



The impact of information systems on the operations of Commercial Banks in Jamaica: A preliminary study

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Introduction #1

- In order to remain relevant, survive and thrive in a highly competitive banking industry, many banks have made significant investment in information systems (Ahmad& Alrjoub, 2014).
- The adoption of information systems (IS) can increase the efficiency and effectiveness of commercial banks' business processes, improve decision making capabilities and provide a competitive advantage (Kamel et al., 2009; Qureshi et al., 2009).

Introduction #2

- The adoption of information systems can lead to higher risk of financial losses, fraudulent and unethical acts, cyber security concerns, banking information exposures and data protection issues.
- While business processes and performance are improving, it might be achieved with greater security challenges (Sun et al., 2006)

Motivation

- There is relatively little research in this domain in Jamaica

Research Questions

- This preliminary study seeks to assess the impact of information systems on the operations of commercial banks in Jamaica, especially in the areas of staff productivity and profitable operations.
- Hence the three research questions are:
 - What is the impact of information systems on the operation of commercial banks in Jamaica?
 - What is the impact of information systems on staff productivity at commercial banks in Jamaica?
 - What is the impact of information systems on the profitability of commercial banks in Jamaica?

Definitions & Scope

- The banking act “of Jamaica” defines a financial institution as an entity that undertakes or engages in financial services which includes banking business, lending, consumer credit, transfer of money and other services.
- A commercial bank as distilled by the Bank of Uganda (2004) means “a company licensed to carry on financial institution business in a country and whose principal business consists mainly in the acceptance of call, demand, savings and time deposits withdrawable by cheque or otherwise, in the capacity of a bank, provision of overdrafts and short to medium term loans; provision of foreign exchange, participation in inter-bank clearing systems and the provision and assumption of guarantees, bonds and other warranties on behalf of others” (p. 10).

Literature Review #1

- No information system is absolutely secure. On a regular basis there are incidents of computer security breaches being reported in newspapers and other media (Yuan, 2005).
- It was reported that many firms are experiencing at least one cyber-crime that compromises the confidentiality, integrity and/or availability of data (Lines, 2015)

Literature Review #2

- Based on the types of services being offered and the types of transactions being conducted by these institutions, there can be incidences of fraudulent and unethical acts being performed both within the organizations by employees and outside by customers and other individuals.
- The likelihood of these incidences is high against the background that the corruption index report places Jamaica at 69 out of 165 countries (Ugaz, 2015).

Literature Review #3

- Technology can be an enabler to facilitate the execution of fraudulent acts.
- Interestingly, Jamaica's mobile phone penetration rate in 2015 was 129%.
- In most cases, Jamaicans gravitate to the high-end smart phones.

Literature Review #4

- Jamaica has a reasonable good world rating on the network readiness index at 83 out of 139 countries, with a score of 3.9 out of a possible maximum score of 7 (World Economic Forum, 2016).
- The network readiness assesses the degree of a society's preparation to make use of ICT infrastructure. Based on Jamaica's reasonable ranking with mobile phone penetration and its network readiness, the country should be in a good position to take advantage of information systems, whether in banking or any other industries.

Hypotheses

- Bawaneh (2014) emphasized that a well-designed computerized information system can add value to the organization by: improving the quality and reducing the costs of products or services; by reducing the amount of wasted materials; improving efficiency of operations by providing more timely information; improving decision making by providing accurate information in a timely manner, and sharing of knowledge by providing competitive advantages.
- The 3 hypotheses developed from the literature are:
 - H1: The use of information systems can have a positive impact on the operation of commercial banks in Jamaica.
 - H2: The use of information systems can improve the productivity of staff in the execution of their duties in Jamaican commercial banks.
 - H3: The use of information systems can have a positive impact on the profitability of Jamaican commercial banks.

