

Internal users' satisfaction of accounting information systems in banking sector: a scenario analysis of performance Sana'a city in Yemen in comparison to Nanded City in India

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Abstract

Objectives: This study aims to discover the current position of performance of the AIS used in banking sector in both India and Yemen, specially, Nanded city and Sana'a city successively, by study of internal users' satisfaction of AISs used in both countries, for the purpose of keeping stability of the AISs used in both countries as long as possible, in addition to sharing of expertise between both countries in this domain.

Methods/Statistical analysis: Descriptive approach and inferential statistics (parametric and non-parametric tests) had been used for achieving the above stated objectives, and testing hypotheses of the research work.

Findings: Results of the research work uncovered that the general mean value of questionnaire hit (4.19, 3.95) in India and Yemen. This indicates that AIS used in banks in India and Yemenis of good performance.

Improvements: This point refers to some recommendations have been formulated in order to strengthen and enhance the current position of performance of AIS used in banking sector in both countries India and Yemen.

Keywords: System, Internal Users' Satisfaction, Accounting, Accounting Information Systems (AIS), Banking Sector.

1. Introduction

The current era is the age of information revolution. Information has become very important source in today's world. It is considered a great source which supports the organization to survive in the competitive environment. It helps the company in pursuing its activities and achieving all its objectives. Therefore, it is not less important of any other important source in organization. Providing information is one of the very important fields, which necessitates special concern by an organization. For this purpose, the firm has to surmount any problems for providing sufficient information to its users. So, concerned aspects must study how to design, process, evaluate and safeguard AIS, particularly in the time of latest technology and communications [1].

Resource of information is considered essential factor of success of business. So, offering information on time helps on taking the right decision in the right time. Therefore, it occupies a high position in social and economic life. Because of the importance of information and its increasing role in social and economical life, there are so many of monitors see that information society is the new alternative of current environment, and the world should seek the achievement of informational conglomeration, or what is called informational revolution [2].

1.1. Types of threats in computerized environment

Information system is the only system in enterprise, which is concerned in collecting, processing, saving and then communicating data to all users alike. Furthermore, in recent years, AISs depend on using computer entirely, but this orientation has led to rise new threats unlike which are known in traditional systems. So this chapter handles these points to provide strong and suitable internal control system can be applied in computerized environment [3]. A threat can be identified as a potential action or event, if occurred, can lead to certain amount of losses for enterprise.

The losses can be financial, notional resource, or chance losses. And these losses are considered real threats to the survival of any institution. Threats can never usually correspond on one-to-one basis with specific assets. A single asset can be exposed to multiple threats (for instance, computer devices are threatened equally by fire, water, electric fluctuation, etc.). Conversely, multiple assets may be affected by a single danger [4]. According to [5], threats which face AISs in computerized environment can be divided into two types as following:

1.1.1. Unintended threats

Political and Natural catastrophes: these kinds incorporate fires, earthquakes, floods, and so on, which be able to obliterate an information system and cause many firms to fail, and an important peculiarity of environmental threats aforementioned is that they are largely unpredictable but not entirely so. In addition, it is relying on the geographical location; quite a few of these catastrophes can be predicted and with a bit proactive planning the affect on these calamities could be scaled down.

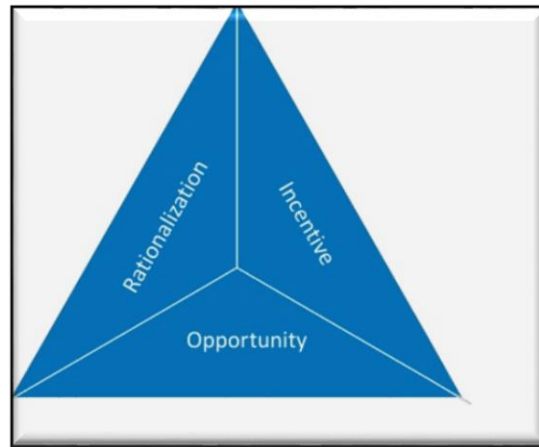
There are threats related to the nature of the action itself, whereas there are risks are inherent to each activity, and there are difficulties to be controlled, such as credit risks in commercial banks.

