

Accounting information system and financial performance: Empirical evidence on Sri Lankan firms

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Abstract

The research aims to examine the effect of quality of Accounting Information System (AIS) on financial performance of listed companies in Sri Lanka. Out of 290 listed companies, 165 companies were selected as a sample using Proportionate Stratified Random Sampling technique and the sample size was calculated via sample size calculator in the web using a 95% confidence level and 5% confident interval. Quality of AIS was measured through system flexibility, system sophistication, effectiveness of the system and system control as per the Contingency Theory and Innovation Diffusion Theory. Both primary (questionnaire) and secondary (annual report) data are combined in the study. A self-administrated questionnaire was issued to collect the quality of AIS, whereas the financial performances of such companies were evaluated under Return on Assets (ROA) by examining the annual reports of the selected companies. Descriptive, correlation and multiple regression analyses are applied to inspect the data. The study finds that there is a significant positive relationship between the quality of AIS and financial performance. Moreover, there is a significant impact of system flexibility, system sophistication, and effectiveness of the system towards financial performance; whilst system control also effect on financial performance, but the result is insignificant. Overall, the findings in this study are supported by other studies in the literature. The study provides a deeper understanding of how system flexibility, system sophistication, effectiveness of the system and system control of AIS quality relate to financial performance. It is recommended to maintain the highest levels of quality of AIS as it will be an advantage to raise the monetary performance of listed companies in Sri Lanka.

Keywords:- AIS Quality, Financial Performance, Contingency Theory, Innovation Diffusion Theory

1 Introduction

Over the last couple of decades, the globe has observed extensive technological advancements, including the field of Accounting. As a result, many business organisations tend to use Information Technologies (IT) (Alrabei, 2014). The competition among the companies has increased, and most of those companies adopt Computerised Information Systems (CIS) to remain competitive advantages (Rajeshwaran & Gunawardana, 2009). Imeokparia (2013) pointed out that a company's financial outcome always depends on how much they invest and

how they can improve the AIS. The most influential and the oldest in the present business system is the Management Information System (MIS). Whereas, AIS is one of the subsystems of MIS and the eldest one (Salehi, Rostami, & Mogadam, 2010). AIS can be used to record and process transactions and to communicate the financial and accounting information that can be necessary for decision making. Furthermore, AIS depends on data and information to enhance international accounting information systems or make such a firm a more successful business. This information leads to better

planning, controlling and making the right decisions. Therefore, the AIS is vital to all worldwide (Jawabreh, 2012).

Quality is an indicator of how well the end outcome of a project satisfies the objectives specified by the management. Laudon and Laudon (2016) portrayed that quality focuses on the correctness and timeliness of information created by the new system and ease of use. If the companies are complying with qualified AIS and when the companies can execute certain technological developments, such companies have shown to achieve high financial performance (Odero, 2014). Financial performance is an intuitively degree of how well a business can utilise resources from its essential mode of commerce and generate income. Further, it is considered as a common measure of a company's general monetary wellbeing over a given period as well as for comparative purposes over divisions or related industries (Odero, 2014).

The higher level of success of the application of AIS indicates the higher level of the company's financial performance by ROA dimensions and profit margin (Odero, 2014). The successful implementation of the AIS encourages daily business operations and also improves the quality of corporate decision-making, both of which are significant components of financial performance (Agung, 2015). Currently, information technology is crucial to several entities. It is hard to attain a competitive advantage and survive without some appropriations or implementations of these progressions in technological items. Companies' most commonly used information system is the AIS concerning the financial reporting aspects (Odero, 2014). However, despite many benefits of using AIS in listed

companies, there are frequent occurrences of accounting malpractices, system configuration errors, lags in the arrangements of financial records, misfortune of financial information, loss of data or services, and frauds can be reported (Agung, 2015).

Furthermore, computerised crimes can quickly happen to computerised AISs. For instance, there is a possibility for dispatching a virus to attach to a computer's system, avail funds unlawfully through computers, and send spontaneous email or junk email (Gamage, 2017). As same as the increasing growth of online data processing in the accounting information system had made easier access for many users with security threats (Rajeshwaran & Gunawardana, 2009). Gupta and Hammond (2005), described that the security-related studies have indicated a number of patterns that are emerging globally. For instance, in Australia, 45% of associations did not budget for their computer security. An information security policy was not developed, and a budget constraint was a primary issue in implementing computer security in around half of the companies in the UK. According to Emam and Koru (2008), AIS software projects failures are increasing day-by-day. It was also noted that 11% of such software program ventures are cancelled in advance before they are conveyed due to the critical quality issues of the software.