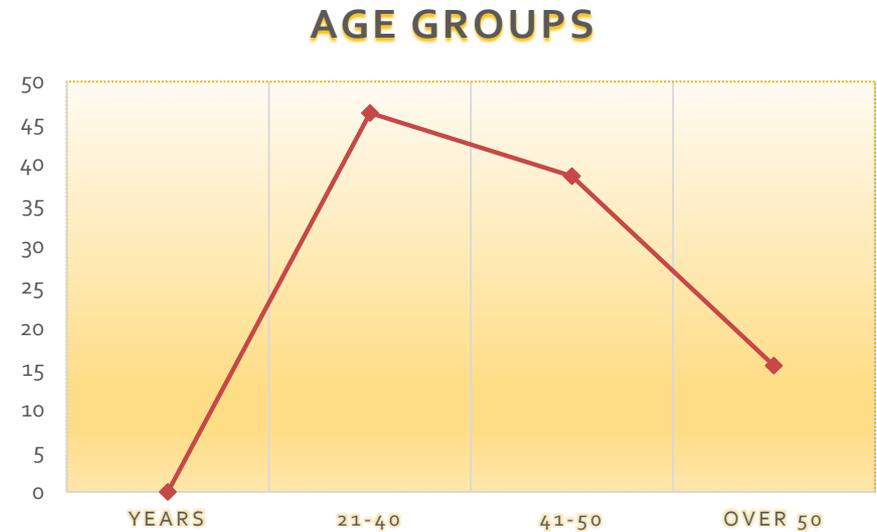
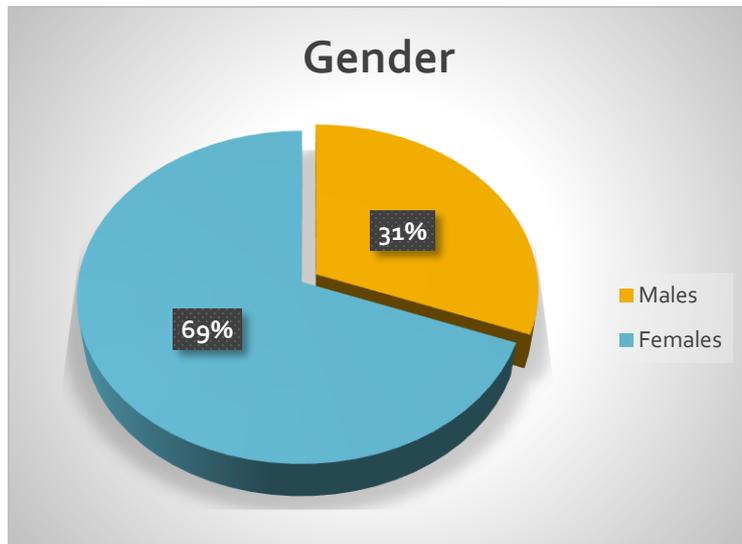
Methodology #1

- A quantitative study targeting Commercial Banks in Montego Bay.
- The targeted survey respondents were managers of the selected banks.
- Pre-test of the survey instrument was conducted.
- Face validity was the main focus of the pre-test.
- The survey instrument had 26 questions.

Methodology #2

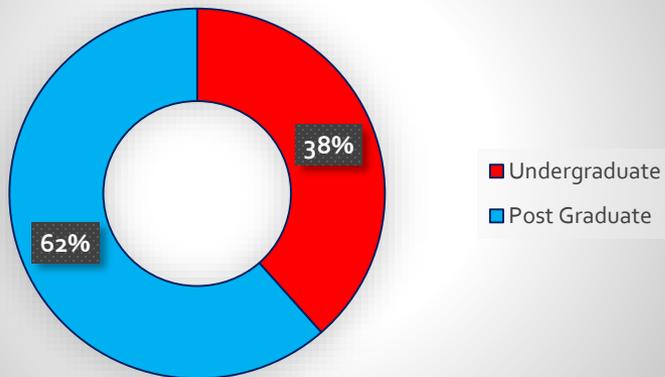
- Managers at the five commercial banks in Montego Bay were contacted via telephone;
- The survey items were anchored on a 5-point likert-type scale;
- Thirty (30) questionnaires were distributed;
- Only thirteen (13) were completed and returned;
- Statistical Package for the Social Sciences (SPSS) was used to do the data analysis.

