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QUALITY OF ACCOUNTING INFORMATION SYSTEMS AND ORGANIZATIONAL EFFECTIVENESS IN AN EMERGING COUNTRY

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Abstract

The study aims to evaluate, the effect of the quality of Accounting Information Systems (AIS) on Organizational Effectiveness (OE), in an emerging country, particularly Automobile Companies in Sri Lanka (AC in SL). OE was the dependent variable, whereas system quality, information quality and service quality were independent variables of the study. Findings showed that the quality of AIS significantly and positively influenced OE of AC in SL. Moreover, the detailed analysis found that the overall quality of AIS and OE reached high level in AC in SL. The system quality and service quality dimensions of AIS influenced OE more than the information quality of AIS. Results of the research would be useful to Automobile Managers and Accountants.

Keywords: *Accounting Information System, Information Quality, Organizational effectiveness, Service Quality and System Quality*

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1. Introduction

In this turbulent business environment, characterised by competitive global market forces, rapidly shortening product life cycle, managers demand more advanced strategies, to improve decision making process for expansion of business. Contingency theory posits that managers should focus on AIS usage, in order to improve the performance of the organization (**Ganyam and Ivungu, 2019**). **Trabulsi (2018)** also argued that AIS is an imperative mechanism for controlling the firm's operations, in order to make effective decision making in an organization. Organizational Effectiveness (OE) is the ability to assess the overall functions of the organization and measure the organizational success in achieving its goals, by relying on its core strategies and resources. According to the resource-based view theory, organizations competently and adequately manage the AIS, to employ its capability, competence and skill sets, for improving organizational effectiveness (**Ganyam and Ivungu, 2019**). **Kaluarachchi (2016)** found that common problems faced by the entrepreneurs of SMEs in Sri Lanka were lack of knowledge and high cost of the implementation of AIS. Further, **Bansah (2018)** reported that the most influencing sources of threats to computerized AIS were power outages, viruses, threats from outsiders, accidental entry of bad data, unauthorized copying of the system's output, lack of frequent back-ups, infrequent security updates, weakness in internal controls, and lack of written policies. **Gunawardana (2015)** pointed out that Sri Lankan organizations, especially the banking sector, have not paid significant attention to computerized fraud detection security control systems.

Rajeshwaran and Gunawardana (2009) also discovered that there were significant

differences among listed companies, relating to the adequacy of security controls of computerized AIS. In this scenario, automobile companies also recorded transactions in AIS in Sri Lanka. **Samuel (2013)** postulated that lack of proper training, lack of proper system documentation and high staff turnover were the main challenges faced by automobile companies, pertaining to the AIS. Even though previous studies focused AIS and organizational performance/ effectiveness in developed countries, there is dearth of empirical studies in the domain of AIS and OE, particularly automobile companies in the Sri Lankan context. Therefore, this research proposes to fill this knowledge gap, by undertaking this empirical research, to examine how the quality of AIS influences OE of AC in SL.

2. Review of Literature

AIS are designed within the MIS to control organizations' economic-financial area (**Qamruzzaman, 2014**). According to **Al-Dalaie and Dalayeen (2018)**, AIS is a system, which generates the vital information for planning, organizing, directing, leading and control on the activities of the organization. Further, the usage of AIS significantly affects the quality, cost reduction, the speed of services, informed decisions and effective information flow (**Trabulsi, 2018**). Successful AIS could save time in completing a task and save more time to do other things, to improve employees' performance in line with organizational objectives (**Fitriati and Mulyani, 2015; Kanakriyah, 2016**). Every organization should keep appropriate information security planning and governance methods, to protect the AIS as it contains very sensitive and confidential information. Utilizing wrong accounting information, derived from AIS, would hinder the progress of the company (**Qamruzzaman, 2014**) and failure of information system could

prevent the realisation of organization's objectives and lead to loss of competitive advantage (Jaafreh, 2017).

Innovation Diffusion Theory is used as a lens, to identify the problem of AIS and to derive solutions to overcome the issues. Diffusion theory postulates five characteristics of innovations that affect their diffusion (Shy, 1997). Those characteristics are relative advantage, compatibility, complexity, trial-ability, and observability. Diffusion studies have demonstrated that innovations, affording advantages, compatibility with existing practices and beliefs, low complexity, potential trial-ability, and observability, will be more extensively and rapidly diffused (Sudhahar, D. J. C., and Selvam, M. (2007); Dandago and Rufai, 2014). The study has identified two qualities of AIS, which are system quality (relative advantage, complexity and trial-ability) and information quality (compatibility and observability), under the Innovation Diffusion Theory.