The increasing usage of digital advances among organisations has emphasised the significance and part of cyber security as a modern risk management measurement (Haapamaki & Sihvonen, 2019). Further, the coincidental devastation of information by workers, accidental input of terrible data by employees, and insufficient control over media

were recognised as the foremost noteworthy threats in the computer environment. Moreover, natural catastrophes, illegal entry to the system by hackers, and poor control are the most dangers in the network environment (Hayale & Abu Khadra, 2008). Therefore, it was found that sufficient implementing of security controls to protect the quality of AIS is much more critical to the entities.

In the Sri Lankan context, the listed companies in Sri Lanka are one of the heavy users of Information Technology (IT) and telecommunication services, with almost every business transaction leading to a computer-assisted process (Rajeshwaran & Gunawardana, 2009). Most of the companies computerised their accounting activities. The Sri Lankan listed companies spend tremendous sums of monies in obtaining IS competence. Most of them want to invest giant sums in foreign currency for hardware, software programs and soft skills. In this competitive and dynamic business environment, there are high threats to computerised accounting information systems. In the meantime, technology for updating security control system is also changing. Accounting Packages and Computerised Accounting information system are changing over the years. Therefore, companies spent huge amount of money to safeguard and uplift the performance of AIS (Rajeshwaran & Gunawardana, 2009). In this scenario, it is necessary to understand whether AIS modified to absorb changes in the environment and technology to provide necessary information on time to make decisions. Further, enhancing AIS quality really increases the companies' financial benefits. Moreover, which dimensions of quality of AIS are critical to the companies.

When allocating the resources among different aspects of organisational functions, it is necessary to understand the linkages between the prevailing quality of AIS and the financial performance of the companies.

Most of the research studies have been undertaken regarding the various applications of the AIS. But in the Sri Lankan setting, there is a need for studies based on the quality of AIS and its linkage with the overall monetary performance of the listed companies of Sri Lanka. Therefore, the present study undertakes this research to fulfill the knowledge gap to identify how the quality of AIS influences the financial performance of listed companies in the emerging country, particularly in Sri Lanka. Hence, the present study attempts to fill this knowledge crevice by doing empirical research to evaluate, how the quality of AIS impacts on financial performance of listed companies in Sri Lanka.

Based on the identified research problem, this research aims to examine the effect of AIS quality on financial performance in listed companies of the emerging country, particularly Sri Lanka.

The paper is structured following key components. The next area reveals an outline of the literature and the methodology of the study. Subsequently, findings are analysed. penultimately, discussions of the findings and conclusions are given. Finally, Contribution, implication of the study, directions for future studies and limitations of the study are presented.

2 Literature review

2.1 Accounting information system

Soudani (2012), declares accounting is several centuries longstanding, and Luca Pacioli, an Italian friar from San Sepulcro, is the founder

of accounting. In 1494, Pacioli was designed to introduce the double-entry bookkeeping method by applying debits and credits to administrate the monetary statistics of an organisation. Pacioli's double entry system encompassed ledgers and journals wherein financial records on the firm were placed (Osmond, 2011). This accounting system is still in operation nowadays, even in the industry's numerous computerised accounting structures. Accounting is not only the firstborn of the management sciences, but also the most established. Despite its consistency and endurance, accounting has undergone significant shifts over the last era (Emmanuel, 2015). It would be shocking if, for a century, accounting remained the equivalent as it is at present (Emmanuel, 2015). Carolina 2014, describes the accounting system is a scheme premeditated to monitor and account for a firm's accounting transactions and processes in a manner that satisfies the practices and regulations. The accounting system can also be defined as "a formal framework for recognising, measuring, accumulating, examining, planning, deciphering and communication accounting information about a specific substance to a specific group" (Ama, 2004). A computer-based accounting framework forms data in fundamentally the same manner as a manual framework but the mechanism is diverse. The computer processes the data and schedules routine tasks such as printing journals, posting to ledger accounts, deciding accounts' balances, and printing monetary statements and other relevant reports (Emmanuel, 2015).