Unintended errors: these types of threats sometimes occurred such as losing, disorganization, or alteration of information, and this acts result in occurrence large losses. The Computing Technology Industry Association assesses that 80% of security problems resulting from human resources. Moreover, inadvertent actions are caused by apathy of human, failure to pursue approved procedures, poorly trained or supervised staff. Errors in programs and flaws in devices. This kind includes operating system crashes, software errors, fluctuations and power outages.

1.1.2. Intended threats

It can be termed fraud, it can take so many forms, and its most important is computer fraud. It refers to premeditated behavior for destroying or harms the system. So under technological developments, information systems are increasingly liable to attack from so many aspects or by using different ways [6]. In [7] depicted reasons which result in fraud in three type’s incentives or motivations of committing fraud, availability of opportunity (circumstances) and rationalization. And these types were portrayed in the following triangle as shown in Figure 1.

Figure 1. Reasons which result in fraud



1.2. Research problem

The research problem represents in study of a scenario analysis of performance of AISs used in the both countries, for the purpose of providing required instructions to strengthen, enhance and upgrading the current performance of AISs used in banking sectors in both countries.

1. Significance of the study

The researcher had drawn up significance of the current research study as under:

1. Increasing of the internal users' satisfaction of AISs used in banking sectors in both countries.
2. Keeping on stability of AISs used in banking in both countries for so long time.

2. Objectives of the study

The research work was conducted with the following objective into consideration:

Objectives of the research study have been drawn up by the researcher as under:

1. To study of ability of AISs used in banking sector in both Sana'a city and Nanded city in Yemen and India, respectively.
2. To study extent of stability of AISs used in banking sector in both countries.

3. Hypotheses of the study

1. There is no high level of satisfaction of internal users of AISs about AISs used in banking sector in Sana'a city, Yemen.
2. There is no high level of satisfaction of internal users of AISs about AISs used in banking sector in Nanded city in India.

2. Research methodology used

The current research study has followed scientific research methodology for the purpose of achieving its objectives and testing of hypotheses related to. Accordingly, some techniques and procedures were used for collecting required data. Therefore, the researcher applied the survey method, and used its methods in this research stud.

1. Population and Sample of the research study

Seventeen banks represent population of the research work in Sana'a city, Yemen, on the other side; thirty nine banks represent the population of the study in Nanded city, India. It should be noted that targeted sample has been selected by the researcher through applying probability sampling method, especially, stratified simple sampling technique. The Table 1 provides a complete portrayal of population and sample used in the current research study. Clearly, by study the above table, Managers, Accountants and IT employees who considered internal users of the AISs represent the sample of the study in both countries.

Table 1. A complete portrayal of population and sample in Yemen and India

Table No. 1			The aimed Sample in Both Countries																			
particulars	Population of the Study		No. of listed Banks				No. of Removed Banks				Distributed Questionnaires						Gross Number		Valid		Invalid	
	N	%	N	%	N	%	Managers		Accountants		IT employees		N	%	N	%	N	%	N	%		
							N	%	N	%	N	%										
Yemen	17	100	12	71	5	29	60	33	84	47	36	20	180	100	112	62	68	38				
India	38	100	29	76	9	24	60	33	84	47	36	20	180	100	112	62	68	38				
Gross Number			41		14		101		223		36		360		224		136					

Source: Field Survey

2. Tools employed for data collection

Indeed, after previous steps are completed, process of collecting data starts. being the descriptive approach is adopted in the current research, then questionnaire technique was applied to collect primary data of the research study, on the other side, secondary data was collected from review of literature pertained to the research work.

