transition to HRIS.

According to the secondary objective 03, management support for the HRIS implementation is directly depended on the management hierarchy. From top level to bottom level, employees are responsible for the implementation. In Sri Lankan MSMEs, the managers are not aware to adopt the HR technologies. Without the management' motive, implementation of HRIS will be difficult to successfully install the HRIS system in their organisation.

According to the secondary objective 04, a proper training will lead to manage and implement the HRIS. MSMEs are mostly not considering the staff training programmes. In Sri Lankan context, the employees currently face lack of performance on the technical aspects and it leads to both software and hardware errors. Staff training is a most important segment that will contribute for effective HRIS implementations especially in Sri Lanka.

Concluding the present research, the expanding implementation of HRIS by businesses, paired with the software's growing complexity, offers businesses with new challenges as well as several advantages. The role of is boosted by a mix of enhanced access to data and the automation of current administrative operations, enabling the HR department for a more effective and efficient contribution. Researchers have reviewed the concerns and challenges that Sri Lankan MSMEs experience when implementing HRIS in this study. The most significant problems that the MSMEs are dealing with; maintenance cost, technical knowledge, management support and staff training.

Discussion

Human Resource Information Technology plays a key part in today's modern company management. Countries like ours, on the other hand,

are having trouble implementing the strategy. The study will help the MSMEs and HRIS service providers to face the challenges in implementation. This study will help MSMEs owners/ HR managers to set the budget for HRIS to implement in their organisation because cost factor is an essential aspect to consider. Companies must prioritise and be prepared for acceptance and implementation decisions for HRIS systems based on this cost factor. As such this preparedness will companies to effectively manage the cost of maintenance during HRIS implementation. The management of the MSMEs must also identify HRIS users in their organisation who need priority regarding necessary technical knowledge and training sessions. This way, MSMEs owners/ HR managers can plan and execute technical sessions to their employees so, that will help them to get hands-on technical expertise. For the success of HRIS adoption, acceptance and commitment of all the managerial levels in a company are required. Employee training should be encouraged on a regular basis by the organisation's management in order to the employees to get the essential abilities.

Future Research Ideas

Future researchers can be conducted in other provinces in Sri Lanka. Further researchers can increase more respondents to get better solution for the research. This research only focussed on MSMEs. According to this research, the challenges of implementing HRIS in Sri Lankan MSMEs are fulfilled but so far, no comparison have been carried out with large scale business. If future research compares the HRIS with MSMEs and large-scale businesses, it will give a better overview of HRIS usage in Sri Lanka. This study only conducted through quantitative data. Future researchers may use both the qualitative and quantitative methods because when researchers collect qualitative data, they need to interview the MSMEs' owners and HR managers. Then, this may reveal more concerns and explanation involved in implementing HRIS. In this study, the researchers have used variables as cost of maintenance, technical knowledge, management support, and staff training.

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