Today, as more capable, adaptable, economical, and user-friendly programs and hardware have become accessible, the tendency

towards a coherent arrangement where a single system can assist both accounting and operational requirements (Ramli, 2015). In brief, today's accounting systems are nearly tied into and may even be completely integrated with other information systems (Wilkinson *et al.*, 1999). The commencement of computer-based accounting system gives major benefits such as speed and accuracy of operation, and the most imperatively, the capability to see the real-time circumstance of the organisation's financial position. These systems accomplish virtually each accounting activities, including account receivables, account payables, payroll, stock control, budgeting etc. (Akesinro & Adetoso, 2016).

The information system is characterised as a collection of relevant parts collecting, preparing, storing and sharing information to ensure decision making, coordination and control within the organisations (Laudon & Laudon, 2016). The use of information system technology in the AIS improves the recording functions, data analysis, reporting and other aspects of AIS and data of AIS (Ramli, 2015). Gelinias (2014) describes the AIS as a system of recording, sorting, summarising and reporting of economic events affecting businesses. One of the purposes of the AIS is to generate commercial statements functioning as the detailed statement of earnings, the statement of financial status and further records utilised by management, borrowers, existing and prospective stakeholders and other parties (Sharkasi & Wynn, 2011).

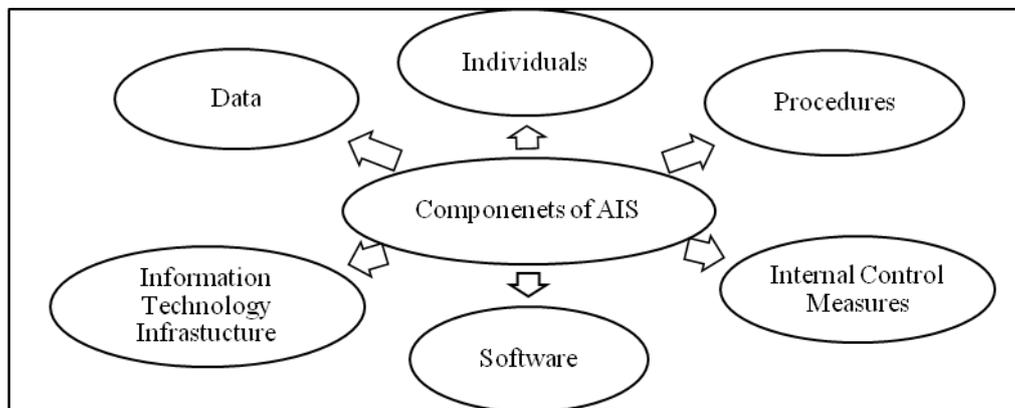
2.2 Components of the AIS

In an ordinary organisation setting, AIS consists of several elements. In accordance to

Romney and Steinbart (2006), AIS is made up of six major elements (Figure 1).

As claimed by Hall (2011), an AIS can be categorised into four main subsystems such as general ledger/financial reporting system, Transaction Processing System (TPS), fixed asset system and management reporting system. The TPS facilitates regular business activities with multiple records and messages for clients all through the organisational stage of the entity, which is a computer based system that carries out and tracks the ordinary

repetitive transactions needed for the organisation to perform (Laudon & Laudon, 2016). General ledger/ financial reporting system initiates the conventional financial declarations, such as statement of earnings, statement of financial status, statement of cash flow, tax returns and other mandatory records. This system is outlined to gather data on AIS, customers, providers, compensation, etc. Fixed assets system manages transactions involve acquiring, maintaining and eliminating fixed resources (Ganyam & Ivungu, 2019).



Source: Romney and Steinbart (2006)

Figure 1. Components of accounting information system

2.3 *The quality of AIS*

The criteria AIS Quality stated by Susanto (2017) is that the information must be accurate, relevant, timely and complete. AIS performs an essential function, supplying information that could aid the company's administration to accomplish its roles to the fullest (Carolina, 2014). Multiple scholars have found that an organisation's success or loss in succeeding its intentions relies on the superiority of the AIS (Aldegis, 2018).

Alrabei (2014), claimed that a good and effective system must be expressed by

integrity, effortlessness, the flux of information, and multiplicity of components, other than brilliance, association and truthful outputs. Furthermore, information must be worthy of making a change in decision making by the objectives of user and problems faced by users (Gelinas, 2014). Quality of AIS has characteristics that such a system can meet or even exceed customer expectations or user of information (Sajady et al., 2008). Eppler (2006), explains the quality of AIS describes the characteristics of information that make such information more useful for the users.