3. Statement of the Problem

Despite the many benefits of AIS (Trabulsi, 2018; Ganyam and Ivungu, 2019), there are high risks to the AIS as per the previous research findings. (Bansah, 2018). The existing security controls of AIS are inadequate to protect the AIS (Rajeshwaran and Gunawardana, 2009). There are human errors in operating the AIS (Selvam, M., et.al. 2007, Samuel, 2013 and Kaluarachchi, 2016). In this context, it is vital to identify the quality of AIS and to examine whether AIS really contributes to the OE of automobile companies. Hence the research attempts to find the answer to the research question, "How does quality of AIS impact OE of automobile companies in Sri Lanka?"

4. Need of the Study

The study identifies the usage of AIS in automobile companies. It also provides a better understanding of the relationship between AIS and OE. The study offers empirical contributions to automobile companies to effectively apply AIS and realise OE.

5. Objectives of the Study

- To identify the extent of quality of AIS of Automobile Companies in Sri Lanka
- To identify the extent of organizational effectiveness of AC in SL.
- To examine the effect of quality of AIS on OE of AC in SL.

6. Hypotheses of the Research

The quality of AIS was measured by three independent variables, namely, system quality, information quality and service quality (Figure-1). The study examined the following two hypotheses, under each independent variable and dependent variable.

H1: There is positive relationship between the quality of AIS and the OE of AC in SL.

H2: There is significant impact of the quality of AIS on the OE of AC in SL.

7. Research Methodology

7.1. Sample selection

The population of the study was executive officers, who used AIS packages in automobile companies. Thirty automobile companies were selected and questionnaires, based on the customer rate, were administered to them. As sample respondents, 120 AIS executive officers such as Financial Managers and Accountants were chosen, using the convenient sampling method.

7.2. Sources of Data

Data were collected through the questionnaire, which was developed in Five-point Likert Scale, based on the literature review.

7.3. Period of Study

The duration of the study was from 09/11/2019 to 24/06/2020.

7.4. Tool used for the Study

Univariate, bivariate and multivariate analyses were used, to analyse the collected data through Statistical Package for the Social Science (SPSS) 22nd version.

8. Analysis of Identifying the Extent of Quality of AIS of Automobile Companies in Sri Lanka (AC in SL)

Cronbach's Alpha Test showed that the internal reliabilities of research variables were satisfactory, at more than 0.7, given in **Table-2**. In other words, overall system quality, information quality, service quality of AIS and organizational effectiveness were high in Automobile Companies in Sri Lanka, as mean values were more than 3.5, for the Decision Criteria, as shown in **Table-1**. Pearson's correlation between system quality and organizational effectiveness was 0.726, with significance value of 0.000 (**Table-3**). The significant value (0.000) was less than 0.01 and hence there was high association between the system quality and organizational effectiveness at the significance level of 1%. Similarly, information quality ($r=0.632$, $p<0.01$) and service quality ($r=0.687$, $p<0.01$) were correlated with organizational effectiveness, at 0.01 of significance level. Further, overall AIS reported strong positive association with organizational effectiveness ($r=0.812$). Since the significant value was less than 1%, "**H-1: There is positive relationship between the quality of AIS and the OE of AC in SL**" was accepted. In other words, there was positive

relationship between qualities of AIS and organizational effectiveness. That is, when quality of AIS increased, organizational effectiveness also increased.

According to **Table-4**, 66% of variation in organizational effectiveness could be explained by qualities of AIS of Automobile Companies in Sri Lanka while 34% of variation in the dependent variable, could not be explained by the model. Simple regression analyses showed that all independent variables of quality of AIS positively impacted the organizational effectiveness. The multiple regression analysis revealed that the beta value of system quality was 0.340, with significant value being 0.000. System quality of AIS positively influenced on organizational effectiveness as the significant value (0.000) was less than 0.01. Similarly, the multiple regression analysis indicated that as per the beta values, other independent variables [Information Quality ($\beta_2 = 0.200$, $p< 0.01$); Service Quality ($\beta_3 = 0.224$, $p< 0.01$)] also positively impacted organizational effectiveness, where the system quality of AIS highly affected the organizational effectiveness. Hence, "**H-2: There is a significant impact of the quality of AIS on the OE of AC in SL**", was accepted, at 1% significant level. It was concluded that there was positive impact of quality of AIS on organizational effectiveness of Automobile Companies in Sri Lanka.

9. Findings of the Study

- Quality of Accounting Information Systems and Organizational Effectiveness attained high level in Automobile Companies in Sri Lanka.
- There was significant and positive relationship between quality of AIS (system quality, information quality, service quality) and organizational effectiveness in Automobile Companies in Sri Lanka.

- There was significant and positive impact of system quality, information quality, service quality as well as overall quality of Accounting Information Systems on organizational effectiveness in Automobile Companies in Sri Lanka.
- The system quality of AIS highly influenced the organizational effectiveness.

10. Suggestions

- Based on the research findings, companies should pay particular attention to improve the quality of AIS, in order to increase the organizational efficiency.
- The system quality of AIS highly influenced the organizational effectiveness. Therefore, organization should pay more attention to improve the system quality of AIS, in order to enhance the organizational effectiveness.
- The top management needs to identify the strengths and the opportunities of AIS. Users were fully aware of the usefulness of AIS, which, in turn, would attract new customers.