3. Questionnaire preparation

After investigation, many of previous questionnaires have been used by former researches in this domain the researcher recognized that questionnaires used cannot provide required data completely. Hence, the researcher resorted to set up a questionnaire that is able to fulfill required objectives; where he is ready to work in field work for collecting demanded data. Questionnaires are addressed to technicians working in IT sector, accountants and managers concerned in the present investigation. So, the questionnaire used to collect data includes the following parts:

1. Covering letter included in the questionnaire

This part provides the main aims of the research work, and sheds light on importance of effective responses received from respondents. Furthermore, through this section the researcher assures to respondents that their answers would be extremely confidential to encourage them to give right responses.

2. Instructions included in the questionnaire

This part explains how to fill in questionnaire in right manner to facilitate analysis process of the study by the researcher.

3. Analysis process of questionnaire

This section of questionnaire reflects points of view of the respondents through answering of questions included in the questionnaire. So, statistical tools related to descriptive approach have been applied, in addition to use inferential statistics also in this part.

4. Testing of the questionnaire

A sample of 30 individual was selected for testing questionnaire, and discovering any errors and treating them before sending questionnaires to respondents in its final form. So, the questionnaires have been managed face-to-face through researcher and respondents. This stage enables the researcher from knowing difficulties that run into respondents to avoid them at final figure of questionnaire.

5. Internal consistency related to the questionnaire

Measuring validity of the questionnaire has been done by internal consistency tool. Therefore, this point can be seen in the Table 2. According to the above table, it can be seen that Spearman’s correlations coefficients fall between (.944, .865). So, it means that a strong correlation between user’s satisfaction and its items included in questionnaires is available. Statistically, it refers also that the internal consistency of questionnaire is highly satisfied, and the results of analysis of questionnaire are accurate.

Table 2. Internal consistency of the questionnaire

Statements		Item.1	Item.2	Item.3	Item.4	Item.5	Item.6	Item.7
Spearman's rho	Gross	.908**	.914**	.915**	.900**	.944**	.865**	.938**
	Correlation Coefficient	.000	.000	.000	.000	.000	.000	.000
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	112	112	112	112	112	112	112

Source: SPSS version 21

6. Administration of questionnaire

The researcher finally made to this stage after completing the earlier mentioned steps. At this point he obtained approval from concerned authorities in banking sector of both countries to distribute the questionnaires. The chosen banks in both countries were visited, and the questionnaires handed over to targeted sample by the researcher in person.

The objectives of research study has been explained to concerned, in addition to how to the questionnaire should be filled up. The researcher runs into some problems such as absence of some respondents, losing questionnaire by respondents or forgetting questionnaire in somewhere. In spite of that, the researcher has overcome these problems, and obtained most of the questionnaires. It is worth mentioning that 180 questionnaires have been distributed in both countries, in Yemeni side 112 questionnaires were obtained which represent 62% of questionnaires have been distributed, so it grants the researcher the trust in collected data, and in Indian side the same.

4. Limitations of the current study

1. The researcher concentrated on AISs used in banking sector in both countries.
2. The study has been devoted to study internal users' satisfaction of AISs applied in both countries Yemen and India specifically Sana'a city and Nanded city respectively.
3. The time factor was very important element to complete the current study.
4. The finance factor was very important aspect to complete the current study.

5. Literature survey

1. Factors affecting accounting information systems success implementation

This study aimed to increase the ability and power of small and medium business enterprises, because small and medium business enterprises play vital role in economical growth. So the one technique which helps small and medium business enterprises to increase its ability and competitive power is employing information technologies. Whereas employing information technology by small and medium business enterprises lead to reduce its production cost and then increasing its profitability and competitive power. Last of all, this study concludes with the following conclusion, the Management context factor had a positive impact on information system for successful implementation. User related to factor had no significance on accounting information system successful implementation. External expertise factor had significant impact on accounting information system for successful implementation. Environmental factor had no significant impact on accounting information system success implementation. Management factor had positive impact on user related factor. Environmental factor had successful positive impact on user related to factor [8].