Profile of the Respondents #1

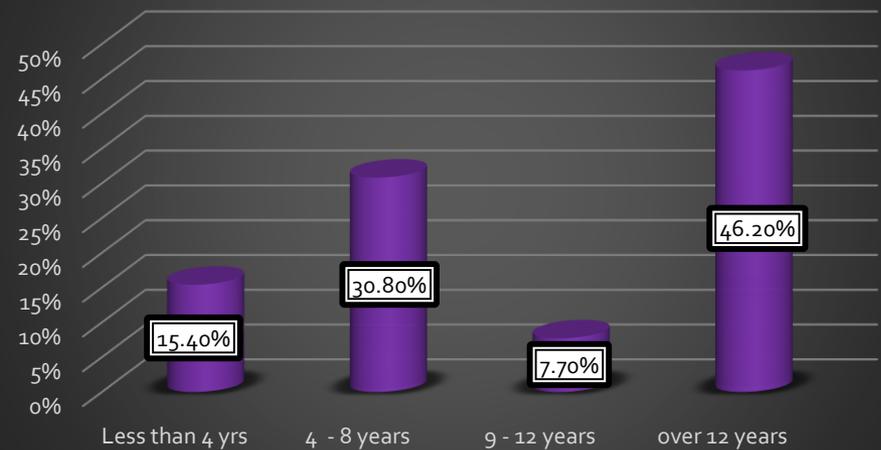


Profile of the Respondents #2

Education Level



No. or Yrs Using I.S.



Findings

- The study found a significant relationship between information systems and the productivity of staff, as well as the efficient operations of Commercial Banks in Jamaica.

Figure 1: Bank will continue services with current Information System

The bank can continue operating and rendering services to their clients with the effective use of information and communication systems?

