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C O N T E N T

"An Analysis of The Impact of Accounting Information Systems on The Performance of Companies." Evidence From a Small Island Developing State.

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ABSTRACT: Accounting information system (AIS) is a crucial tool for managers striving to preserve a competitive advantage in the face of rapid technological innovation. This research investigates the impact of AIS on the performance of companies. It has been found that implementation of AIS, effectiveness of AIS, accuracy of AIS, and reliability of AIS all contribute to the improvement of the performance of companies in Mauritius. The principal purpose of this research is to investigate the conceptual and theoretical foundations as well as empirical research pertaining to the impact of AIS and companies' performance. Previous research demonstrate that AIS do help the enhancement of company performance. Tests such as Pearson Chi-Square, the test for Normality, mean, mode, and median, the hypothesis summary test, and Spearman correlation using Statistical Package for the Social Sciences (SPSS) package were conducted. It was concluded that AIS do play a significant role in enhancing the performance of companies in this modern world by supplying the data necessary to make appropriate and effective decisions for the success and growth of businesses.

KEYWORDS: Accounting Information Systems, Implementation, Effectiveness, Accuracy, Reliability, Performance

Introduction

It is of no doubt that all organisations including non-profitable firms, must have a fully functional and reliable accounting department in order to have proper control. However, in this modern era, the 21st century, the world is rapidly changing, and people are trying their best to adapt their living style according to the modernisation of technology. The accounting sector is of no exception. With the demand of this modern era, traditional paper-based accounting has been relatively rare, and it can mostly be said that the accounting world is now mostly depending on AIS. All information is now being generated and stored using AIS, but data are still being input by a human. Organisations are using financial information that has been processed by AIS to make decisions about how to improve the performance of the company.

Nowadays, organisations focus on methods which they can use to maximise profits, market share and quality, especially with the available modernised technology. One of the major use of technology is AIS. There is numerous previous research that has been conducted worldwide on the impact of AIS on organisational performance such as for example Khairuddin (2010), Kouser (2011), and Sajady et al., (2008).

However, it is found that there is limited research in small island economies such as Mauritius (Padachi 2012). Nevertheless, it can be said that there exists a gap in the literature about how AIS has contributed to the improvement of the performance of companies in Mauritius. Indeed, there are various other studies about accounting in SMEs and traditional accounting, but those studies lack the specification of AIS's impact on the performance of companies in a small island developing state context.

This study will specifically focus on how AIS has contributed to improving the performance of companies using four main factors such as implementation, effectiveness, accuracy and reliability. Most importantly, this study will focus only on companies in Mauritius and will analyse to what degree the modernisation of technology has impacted those companies.

The aim of the study is to analyse factors of AIS which contribute to improving the performance of companies in Mauritius. Through this study, four factors such as implementation, effectiveness, accuracy and reliability will be described and tested in order to determine the extent to which they contribute towards improving the performance of companies. Also, this study will be used to analyse how the implementation of AIS has been a success in most companies in Mauritius, a small island developing state forming part of the African region and how effective and accurate it has been in improving performance.

Literature Review

The Contingency theory

Contingency theory is required to assess environmental factors such as competition intensity, strategy, and environmental uncertainty, which can lead to a more effective management accounting system. The interaction and implementation of management AIS and business strategies have an impact on managerial performance. Implementing a suitable strategy necessitates the use of trustworthy data for decision making and these data are provided by the management AIS. Management AIS necessitates the use of information technology (Abernethy & Guthrie, 1994).

The McLean and DeLone Model

A model related to information systems was made by 'McLean and DeLone', which has since been used in varieties of studies around the world (Al-Okaily, 2021; Wieder &Ossimitz, 2015 and Popovic et al.,2012).The model was first introduced by DeLone& McLean (1992), who identified categories that have been referred to as the common dimensions of information system success, such as system quality, information quality, and usage level (DeLone& McLean, 1992).