The quality of accounting statistics denotes the worth of the result produced by the information system, which can be either reports or online screens (Romney & Steinbart, 2006). Dimensions of quality of AIS are identified via contingency theory and innovation diffusion theory in-depth literature review.

2.4 Underpinning theories of quality of AIS

2.4.1 Contingency theory

Contingency theory states that one technique may not be worked in another context (Ayman et al., 1995) As per the contingency theory, AIS must be created in a flexible manner in considering the organisational and environment factors (Samuel, 2013). To improve the performance of the companies, executives of the companies ought to give a specific consideration to their utilisation of AIS, taking care to receive the systems best match to their extraordinary situations (Ganyam & Ivungu, 2019).

2.4.2 Innovation diffusion theory

Diffusion theory explains why and how new technology is spreading (Rogers, 2003). There are five features of innovation diffusion theory namely, relative advantage, compatibility, complexity, trial-ability and observability. Diffusion studies have illustrated that advancements affording benefits, compatibility with existing practices and convictions, less complexity, potential trial-ability, and perceptibility, will be more broadly and quickly diffused than an innovation with the cluster of inverse characteristics. Accordingly, it can be identified that two qualities of AIS which are system quality (relative advantage, complexity and trial-ability) and information quality (compatibility and observability), are

delineating in the innovation diffusion theory (Dandago & Rufai, 2014). Innovation diffusion theory as an underlying the subject matter of accounting information system on reporting quality (Robert & Agada, 2016).

Considering the contingency theory and innovation diffusion theory and related previous researches, system flexibility, system sophistication, effectiveness of the system, and system control are identified as dimensions of quality of AIS. The AIS flexibility can be viewed as the ability of an information system to react to the fluctuating technology and business atmosphere (Ramaraj, 2010). Ramaraj (2010) further expressed that system flexibility is the capability to respond and adjust to floating business conditions inside and outside the organisation.

According to Gorla et al. (2010), system sophistication denotes a feasible system that is simple to use, well documented, encompasses a quick turnaround time and uses new technology empowering user-friendliness of systems. A system with advanced sophistication (that means, one that uses modern technology and provides user-friendly interfaces) will lead to extend institutional impact in terms of supplier switch/search costs since suppliers are comfortable in utilising easy-to-use systems. Because of the firm's user-friendly and well-integrated technologies, as well as the short response times, this system would be cost-effective for the suppliers handling the company's orders. Furthermore, a system with higher sophistication reveals increased profitability due to the high integration of activities possible with Enterprise Resource Planning (ERP) and Supply Chain Management (SCM) solicitations. (Gorla et al. 2010).

As stated by Gelinas (2014), effectiveness concerned with materials that is significant and applicable to the market process and that is conveyed in a timely, accurate, trustworthy and accessible mode. Here the researcher also has abled to find that effectiveness of the system is at a high level within the companies. An effective AIS as noted by Yvonne and Nizam (2018), shows several major functions such as infromation gathering and maintenance, accounting systems and knowledge administration, data control and data generation. Numerous variables influence the efficiency and viability of AIS (Shagari et al., 2017).

Companies have been obliged to use AIS to stay competitive due to the rapid growth of IT, the availability of user-friendly accounting software, and growing rivalry, whereas challenges to AIS are unavoidable in the dynamic environment. In this scenario, security controls of accounting information systems are critical to the organisations (Rajeshwaran & Gunawardana, 2009).

2.5 Return on assets

Return on assets (ROA) demonstrates the company's capability to make profits before leverage, rather than by utilising leverage. As specified by Heikal et al. (2014), unlike other profitability ratios, for instance, return on equity (ROE), ROA, dimensions contain entire resources of a corporation, together with those ascend from creditors' obligations and from contributions by stakeholders. Therefore, ROA indicates how well the management uses the company's resourses to engender benefit, but is normally less of stakeholder concern than any additional financial proportions (Heikal et al., 2014).

2.6 Hypotheses formulation

The integration of elements of both physical and non-physical which are interconnected and inter-related with each other to process the monetary transactional data into monetary information is commonly known as AIS (Carolina, 2014). Further, Carolina (2014) explained that to what extent the consumers of financial statistics are satisfied with the information generated by the AIS has been the main measure in assessing the quality of information system.