2. Utilization of data mining technology in the AISs in the public sector: a country study – Malaysia

The purpose of the current study is in reference to implement and the extent of utilization of data mining technologies within the accounting information systems in the Malaysian public sector. It is worth mentioning that some studies are interested to implement data mining technology in Malaysia just in private sector. Public sector in this domain represents the gap which is existing in previous studies. Therefore, this study assists helpfully in filling this gap by exploring the role of technology, organization, human resources and external issues, such as political intervention are explored. In [9] the current study, for collecting data, mail survey and interview techniques were adopted. In the mail survey a response rate of 39% was achieved, and data analysis depended on SPSS and for interview data. Eventually, it is found that the best model to apply data mining technologies within the public sector would include a centralized data repository linked to a well-managed data warehouse integrating a number of existing systems with data mining technology.

3. Role internal control under electronic accounting information system: a practical study on a sample of banks Iraq –Kurdistan Region

The research aims to highlight on the crucial role of internal control in the light of electronic accounting information systems, in addition to the extent of the commitment of banks under study with it. For this purpose, this study has done through selected ten banks, on the other hand, a questionnaire technique was developed and employed to collect data of the study and thus, and data collected have entered and processed by proper statistical tools for testing hypotheses. To conclude, results of the study referred to the following [10].

There is a need of effective internal control system keeps up with latest technology in the manner which enables of integration with other financial and informative systems. The internal control has to be developed and updated continuously for achieving its targets duly.

6. Analysis and Interpretation of the data

1. Descriptive statistics

Descriptive Statistics included in this study are represented in Mean, Std. Deviation, Variance, Range, Sum, and Rank. In this regarding the above mentioned Descriptive Statistics are computed on the level of each item.

Table 3. Mean, Std. Deviation, Variance, Range, and Rank of All Items of Users' Satisfaction

Item	Mean		Std. Deviation		Variance		Range		Rank	
	YEMEN	INDIA	YEMEN	INDIA	YEMEN	INDIA	YEMEN	INDIA	YEMEN	INDIA
Item 1	4.01	4.18	.765	.588	.586	.346	3	3	4	3
Item 2	4.10	4.15	.805	.573	.648	.328	4	3	2	5
Item 3	4.10	4.08	.759	.572	.576	.327	3	3	3	7
Item 4	4.18	4.13	.687	.617	.472	.381	3	3	1	6
Item 5	3.54	4.21	.910	.527	.828	.278	4	3	7	1
Item 6	3.93	4.20	.667	.598	.445	.357	3	3	5	2
Item 7	3.78	4.18	.846	.524	.715	.274	4	2	6	4
Total average	3.95	4.19								

Resource: Field Survey

In Yemeni side: The items appearing in the Table 3 namely (Item1, Item2, Item3, Item4, Item5, Item6, and Item7) given the following values of mean: 3.96, 4.15, 4.01, 4.13, 4.01, 4.08, 4.20 and 4.07), in a row. Therefore, it can be said that the general average of the questionnaire is 3.95 that falls in the interval (4.2-3.4). This result does not support the null hypothesis related to Yemeni aspect. In Indian side: The items described Table 3 namely (1, Item 2, Item 3, Item 4, Item 5, Item 6, and Item 7) given the following values of mean: (4.23, 4.25, 4.21, 4.22, 4.29, 4.24, 4.24 and 4.21), in a row. Therefore, it can be said that the general average of the questionnaire is 4.19 that falls in the interval (4-4.2). This result does not support the null hypothesis related to Indian aspect.

7. Testing of hypotheses

This part aims to testing of hypotheses of the research study; the researcher applied inferential statistics in particular non parametric tests.