11. Conclusion

The study aimed to evaluate the effect of the quality of Accounting Information Systems (AIS) on Organizational Effectiveness (OE) of AC in SL. The study found that overall qualities of AIS and OE of AC in SL reached a high level. In other words, there was statistically significant and positive impact of quality of AIS on OE of AC in SL. In addition, it was found that causes for higher level of quality of AIS are system quality and information quality of AIS, which are explained by the Innovation Diffusion Theory.

12. Limitations of the Study

- This research examined only the automobile sector in Sri Lanka.

- This study focused only on quantitative data. If any study could consider qualitative data, it would facilitate further understanding of the usage of AISs and its effect on OE.
- This study considered only 120 respondents as sample. If the sample size had been large, the accuracy of the findings may have been enhanced.

13. Scope for Further Research

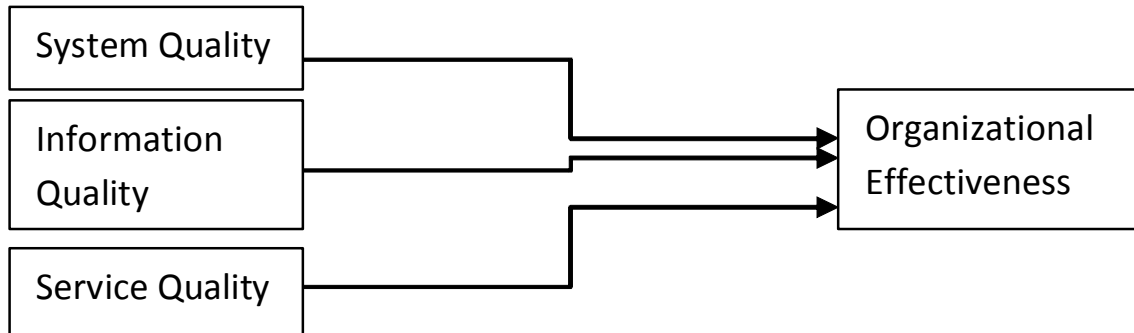
- This research examined only the automobile sector in Sri Lanka. More rich findings could be derived, if any study were to consider other types of industries such as banks, hotels, insurance, wholesale businesses, etc.
- This study included only variables such as system quality, information quality, service quality, and organizational effectiveness. Therefore, future researches could be conducted by adding more new variables.
- This study focused only on quantitative data. If any study could undertake triangulation approach, more insights could be gained, pertaining to the quality of AIS and OE.

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Figure-1: Conceptual Framework



Source: Gorla, et.al. (2010); DeLone and McLean (2003)

Table-1: Results of Decision Criteria for Quality of AIS and Organizational Effectiveness

Decision Criteria	$1.0 \leq X_1 \leq 2.5$	$2.5 < X_1 \leq 3.5$	$3.5 < X_1 \leq 5.0$
Decision Attribute	Low level	Moderate level	High level

Where X_1 = mean value of a variable;

Source: Primary Data computed using SPSS

Table-2: Results of Reliability Analysis and Descriptive Statistics of Quality of AIS and OE

Variables	No. of Statements	Cronbach's Alpha	Mean	Std. Dev.	Level
System Quality of AIS	08	0.754	3.92	0.427	High
Information Quality of AIS	08	0.724	4.08	0.399	High
Service Quality of AIS	15	0.780	3.98	0.334	High
Organizational Effectiveness	14	0.728	3.94	0.315	High

Source: Primary Data computed using SPSS

Table-3: Results of Correlation Analysis showing the Relationship between the Quality of AIS and Organizational Effectiveness

	System Quality	Information Quality	Service Quality
Pearson Correlation (r)	0.726*	0.632*	0.687*
Sig. (2-tailed)	0.000	0.000	0.000

*P-value<0.01.

Source: Primary Data computed using SPSS

Table-4: Results of Simple and Multiple Regression Analysis showing the Impact of Quality of AIS on Organizational Effectiveness

Independent Variables	Simple Regression			Multiple Regression
	Model 1	Model 2	Model 3	
Constant (β_0)	1.840* (0.000) [0.184]	1.906* (0.000) [0.230]	1.361* (0.000) [0.252]	0.898* (0.000) [0.214]
System Quality (β_1)	0.535* (0.000) [0.047]			0.340* (0.000) [0.051]
Information Quality (β_2)		0.498* (0.000) [0.056]		0.200* (0.001) [0.058]
Service Quality (β_3)			0.648* (0.000) [0.063]	0.224* (0.004) [0.077]
R	0.726	0.632	0.687	0.812
R Square	0.527	0.400	0.472	0.659
Adjusted R Square	0.523	0.395	0.468	0.650
F	131.464* (0.000)	78.592* (0.000)	105.521* (0.000)	74.579* (0.000)

Source: Primary Data computed using SPSS