Impact of Information Systems for the Performance of Public Sector Organizations in Western Province - Sri Lanka.

Senevirathne G. K.[1]

Introduction

Government organizations in Sri Lanka (SL) invest significant resources, huge amounts of money and countless hours in the adoption and implementation of different kinds of information systems (IS). However, after implementing such systems still there is a question regarding the effective use of these systems. That means it is important to have a high-performance system.

By considering this new technological environment with the increased need for better IS, the main objective of this study is to establish how the IS affect for the performance of the government organizations in Western Province (WP) under the following dimensions.

- System quality
- Service quality
- Information quality

For this research primary data were collected using a questionnaire. Quantitative data collected were analyzed using the Statistical Package for Social Sciences (SPSS V-24). To analyze the data obtained univariate and bivariate analysis were used. Findings of the research prove that there is a positive impact of IS on performance of the government organizations in WP – SL.

Methodology

The questionnaire used to collect data consists nearly 27 questions. Questions were prepared according to the three dimensions. Each dimension consisted of 4 to 6 questions. Likert scale of 1-5 was used (Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree) to get the response from the users.

The mean value of the five-point scale was 03 (i.e. $\{1+2+3+4+5\}/5=3$). Therefore, this mean value was taken as the deciding factor for the impact of the IS.

Table 1: Scale for Statements

Variable	Levels of measurement
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2

[1] Information and Communication Technology Centre, University of Kelaniya, Sri Lanka. *(gayakavisen@gmail.com)*

Strongly Disagree	1

Information System

Let "X" be the average score of the respondents for impact of IS.

If "X" >3, then the impact is High.

If "X" =3, then the impact is Satisfactory.

If "X" <3, then the impact is Low.

Organizational Performance

Let "Y" be the average score of the respondents for Organizational Performance.

If "Y" <3, then the Performance is Poor.

If "Y" =3, then the Performance is Satisfactory.

If "Y" >3, then the Performance is Good.

The impact of IS was presented in terms of three factors such as system quality, information quality and service quality and these were taken as independent variables and organization performance was identified as the dependent variable. It was hypothesized that all the three dimensions have a positive impact for the performance of an organization. After that, based on the data collected from the survey, a univariate and bivariate analysis was conducted.

Findings

Cronbach's Alpha Test method was used to measure the internal item consistency and reliability of the instruments used to collect data.

Table 2: Validity and Reliability of Instruments

Dimensions	Cronbach's Alpha Value
System Quality	0.823
Information Quality	0.877
Service Quality	0.769
Organizational Performance	0.836

The standard value of the Cronbach's alpha is 0.7. Table 2 shows that all the dimensions are above the standard value. Therefore, all dimensions are in the satisfied condition.

In the univariate analysis, the mean values for all the three dimensions were higher than the average score of the respondents, which were 3.75, 3.85, and 3.33 respectively. Therefore, it can be suggested that the current IS adoption does contribute to effective overall organizational performance. To perform bivariate analysis, researcher used correlation analysis and the simple regression analysis. These two types of bivariate analysis methods were used to identify whether there is any relationship between the quality of the Information System and Organizational Performance.

Table 3: The frequency distribution for the three dimensions of information systems.

Statistics		
System Quality		
N	Valid	80
	Missing	0
Mean		3.75
Std. Error of Mean		0.074
Median		3.83
Mode		4
Std. Deviation		0.664
Variance		0.441
Skewness		-0.416
Std. Error of Skewness		0.269
Kurtosis		0.034
Std. Error of Kurtosis		0.532
Minimum		2
Maximum		5

Statistics		
Information Quality		
N	Valid	80
	Missing	0
Mean		3.85
Std. Error of Mean		0.088
Median		4.00
Mode		4
Std. Deviation		0.788
Variance		0.620
Skewness		-0.793
Std. Error of Skewness		0.269
Kurtosis		1.262
Std. Error of Kurtosis		0.532
Minimum		1
Maximum		5

Statistics		
Service Quality		
N	Valid	80
	Missing	0
Mean		3.33
Std. Error of Mean		0.091
Median		3.25
Mode		4
Std. Deviation		0.816
Variance		0.666
Skewness		0.190
Std. Error of Skewness		0.269
Kurtosis		-0.476
Std. Error of Kurtosis		0.532
Minimum		2
Maximum		5

Moreover, based on the results from the bivariate analysis, it was suggested that if each dimension of IS increased by one unit the performance of an organization will also be increased positively. Therefore, it was found that each of these three dimensions has a significantly positive relationship with organizational performance. So, this proves that there is a positive relationship between organizational performance and IS.

Hence, the details gathered through the survey and its findings point that the hypothesis can be accepted because all the three dimensions show a positive impact for organizational performance.

Conclusion

To improve the system quality of an IS, software provider has the responsibility of making user-friendly systems with good user interfaces. If the user interface is eye-catching then the intention to use the system becomes high.

In order to improve the information quality, developers must consider about the relevance of the information provided from the system.

To improve the service quality organizations can arrange training programs to operate the IS and providing understandable user manual to help them to use the IS.

Keywords: Impact, Information systems, Organizations, Performance, Public sector.

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