1. Testing of hypotheses in Yemen aspect

The null hypothesis in respect of Yemen states that: There is no high level of satisfaction of internal users of AISs about AISs used in banking sector in Sana'a city, Yemen. From the Table 4, it can be seen that significance value is less than .05. Thus, the decision is non-acceptance of the null hypothesis which cites that: There is no high level of satisfaction of internal users of AISs about AISs used in banking sector in Sana'a city, Yemen. In return acceptance of the alternative hypothesis which states that: There is high level of satisfaction of internal users of AISs about AISs used in banking sector in Sana'a city, Yemen.

Table 4. Hypothesis test summary

Test	Sig	Decision
One- Sample Wilcoxon Signed Rank test	.000	Reject the null hypothesis.
Level of Significance at .05		

Source: SPSS version 21

2. Testing of Hypotheses related to Indian aspect

The null hypothesis in this side has been formulated as below: There is no high level of satisfaction of internal users of AISs about AISs used in banking sector in Nanded city in India. By investigating the Table 5, it can be revealed that significance value is less than .05. Thus, the decision is rejecting of the null hypothesis which reports that: There is no high level of satisfaction of internal users of AISs about AISs used in banking sector in Nanded city in India. Against acceptance of the alternative hypothesis which refers to that: There is high level of satisfaction of internal users of AISs about AISs used in banking sector in Nanded city in India.

Table 5. Hypothesis Test Summary in relation to India

Test	Sig	Decision
One- Sample Wilcoxon Signed Rank Test	.000	Reject the null hypothesis.
Level of Significance at .05		

Source: SPSS version 21

8. Conclusion

In fact, this part is considered coronation of the preceding stages in the present study. So, this section can be organized as below:

8.1. Regarding to Yemen

8.2. Demographic Data

1. Percentage of selected sample represents 71% of the population.
2. Manager's group used in the current survey represents the majority of the chosen sample, where the percentage reached to 42%.
3. Most of respondents possess graduate qualification.
4. Most of respondents are in accounting field, where their percentage touched 39% of the total sample.
5. The group 6-10 years of experience has occupied the highest percentage, where the percentage reached to 41% of gross sample.

8.3. Analysis of questionnaire

Frequencies of the study proved that internal users' satisfaction of AISs used banking sector in Sana'a city, Yemen are high. Descriptive statistics used in the current study confirmed that AISs used in banking sector in Sana'a city, Yemen are of high level of internal users' satisfaction.

8.4. Regarding to India

8.5. Demographic Data

1. The selected sample was enough to represent the population, where its percentage reached to 76% of the universal.
2. Accountants group used in the current survey represents the majority of the chosen sample, where its percentage reached to 69% from the selected sample.
3. Most of respondent's hold postgraduate qualification where this group touched 49% of the selected sample.
4. The group of, above 10 years has occupied the highest percentage, where it reached to 66% of the selected sample.

8.6. Analysis of questionnaire

Frequencies of the study proved that internal users' satisfaction of AISs used banking sector in Nanded city, India are high. Descriptive statistics used in the research study pointed out that AISs used in banking sector in Nanded city, India are of high level of internal users' satisfaction.

9. Recommendations of the study

1. Eventually, this part has been formulated to support the positive aspects of the present study. It includes the following points:
2. Enhancing AIS's ability to export financial reports to different software such as Microsoft excel and Microsoft Word to facilitate dealing with it by users. And supporting the financial reports with sufficient accounting disclosures and charts, which help on analysis and interpretation of financial reports
3. Commitment of programming companies for monitoring the AISs systematically, to scrutinize its performance level, remedying troubles and avoiding potential problems.
4. Enhancing the ability of AIS to provide the financial reports, which support users in decisions making on demand, and increasing its ability to issue financial reports according to different norms, according to users' demands?
5. Putting certain conditions and specifications by Reserve Bank of India (RBI) to certify any electronic accounting system applies in banking sector and monitoring fulfillment of banking sector to these conditions and specifications by RBI and by central bank of Yemen in aspect of Yemen.

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