Implementation of AIS on the performance of companies

When the ideas of organisation and performance are brought together, it arrives at the following definition of organisational performance: "the result of the successfully coordinated activities within an organisation." It's possible to argue that it has something to do with how effectively a well-coordinated team of individuals carried out a particular task. It refers to the manner in which a corporation is organised in order to achieve its goals as well as the means by which it does so (James, 2012).

In their study, Jaleel & Alfartoosi (2022) mentioned that nowadays as technology is continually evolving and providing new ways to improve and simplify people's lives. In the future, businesses should embrace the efficient use of AIS to get timely, accurate, and useful data to improve decision-making. It follows that Jaleel &Alfartoosi (2022); Kurniawati & Saputra (2019), Klinsukhon and Ussahawanitchakit (2016) and Jarah& Iskandar (2019), found a statistically significant correlation between AIS implementation and companies' performance in their studies. Implementation of AIS also plays an important part in the decision-making process at managerial levels (Gebremedihin, 2019). To add on, Chaturvedi & Sharma (2021) stated that AIS has been an essential tool in information and technology adoption because it is not only based on financial controls but has also had a substantial impact on performance improvement assessment. This is in addition to the fact that AIS is based on financial controls. As such, the following hypothesis is proposed:

H1 : The implementation of AIS has a positive impact on improving the performance of companies

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Accuracy of AIS on performance of companies

It is possible to refer to AIS as being accurate if it has strictly complied with all applicable accounting standards and regulations, as well as any changes that may occur to any of those standards (Kohlbeck& Warfield, 2010). In addition to Kohlbeck& Warfield (2010), Nakitende (2019) referred to accuracy as the faultlessness of reports with all constraints and the inherent exactitude of the management process. Nevertheless, Taiwo (2016) mentioned in their research that information and communications technology (ICT) has been used to improve the performance of organisations by providing accurate accounting data and information, which has helped to improve financial reports.

Moreover, another study that was conducted by Bukenya (2014) concluded that there is a significant link between the accuracy of AIS and financial performance. On the same note, it was mentioned that accuracy was helpful in making decisions because the higher the quality of the financial report is, the more accurate it is, which in turn boosts the confidence of managers to rely on the information contained in the report.

In addition, Abu-Ekeret al. (2019) stated that accuracy facilitated decision-making by gauging the quality of accounting information and establishing a connection between the expression of the quality of accounting information that was more accurate and higher levels of quality in the expectations for the future. As a result, the following hypothesis is proposed:
H 2 :Accuracy of AIS has a positive relationship with improving the performance of companies

Effectiveness of AIS on performance of companies

Huber (1990) stated that one of the effectiveness of AIS is to increase system integration which is to improve internal communications throughout an organisation. According to Stankovic et al.,(2012) if an individual really want to see the effectiveness of AIS, they have to analyse the firm's superior performance in managing its resources for operations, investment and financing undertakings.

Teru et al.,(2017) stated that AIS does have an effect on fulfilling a company's mission, consideration and sensitivity to its environmental actions, and capacity to understand and respond to market demands from different perspectives. AIS helps in classifying sufficient, accurate, and relevant data in the quest to taking concrete decisions and in controlling business activities.

Furthermore, Jaleel and Alfartoosi (2022) claimed that efficiency is also determined by the links and controls of input and output of the AIS. It indicates efficiency when the value of output information exceeds the value of its data inputs. The AIS effectiveness is linked to the extent to which the system is intended for the general public.

Adrian-Cosmin (2015) mentioned that AIS can generate financial accounting, both valid and dependable. This corroborates with the study by Jaleel &Alfartoosi (2021) where AIS was considered to be a prediction tool for future events and phenomena even before making any decisions. Accordingly, it was concluded that, particularly in the modern era, the attributes of accounting information systems, such as relevance, accuracy, and efficiency, do have a major influence on decision-making (Jaleel &Alfartoosi, 2021). Hence, the following hypothesis may be deducted:

H3:   The effectiveness of AIS has a significant relationship with improving the performance of companies

Reliability of AIS on performance of companies

As a fundamental aspect of management, system assurance is essential to verify that the data generated from AIS is reliable. Conversely, an unstable system may display a variety of negative side effects, such as the inability to prevent unauthorised access to the system, leaving it susceptible to viruses, hackers, and loss of data confidentiality. Loss of data security includes corrupted, insufficient, and falsified information, and genuine support difficulties causing unforeseen bad consequences from system modifications, such as breakdown of access to system administrators, loss of information privacy, or loss of information credibility (Boritz, 2005; McPhie et al., 2000 and Topash, 2014).