Flexilbilty as the capability against changes aligned with forthcoming organisational needs (Ramazani & Allahyari, 2013). Similarly, Palanisamy and Sushil (2003) affirmed that system versatility is characterised as the capacity of information systems to adjust or evolve and adapt in react to recent situations and comfort in maintaining the quality components of such systems. John and Orio (2015) and Sajady et al. (2008) concluded that more sophhicticated system is positively influence to the overall performance and the quality of the corporations. Wilkinson et al. (1999) noted that, a powerful AIS conducts many core tasks, such as data processing, data maintenance, knowledge supervision and information generation, which have a beneficial impact on organisations' financial efficiency and quality reporting. Detective controls aid with tracking the presence of damage and security violations after a device has been breached. Corrective controls are used to aid in the recovery of damage or to reduce the negative repercussions of its occurrence (Rajeshwaran & Gunawardana, 2009).

Borhan and Nafees (2018), have scrutinised the effect of AIS on financial profitability of selected commercial banks in

Jordan. Under the survey, discoveries highlight that there was a substantial impact of AIS on the financial profitability of bank. Further, Akanbi and Adewoye (2018), examined the effect of AIS adoption on the monetary performance of commercial banks in Nigeria. According to the findings, AIS deployment positively correlates with all performance measures. (ROCE, ROA, ROTA, GPM and NOP). Moreover, Borhan and Nafeez, (2018) studied the influence of AIS on banks attainment in Jordan. As per the findings AIS has a substantial impact on banks success.

Based on preceding studies, the present research has identified several dimensions to measure the effect of AIS quality on financial performance of listed companies of Sri Lanka. Hence, the present research has formulated the following scientific hypotheses.

H₁: There is a positive significant effect of system flexibility of AIS on financial performance of listed companies of Sri Lanka.

H₂: There is a positive significant effect of system sophistication of AIS on financial performance of listed companies of Sri Lanka.

H₃: There is a positive significant effect of system effectiveness of AIS on financial performance of listed companies of Sri Lanka.

H₄: There is a positive significant effect of system control of the AIS on financial performance of listed companies of Sri Lanka.

H₅: There is a positive significant effect of Quality of AIS on financial performance of listed companies of Sri Lanka.

3 Methodology

All the listed companies in the Colombo Stock Exchange of Sri Lanka computerised accounting system. Therefore, the study considered all companies as a population of the study. There were 290 companies listed under

twenty (20) business sectors in the Stock Exchange of Sri Lanka (Colombo Stock Exchange, 2019). Out of the population, 165 companies were selected using proportionate stratified random sampling technique representing all the business sectors. The sample size is calculated using the sample size calculator in the web using a 95% confidence level and 5% confident interval (Survey System, 2019).

For checking the hypotheses of the study, both primary and secondary data were collected. Survey was carried out by means of a self-administered questionnaire to explore and assess the quality of AIS on the financial performance of chosen publicly traded companies. The relevant data were collected from Accounting Head, Manager, Financial Manager or Financial Head of selected companies' presence and by sending Google Forms to them through emails. The questionnaire was classified under main dimensions of AIS quality, such as system flexibility, system sophistication, effectiveness of the system and system control. However, such companies' financial performance was evaluated by ROA from annual reports published in 2018/2019 of the selected companies.

Every variable in the research model was analysed by using descriptive statistical method (mean, standard deviation). Decision criteria are shown in Table 1.

Pearson correlation was piloted to evaluate the intensity and direction of the relationship quality of AIS and financial performance of listed companies. Multiple regression analysis was applied with the help of SPSS to provide the pattern of relationship

between the set of the predictors and the outcome.

Table 1. Decision rule

| Decision Criteria | Decision Attributes |
|--------------------|---------------------|
| $1.0 < X \leq 2.5$ | Low level |
| $2.5 < X \leq 3.5$ | Moderate level |
| $3.5 < X \leq 5$ | High level |

4 Findings

Respondent profiles and features of AIS in the collected companies are shown in Table 2. Eight features have been discussed in terms of the market of providing services, the duration which the company has been established, the extent of accounting function of the company being outsourced, time period which the company started to use AIS, type of accounting software package being used, the most influencing factor to choose appropriate type of AIS, the most influencing reason to decide to establish AIS and finally, the most effective security system being used by the companies. On the basis of gathered information, out of 165 companies, most companies are providing their services only to the domestic market, whereas a smaller number of listed companies are accommodating services to domestic and international markets. Moreover, the most of listed companies adopt with internally developed accounting software rather than

outsourcing from external parties. As per the results, many companies are using ERP and Sage as their prominent accounting software. In the meantime, the study findings demonstrate a large percentage of respondents agreed that strong password systems are used to identify individuals as authorised users of the system.

