

ASSESSING ELECTRONIC BANKING SERVICES IMPLEMENTATION IN KHARTOUM, SUDAN USING ELECTRONIC SERVICES DIMENSIONS

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ABSTRACT

This paper reviewed and assessed the current status of the Electronic Banking Services (EBS) adoption in Khartoum province of Sudan from the customers' point of view and/or perceptions. Moreover, the paper presented the benefits of the adoption of EBS including the challenges and issues faced by the patrons. This paper used the descriptive statistics and theoretical analysis approaches for collecting and analyzing the data. The investigation was based on qualitative and quantitative design using the questionnaire and semi-structured interviews. The research questionnaires were distributed to two-hundred fifty (250) questionnaires over the ten (10) selected sectors in Khartoum State with only hundred-fifty (150) usable questionnaires, yielding a response rate of seventy-five percent (75%). Questionnaires focused on the seven (7) measures of Electronic Service Dimensions (ESD) namely: the general impression, accuracy, attractive, efficient, organizing, interactive and satisfaction. Multiple regression analysis were used to analyze the data collected. The results of the analysis of the variance between the seven (7) independent variables of the ESD and the status of the EBS showed that the measures of dimensions were not fully implemented in the EBS of Khartoum, Sudan. Thus, it is recommended that the dimensions be fully incorporated in the design of the EBS before it is implemented to the patrons and stakeholders.

Keywords: Electronic Banking Services (EBS), Electronic Service Dimension (ESD), Customer Satisfaction, Khartoum, Sudan

INTRODUCTION

Sudan, a developing country in East Africa with an economy that has been performing well in recent years has been evolving into a becoming technology-adept country.

Automating technologies are not as adaptable to high variance customer inputs as human labour is. In services, they can significantly damage customer satisfaction because they fail to accommodate the uniqueness of each customer's inputs, i.e. they over standardise. (Sampson&Froehle,2006). Users of the Electronic Services are mainly interested on the Electronic Services that should be accuracy, attractive, efficient, organize, interactive and satisfy their daily activities and services including decision-making processes, planning, organizing, staffing, directing and controlling. Electronic Services (e-Service) will play an important role in the most of the daily Sudanese activities particularly as the world today is moving towards and implement an electronic government and electronic services. Sudanese sectors lack awareness of Information and Communication Technology (ICT) in the area of Electronic Services. (STC, 2012).

1. Roles and Reasons for Adopting Electronic Services (e-Services)
 - a. To seek innovative approaches to empowering customers become a responsive Service design oriented.

- b. To move to web-based systems to customers Service process that support self-service standardisation.
 - c. It connects people who design systems and interfaces with people who are affected by the systems.
 - d. Quality of service delivery to businesses and customers, Transparency, anticorruption & accountability
 - e. Promote use of ICT in other sectors of the society plus Network and community creation.
 - f. Increase the capacity of government and improve the quality of decision making.
2. Challenges in Adopting Electronic Services (e-Services)
- a. Lack of knowledge about the e-solution program.
 - b. Lack of qualified personnel and training courses.
 - c. Lack of policy and regulation for e-solution.
 - d. Lack of usage, security and privacy of information.
 - e. Lack of strategic plans, , partnership and collaboration.
 - f. Lack of Leaders and management support and their resistance to change to e-Services.
 - g. Shortage of financial resources and weakness of IT Infrastructural.

THE PROBLEM

Despite the growing literature in the area of Electronic Services (e-Services) it is not known why the development of the Sudanese Electronic Services (SES) is still very low, especially in the Sudanese Government, private sectors and the daily activities and transactions. Could it be a reflection of the fewer acknowledgements for the importance of the Electronic Services (e-Services) in the Sudanese activities?

Based on the problem identified, the following hypothesis was raised: The performance of the Sudanese Electronic Services are influences by the dimensions of electronic services.

RESEARCH MODEL

The following research model (Figure1) was developed based on the effect of the seven independents variables of the Electronic Service Dimension (SED) in the Electronic Sudanese Services (SES) identified in the literature in order to assist this study in answering the above questions:

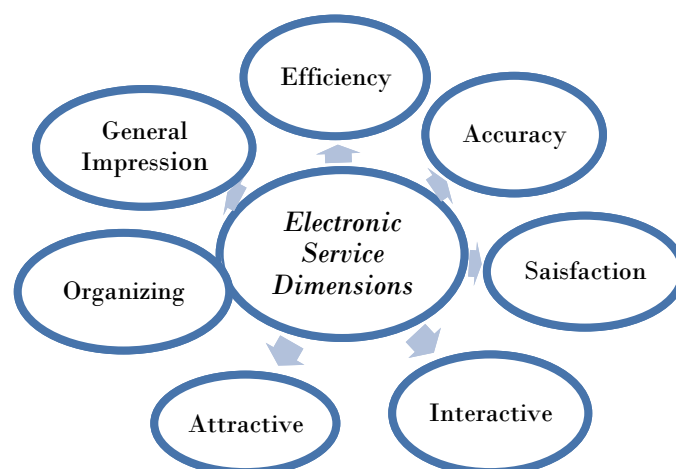


Figure 1: EBS Research Model

LITERATURE REVIEW

This section provides a review of the conceptual literature which will inform the frameworks of the study. The literature review for the study includes the electronic, solution, electronic services, Sudan and electronic service, electronic services and Sudanese daily activities; each of these themes contributes to the foundation for this study.

Electronic Services

Electronic Services are services capable of delivery from a remote location which are supplied over the internet or other electronic network and which cannot be obtained without the use of information technology and where delivery of the services is essentially automated, (Norwegian Tax administration, July 2011).