Maines&Wahlen (2006) described reliability as an essential characteristic of AIS. According to the authors, reliability was important as it helped in decision-making and represented the extent to which information was unbiased, error-free as well as representationally faithful. In addition, Jarah and Jarrah (2022) stated that reliability was a term which referred to data and information that are devoid of inaccuracies and that accurately reflect economic conditions and occurrences.
Karuna (2009) reported that reliability is an important attribute of financial accounting data. To add on, Khan& Ahmed (2016) stated that reliability allowed consumers to safely rely on the quality of the information provided and that this information was verifiable, faithfully represented and judicially error-free as well as bias-free.

Additionally, according to prior research, AIS quality is positively connected with decision-making quality because it reduces the burden of the decision-making process, hence improving its quality (Gonzales et al, 2015; Arnott and Pervan, 2015). Nevertheless, Al-Hanini (2015) concluded that there is a positive and significant relation between the reliability of AIS and business performance. As a result, the following hypothesis is proposed:

H 4 :   Reliability of AIS has a positive impact on decision-making to improve the performance of companies

Research Methodology

For this research, quantitative approach is being used as it is a source of first-hand and it helps to collect concrete and relevant data thus lowering the level of bias. For the collection of data, a self-administered questionnaire was selected. Moreover, as mentioned above, the dependent variable is the Performance of Companies, and the independent variables that will be tested are factors of AIS which are implementation, effectiveness, accuracy and reliability of AIS. For this study, the targeted population is employees from the accounting and financial firms in Mauritius. A simple random sampling was used and 214 accounting firms in Mauritius were targeted and a questionnaire was sent to all of the companies.

The questionnaire was a 'self-administered' one as it was delivered online; through emails and some were sent on WhatsApp, and some were replied to in person. Moreover, the questionnaire considered only closed-ended questions with simple, easy-to-understand and direct questions and the respondents had to choose from a limited number of potential answers. A pilot test was also carried out to ensure that the structure and phrases used were simple to read and double-barrelled questions were eliminated. Both Excel and SPSS Software Statistics 22 were used to analyse the data collected.

The most commonly used parameter is Cronbach's coefficient alpha. The average correlation between all the scale's items used in this study was above 0.70, indicating that they were all consistent (Sekaran and Bougie, 2010).

Numerous challenges and limitations have been encountered and tackled in order to complete this study. Firstly, there is limited research that has been done on the impact of AIS in Mauritius and this has proved to be disadvantageous as this study is based on companies in Mauritius. Moreover, some respondents of the questionnaire did not fully understand the concept of the survey and still decided to answer it even though the company they work with, do not use AIS. Furthermore, this study targeted at least 214 responses but received only 150 valid responses.

Findings

Demographics Profile

The number of respondents consisted of 73 males and 77 females concluding that both males and females were willing to answer the survey. Among the 150 respondents, 65 are aged between 18 – 25 years which is about 43.33%, 51 are aged between 26 – 30 years which is about 34.00%, 21 are aged between 31 – 35 years which is about 14.00% and only 13 are more than 35 years old which is the only 8.67% of the whole. It can be deduced that out of the random accounting employees, mostly young adults were willing to contribute to this survey. The majority of respondents are bachelor's degree holders which are around 46.67%, followed by master's degree holders which are around 26.67% and higher school certificate holders which are around 15.33%. Most respondents (51.33%) have less than 5 years of experience. The second was 5 – 9 years (32.00%), followed by 10 – 14 years (10.67%). The least number of respondents have more than 15 years of experience (6.00%). It can be deduced that junior employees, senior employees and interns were more willing to participle in this survey. Managers, supervisors, CEO, administrative officer and business talent were least interested in this survey. The percentages of their responses were 4.00%, 1.33% 1.33%, 0.67% and 0.67% respectively. In total, 29 companies have been using AIS for more than 10 years and only 26 companies have been using AIS for less than 1 year. It can be found that most companies in Mauritius have a piece of knowledge about the impact of AIS on the performance of companies.