The reliability of internal consistency about independent variables is examined with Cronbach's Alpha test (Table 3). The test results suggest that each variable's internal dependability is greater than 0.7. Frequency analysis presents that 90.9% of respondents have positive attitudes towards the quality of AIS used by them to record their financial transactions. In order to descriptive statistics, all independent variables of the quality of AIS are higher level.

As per the study results, system flexibility has a mean value of 4.07 and a standard deviation of 0.68. According to the responses, the system flexibility is at a high level. The reason for the high level of system flexibility is that the AIS usually provides information in formats that are easy to review. Moreover, AIS improves the possibility of comparing the company's performance with itself and similar firms over time and provides more up-to-date data.

Table 2. Respondent profiles and features of AIS in the companies

| Classification | No. of Respondents |
|---|--------------------|
| The Market which the service provided | |
| Only Domestic Market | 142 |
| Only International Market | 0 |
| Both | 23 |
| Number of Years that the Organization Established | |

| | |
|---|-----|
| 1-5 years ago | 7 |
| 6-10 years ago | 14 |
| 11-15 years ago | 30 |
| 16-20 years ago | 51 |
| More than 20 years ago | 63 |
| The Extent of Accounting Function being Outsourced | |
| Fully Outsourced | 5 |
| Partly Outsourced | 34 |
| Not Outsourced | 126 |
| Number of years that the company started to use AIS | |
| 1-3 years ago | 18 |
| 4-6 years ago | 47 |
| 7-9 years ago | 57 |
| More than 10 years ago | 43 |
| Type of Computerized Accounting Software Package | |
| E-Finance | 21 |
| Tally | 17 |
| Sage | 30 |
| QuickBooks | 8 |
| ERP | 34 |
| Other | 55 |
| The Most Influencing Factor in Choosing AIS | |
| Your Business Size | 30 |
| Acceptance by users | 41 |
| Compatibility | 29 |
| Price | 41 |
| Other | 24 |
| Reasons for the Decision to Establish the AIS | |
| To Minimise mathematical and arithmetic error | 55 |
| To remain competitive | 35 |
| You felt it would be beneficial | 19 |
| To decrease paper work | 51 |
| Others | 5 |
| Security System | |
| Password System | 78 |
| User access privileges | 24 |
| Segregation of duties | 19 |
| Monitor system activities | 30 |
| Other | 13 |

(Source: Survey Data)

Table 3. Cronbach's alpha value mean and standard deviations for variables

| Variables | Cronbach's Alpha Value | Mean | Standard Deviation |
|-----------------------------|------------------------|------|--------------------|
| System Flexibility | 0.796 | 4.07 | 0.68 |
| System Sophistication | 0.740 | 4.20 | 0.64 |
| Effectiveness of the System | 0.828 | 4.25 | 0.65 |
| System Control | 0.710 | 4.34 | 0.57 |
| Overall AIS Quality | 0.901 | | |

(Source: Survey Data)

Table 4. Correlation matrix among the independent and dependent variables

| Variables | Financial Performance (Correlation r) | P value |
|-----------------------------|---------------------------------------|---------|
| System flexibility | 0.333 | 0.000 |
| System sophistication | 0.394 | 0.000 |
| Effectiveness of the system | 0.406 | 0.000 |
| System control | 0.239 | 0.002 |
| Overall AIS Quality | 0.428 | 0.000 |

(Source: Survey Data)

According to the responses (Table 3), system sophistication is at a high level. The reason for the high level could be the integration of the AIS with the existing internal control system of the company and the performance of AIS is easy to adopt by users of the system. System control is also at a high level as the companies use several methods to secure their information such as password systems, security rules etc.

4.1 Correlation analysis

According to the Pearson correlation results of the listed companies in Sri Lanka, the Quality of AIS is significant positively correlated with financial performance, as the coefficient of correlation (r) value is 0.428, and the Significance Level (P) is 0.000 (Table 4).

4.2 Multiple regression analysis

Significant values of system flexibility, system sophistication and effectiveness of the

system are less than 0.05, while the significant value of system control is more than 0.05 (Table 5). It indicates that all variables except system control significantly affect the financial performance of the listed companies of Sri Lanka. As per the result of multiple regression analysis, the combined effects of the system flexibility, system sophistication, effectiveness of the system and system control on financial performance which was calculated by ROA indicate that R^2 and adjusted R^2 values are 0.215 and 0.195, respectively. It shows that around 21.5% of the variation of financial performance (ROA) can be explained by the quality of AIS of the listed companies in Sri Lanka.