Sudan and Electronic Services

Sudan is the third largest country in Africa. Dominated by the Nile and its tributaries, it borders South Sudan, Egypt, Libya, Chad, the Central African Republic, Ethiopia and Eritrea (Secretariat General of the council of ministries, 2014).

Generally the use of Electronic Services (e-Services) in the daily Sudanese activities is very limited and new, the development of Electronic Services (e-Services) is still very low especially among the current Sudanese medium-sized industries. This will be due to some factors that influence the perceived use of Electronic Services (e-Services), or could be as a result of the relative novelty (in Sudan) of combining the Sudanese daily activities (SDA) with Electronic Services (e-Services).

RESEARCH METHODOLOGY

Descriptive statistics techniques will be used to analyze the data. The questionnaire technique of data collection will be used. Students from three universities (Future University, Sudan International University and Sudan University) in Khartoum province will be conducted purposively to select the participant of the questionnaire. Electronic services provided by the ministry of high education, Faisal Islamic Bank and ministry of interior will be taken as sample case for the purpose of study. Analysis of variance (ANOVA) will be used to answer the research question. The sampling frame population for the paper was 550 persons. Even though 250 questionnaires were distributed to the participants, only 200 questionnaires were successfully collected. Of the 200 (80%) questionnaires that were returned successfully only 150 (60%) copies were completely answered. The remaining of 50 questionnaires could not be included in the study due to incomplete data or poor responses

RESULTS AND DISCUSSIONS

Analysis of variance table techniques was used as quantitative approach to answer the question about the status of the Sudanese Electronic Services (SES) from the user's point of view.

Analysis for the status of the Electronic Sudanese Services (SES)

The results of the a Analysis of variance table which has been applied to the data as an statistical test find that F Calculated Value is equal to 0.359 while F Tabulated value is equal to 19.00 at 0.5, which indicate that F Calculated is less than F Tabulated, that means the status of the Sudanese Electronic Services (SES) is not satisfy the user's needs " not handling certificate of satisfaction" or as general descriptive word it is Weak (See Table 2). Hence, each item correlates "adequately" within the construct. F Calculated Value is equal to 0.359 while F Tabulated value is equal to 19.00 at 0.5 suggests Weak reliability and indicators of

this model's constructs' validity are Weak. The probability of this result, assuming the null hypothesis, is 0.902.

Table 1. Results of the Analysis of Variance

Source of Variation	Degree of Freedom	Squares of Sum	Mean of Squares	F Calculated Value	F Tabulated Value
Between	3312	6	552	0.359	19
Errors	4.3801E+04	28	1564.	-	-
Total	4.7113E+04	34	-	-	-

The Relationship between the Dependent Variable and the Independent Variables

Using Median Absolute Deviation (MAD) or Absolute Deviation around the Median is a robust measure of central tendency that has been used to predictor the impact of using Electronic Services Dimensions (SES) in the Electronic Sudanese Services (ESS). Robust statistics are statistics with good performance for data drawn from a wide range of non-normally distributed probability distributions. Therefore all the seven variables, namely General Impression, Organizing, Efficiency, Attractive, Interactive, Satisfaction and Accuracy (SES) were significant independent variables that driven the dependent variable (SES) to the Weak Status. (Median Absolute Deviation for the Electronic Service Dimensions>b where b=1.4826). The highest (Median Absolute Deviation value is 48 where the lowest Median Absolute Deviation value is 17.6 over b=1.4826. Table 3 shows the results (significant) of the Median Absolute Deviation applied between the dependent variables (Electronic Sudanese Services) and the independent variable (Electronic Service Dimensions).

Table 2. Relationship between Dependent and Independent Variables

Model	Mean	Confidence interval for the Mean	Std	Hi	Low.	Median	Average Absolute Deviation
General Impression	139	102.8 Thru 175.2	33.6	177	95	131	25.2
Organizing	139	102.8 Thru 175.2	23.1	162	109	146	17.8
Efficiency	139	102.8 Thru 175.2	48.2	183	76	164	36.2
Attractiveness	139	102.8 Thru 175.2	24	167	105	143	17.6
Interactivity	139	102.8 Thru 175.2	29.2	166	97	145	22
Satisfaction	139	102.8 Thru 175.2	65.8	225	54	153	48
Accuracy	111	74.97 Thru 147.4	34.9	161	67	102	24

Results of the Analysis Using the Absolute Deviation around the Median

The results of the Absolute Deviation around the median between the independents variables " Electronic Service Dimensions (ESD) and their role in the Electronic Sudanese Services (SES) show that the seven independent variables, namely General Impression, Organizing, Efficiency, Attractive, Interactive, Satisfaction and Accuracy found to be significantly associated with the status of the Electronic Sudanese Services.

CONCLUSIONS AND RECOMMENDATIONS

Electronic Service Dimension (ESD) offer very powerful instruments to bring higher performance for the Electronic Sudanese Services (SES). However, as it has been stated in

several studies reviewed, the SES is not a solution to any development problem; it is only provides an opportunity. This research paper explore the experience resulting from these attempts worldwide, and implying the same practice in growth of Electronic Services in the Sudan with a focus on the potential of the Electronic Sudanese Services (SES) to enhance access, efficiency, quality, and management of overall Sudanese daily activities.

The limitations of this study is the participant of our questionnaire survey conducted within a specific Sudanese citizens or participants, the results of the study therefore may not be generalized to all other Electronic Sudanese Services (SES), the study was conducted in only specific Sudanese sectors, the results may not be more accurate to all other Electronic Sudanese Services (SES).

Challenges for Implementing Electronic Services (e-Services) in Sudanese sectors and the daily life style includes: Lack of Electronic Services (e-Services) tools and techniques Relative, low level of awareness and understanding of the topic, Lack of implementation of research based system in term of Electronic Services (e-Services).

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