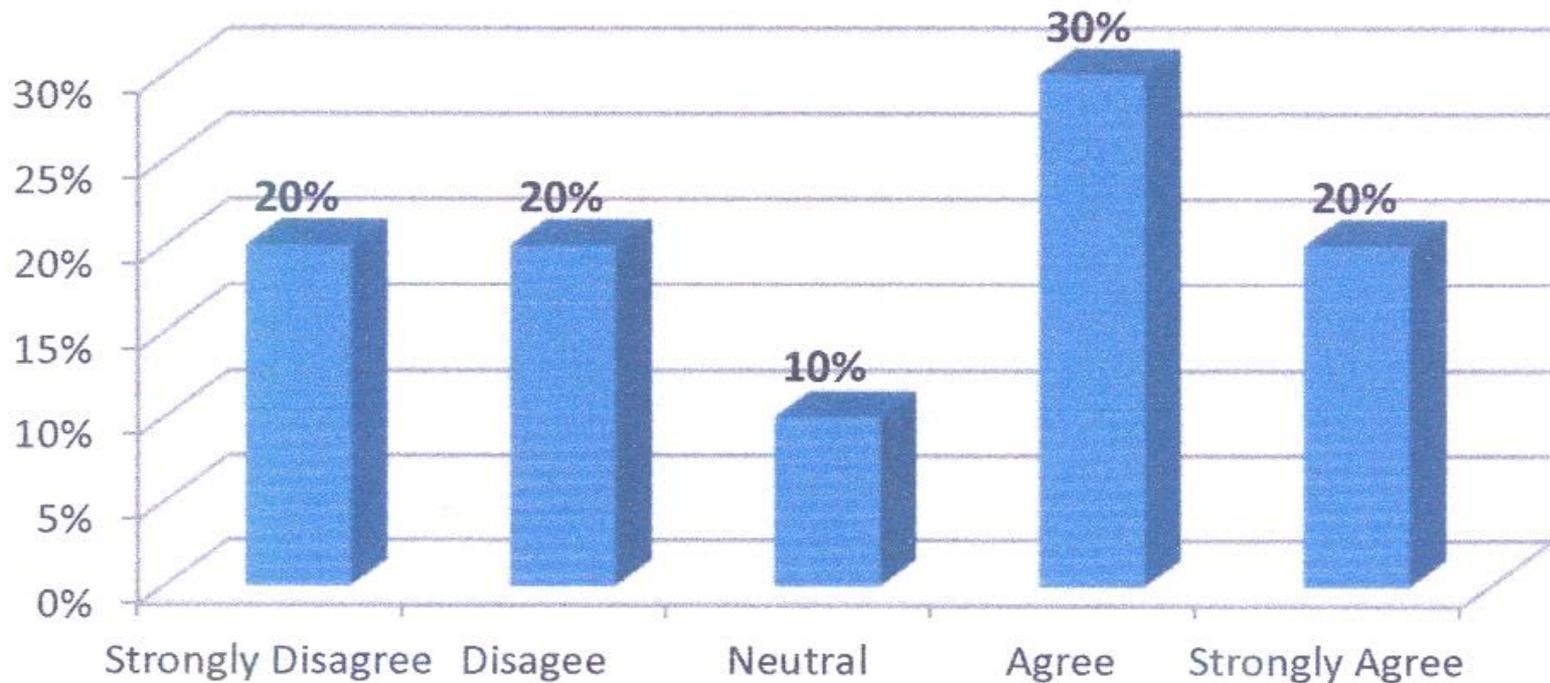


Figure 2: The Banks Dependency of the System