4.3 Multicollinearity

Multicollinearity is the incidence of high strength of association across independent variables in a multiple regression model.

According to the Multicollinearity analysis, VIF (Variance Inflation factor) is less than ten or Tolerance (1/VIF) is greater than 0.1, which indicates that there is no perfect multicollinearity between independent variables as system flexibility, system sophistication, the effectiveness of the system and system control.

In keeping with the consequences of Pearson's Product Movement correlation analysis of system flexibility, system sophistication, effectiveness of the system and system control along with the financial performance, the correlation coefficients are 0.333, 0.394, 0.406 and 0.239 correspondingly. It demonstrates that the positive relationship at 1% ($p=0.000$). As per the outcomes of simple regression analysis between the overall quality of AIS and financial performance, the regression coefficient (b) is 0.614 which is significant at 1% (Sig. $t = 0.000$). Therefore, the data support the hypothesis that there is a positive substantial effect of AIS quality on Financial Performance in listed companies in Sri Lanka. In relation to the multiple regression analysis, system flexibility, system sophistication and effectiveness of the system have significant effect on financial performance, but system control is negative insignificant variable. The purpose of doing the multiple regressions is to find out overall combined effect of independent variable on dependent variable.

For the purpose of assess the model fitness, insignificant variable must be detached. Therefore, it can be concluded that there is combined effect of system flexibility, system sophistication, and effectiveness of the system have significant effect on financial

performance in accordance with the multiple regression analysis.

Table 5. Multiple regression results

| Independent Variables | Dependent Variable: Financial Performance |
|-----------------------------|--|
| β_0 | (0.000) [0.448] |
| System Flexibility | 0.164* (0.047) [0.091] |
| System Sophistication | 0.209* (0.046) [0.121] |
| Effectiveness of the System | 0.285* (0.021) [0.143] |
| System Control | -0.156 (0.126) [0.135] |
| F | 10.961** (0.000) |
| R | 0.464 |
| R ² | 0.215 |
| Adjusted R ² | 0.195 |

Notes: Significant level is indicated by **, * for 1% and 5% respectively. P-values are shown in parentheses, and standard errors are reported in square brackets.

(Source: Survey Data)

5 Discussion and conclusions

The study found that most of listed companies adopted AIS to undertake day-to-day accounting tasks, and the extent of quality of AIS is at a high level. Further, it is found that

dimensions of AIS quality, namely, System Flexibility, System Sophistication and Effectiveness of the System, are positively related to the companies' financial performance. System flexibility is found to have a significant positive impact on financial performance with the b value of 0.371, which is significant at 5% (Sig.0.000). Therefore, alternative hypothesis accept which indicates that 'there is a significant effect of system flexibility on financial performance of listed companies in Sri Lanka'. And it can be concluded that system flexibility is a significant predictor of financial performance. Similar findings are observed in following previous studies. Flexibility as the ability against changes aligned with future organisational needs (Ramazani & Allahyari, 2013). Similarly, Palanisamy and Sushil (2003) define system flexibility as the capacity of the information systems to change or to adapt and adjust in response to new conditions. Further, system sophistication is found to have a significant positive impact on financial performance with the b value of 0.460, which is significant at 5% (Sig.0.000) which is less than $\alpha = 0.05$ thus null hypothesis is reject and alternative hypothesis accept which indicates that 'There is a significant effect of system sophistication on financial performance of listed companies in Sri Lanka'. And it can be also concluded that system sophistication is a significant predictor of financial performance. John and Orio (2015), and Sajady et al. (2008) concluded that a more sophisticated system positively influences the overall performance and quality of the firms. Similarly, it can be found that effectiveness of the system have a significant positive impact on financial performance with the b value of 0.478, which

is significant at 5% (Sig. 0.000). According to Wilkinson et al., (1999) an effective AIS performs several key functions such as data collection, data maintenance, knowledge management, and information generation, all of which have a positive impact on an organisation's financial performance and quality reporting. As per results of simple regression analysis between system control and financial performance, system control is found to have a significant positive impact on financial performance with the b value of 0.316, which is significant at 5% (Sig.0.000) which is lowest b value and it can be concluded that system control has less effect on financial performance by comparing to other variables. Detective controls assist in determining the incidence of harm and security breach after a system has been exploited. Corrective controls are used to mitigate the threat's impact after a loss has occurred. As a nutshell, the intention of corrective controls is to facilitate in the recovery from damage or the lessening of the negative consequences of its occurrence (Rajeshwaran & Gunawardana, 2009).