The mean, mode and median have been calculated for each variable studied. Most respondents agreed to the implementation, effectiveness, accuracy, reliability of AIS and its impact on performance of companies, as the mean, mode and median are all based on the value 4 which is the coding for agree in SPSS. Hence, it was firstly concluded that the all hypotheses would be accepted, however further testing were needed to confirm this statement.

Cross-tabulation have been used for the Pearson Chi-Square test as same helps to analyse the relationship between the different variables. It was concluded that in accordance with the Pearson Chi-Square test, which was less than 5 for all the variables studied, all the hypotheses would be accepted.

A test to determine whether data is normally distributed or not was conducted, so as to decide which test would be chosen. A Kolmogorov-Smirnov test was used and the p-value for implementation, effectiveness, accuracy, reliability and performance were equal to 0.000 which is less than 0.05. It was concluded that data is not normally distributed, and a Spearman Correlation should be done

Table 1 - Spearman Correlation

			IMPLEMENTATION	EFFECTIVENESS	ACCURACY	RELIABILITY	PERFORMANCE
Spearman's rho	IMPLEMENTATION	Correlation Coefficient	1.000	.554**	.690**	.642**	.578**
		Sig. (2-tailed)	.	.000	.000	.000	.000
		N	150	150	150	150	150
	EFFECTIVENESS	Correlation Coefficient	.554**	1.000	.707**	.736**	.583**
		Sig. (2-tailed)	.000	.	.000	.000	.000
		N	150	150	150	150	150
	ACCURACY	Correlation Coefficient	.690**	.707**	1.000	.705**	.609**
		Sig. (2-tailed)	.000	.000	.	.000	.000
		N	150	150	150	150	150
	RELIABILITY	Correlation Coefficient	.642**	.736**	.705**	1.000	.589**
		Sig. (2-tailed)	.000	.000	.000	.	.000
		N	150	150	150	150	150
	PERFORMANCE	Correlation Coefficient	.578**	.583**	.609**	.589**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000	.
		N	150	150	150	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

As shown in the Gable 1 illustrating the results of the Spearman Correlation test, the independent variables and dependent variable are all positively significantly correlated. This means that **H1**, **H2**, **H3** and **H4** are accepted.

Since the correlation coefficient range from -1 to 1, it can be deduced that there is a positively strong correlation between all independent variables which are implementation, effectiveness, accuracy and reliability of AIS, and the dependent variable, which is performance of companies in Mauritius, as the Spearman's coefficient are 0.578, 0.583, 0.609 and 0.589 respectively. It can be concluded that implementation, effectiveness, accuracy and reliability of AIS have a strong positively statistical correlation with performance of companies.

Many previous findings that have been mentioned earlier support this argument such as Jaleel and Alfartoosi (2022), Kurniawati and Saputra (2019), Klinsukhon and Ussahawanitchakit (2016) and Jarah and Iskandar (2019), who found a statistically significant correlation between AIS characteristics and companies' performance in their studies.

Conclusion

Accounting is an important aspect of every company. However, companies nowadays have to adapt with the changing technological working environment and make AIS a part of the company. The findings of the study concludes that AIS does have a positive impact on performance of companies in Mauritius. The independent variables, Implementation, effectiveness, accuracy and reliability of AIS, were proved to positively impact performance of companies in Mauritius. All data that were collected from the survey were analysed and all results were positive. It can

successfully be concluded that factors of AIS do impact performance of companies in Mauritius positively. It is recommended for a small island developing state like Mauritius to do more awareness programmes about the positive impact that AIS has on performance of companies. Moreover, it is recommended that most companies must now include AIS as part of their operations. The importance of AIS must be demonstrated to everyone in the organisation especially to the younger generations of the workforce. They should be provided with training about the importance and use of AIS and this will help them to adapt quickly to the new working systems.

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