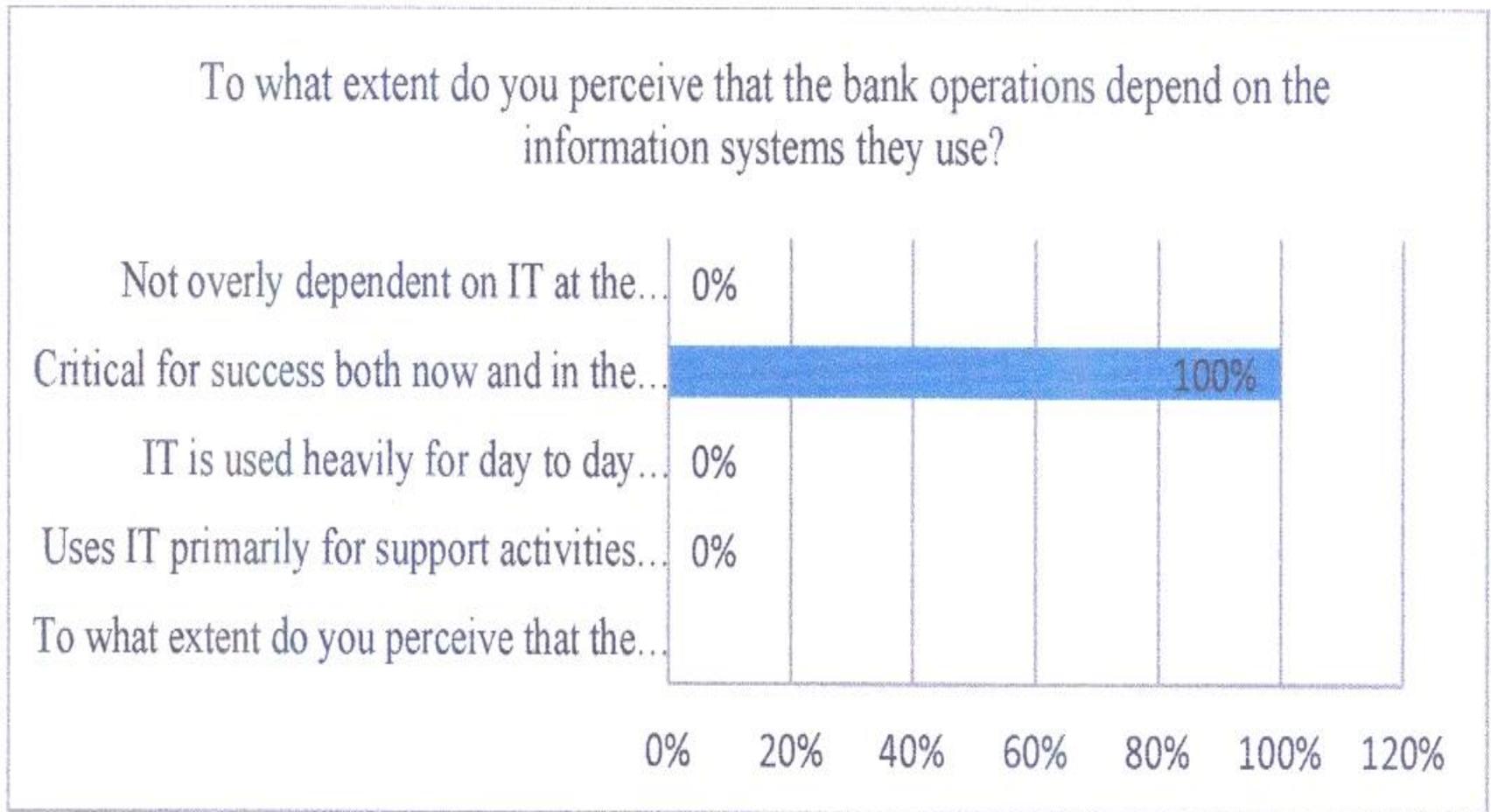


Figure 3: The #1 Reason the Bank Implemented the I.S.