However, even though System Control is insignificant as per the multiple regression analysis, it is negatively associated with financial performance. It is concluded that enhancing Quality of AIS leads to raise the return on assets (financial performance). The study supports the Contingency Theory and Innovation Diffusion Theory. Moreover, the companies ought to maintain up to date sophisticated technologies while balancing system flexibility and control.

5.1 Contribution of the study

The quality of AIS was studied underpinning contingency theory, Innovation Diffusion

Theory, and relevant literature. The study provides deeper understanding about the quality of Accounting Information System towards financial performance, by paying special attention to listed companies of Sri Lanka. In addition, it contributes to how quality of AIS impacts on actual financial performance which was measured from the companies' annual reports. The research also provides immense knowledge pertaining to how Quality of AIS of listed companies are managed to improve the financial performance for the benefit of stakeholders.

5.2 Implication of the study

In the Sri Lankan economy, the listed companies' performance a crucial role. Essentially, advanced accounting management systems are heavily consumed by all the listed organisations for real-time data analysis rather than employing manual systems to document financial transactions. At the functional stage, the findings of the present research analysis would be significant from the viewpoint in accountants of those organisations.

Maintaining a high level of accounting information system quality will be an advantage to raise the financial performance of listed companies of Sri Lanka. As per the indicators of system flexibility, results show that comparability has scored a moderate level of perceptions. Hence, the management shall consider improving their AIS by making convenience to compare the results with other similar companies in the industry and the same company within previous periods. Moreover, in the system sophistication, the indicator of response time has scored moderate level attitudes by the respondents towards a response time of AIS for online inquires. Therefore, the management of the listed

companies must pay more attention towards maximising response time for online inquiries of AIS users. Simultaneously they must diminish the time lag between data input and output of AIS. The management can adapt the latest updates of technology such as system updates and software updates. If there are any system errors or failures, it should be immediately reported to the relevant sections such as MIS division, IT division etc. It supports to increase the response time and enhance the AIS users' relationship with the system developers of the company. Further, consequences and suggestions from the present research allow accountants, auditors, management, and IT consumers to better understand, optimise, and maintain consistency in order to come across the achievement of their visions.

5.3 Directions for future studies

In Sri Lankan context, the small and medium-sized corporations are not expressly associated with Accounting Information Systems to monitor and record their transactions. Therefore, the present study can be spread over by them to consist with AIS and to boost the financial performances. Moreover, the dimensions considered in this study such as system flexibility, system sophistication, the effectiveness of the system, and system control can be used to evaluate the quality of AIS.

Comparative assessments should be carried out in order to investigate the significant gaps between developing and developed nations in terms of the appropriateness and utility of applied accounting information systems. Much of the accounting information systems were analysed little by little (section by section) by previous scholars, but this analysis was conducted

comprehensively (holistic). As a result, any firm may use this questionnaire to assess the quality of their AIS and its overall impact on financial performance.

Eventually, considering the present research as a base, a future study could be undertaken by triangulation method to gain a more in depth understanding of the quality of AIS and organisation performance in a broader perspective through the eyes of Chief Accountants or Financial Controllers.

5.4 Limitations of the study

The study was limited to investigate the effect of AIS Quality on Financial Performance of 165 listed companies out of 290 companies which are listed at Colombo Stock Exchange. This research can be applied to the companies which are not listed in the Colombo Stock Exchange too.

Data were collected via Google Forms which were sent to the particular listed companies. If the researchers could personally visit to the selected companies, rather than sending Google Forms, it could be possible to gather more accurate results and the actual conditions of the AIS used by them. This provides for future insight for researchers to conduct their research within an appropriate time framework.

Due to the sensitivity of financial information, some companies initially refused to provide information. However, after consulting and explaining the research purpose they finally accepted to respond to the questionnaire. Some respondents were also unwilling to respond to the questionnaire with reasons that they had no time due to their work load.

Moreover, it focused only on one measurement of financial performance which

is Return on Assets. It would be interesting to use other measurements of financial performance such as Growth in sales, Growth in Return on Sales (ROS), Growth in market share and Return on Investment (ROI) as suggested by Ameer and Radiah, (2012).

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