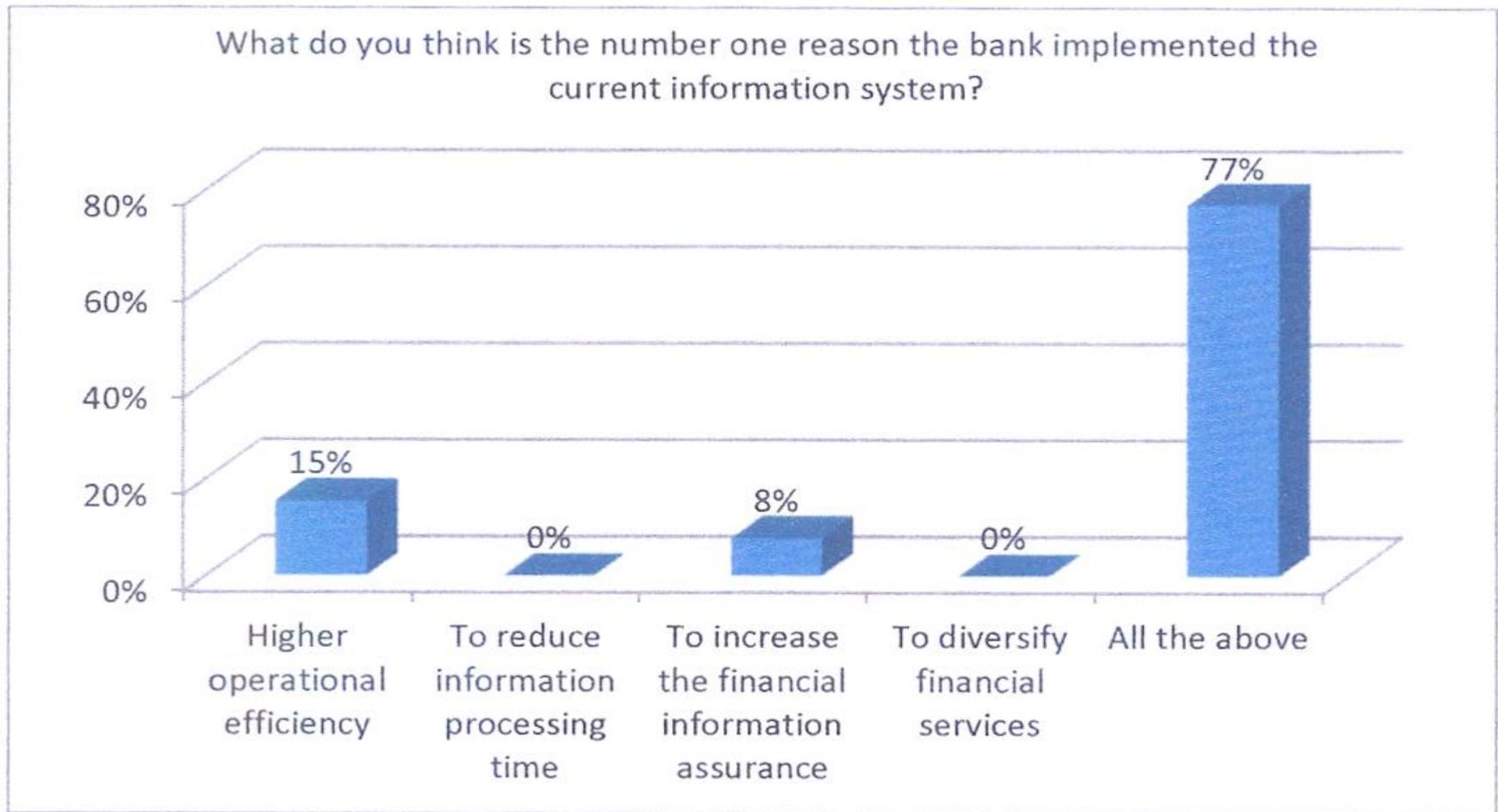


Table 1: Correlations – Efficient Operation of Bank

Correlations				
			Bank_Highly_ Dependent	Operation1
Spearman's rho	Bank_Highly_ Dependent	Correlation Coefficient	1.000	0.710**
		Sig. (2-tailed)	.	0.007
		N	13	13
	Operation1	Correlation Coefficient	0.710**	1.000
		Sig. (2-tailed)	0.007	.
		N	13	13
** Correlation is significant at the 0.01 level (2-tailed)				

Table 2: Correlations – Staff Productivity

Correlations				
			Increased_ Productivity	Operation2
Spearman's rho	Increased_Prod uctivity	Correlation Coefficient	1.000	0.587*
		Sig. (2-tailed)	.	0.035
		N	13	13
	Operation2	Correlation Coefficient	0.587*	1.000
		Sig. (2-tailed)	0.035	.
		N	13	13
* Correlation is significant at the 0.05 level (2-tailed)				

Table 3: Correlation – Profitability of Bank

Correlations				
			Increased_ Profitability	Impact_ Competitive_ Advantage
Spearman's rho	Increased_ Profitability	Correlation Coefficient	1.000	0.729**
		Sig. (2-tailed)	.	0.005
		N	13	13
	Impact_ Competitive_ Advantage	Correlation Coefficient	0.729**	1.000
		Sig. (2-tailed)	0.005	.
		N	13	13
** Correlation is significant at the 0.01 level (2-tailed)				

Discussion

- The use of information system does have a significant effect on the efficient operation of commercial banks.
- The information system helps bank staffs effectively in the performance of their duties.
- The use of information system has a positive impact on the bank's profitability.
- In relation to the use of software for financial reporting purposes, the banks' managers indicated that the main purpose of the implemented system were the ease of reporting, more accurate reporting, and reporting more quickly.

Contribution of the study

- These findings can provide useful insights to senior executives in Commercial Banks in Jamaica regarding the best strategies to employ in an effort to improve the performance and competitiveness of these institutions

Conclusion

- The study revealed that employees concur that information systems improved their work performance.
- This was supported by their indication that processing time was reduced.
- The findings revealed there was no reduction in customer complaints, however there were improvements in customer satisfaction
- It can be concluded that the information system assisted banks' staff to work more effectively in the performance of their duties, which by extension improved the efficiency of these banks.

Questions?

Thank You!