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## Article

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### BANKING E-SERVICES REQUIREMENTS IN YEMEN

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#### Abstract

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E-banking is one of the most popular services utilized by most of the country's banking recently. Studies have shown that the quality of e-services is a core issue that influences adoption of e-banking services worldwide. The objective of this study is to investigate the availability of the essential requirements for e-banking adoption in Yemen. Results show that the infrastructure requirements are the strongest points, where the requirements related to employees and clients are the weakest points related to applying e-service in Yemeni banking. The implications are discussed and recommendations are made in order to improve e- banking service in Yemen.

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## Introduction

In the past decade there were several discussions around those new terms; e-Management, e-Business and e-Commerce. They were marketed as the magic solution to all companies' problems. As any new technology they mostly remain only at a theoretical stage, and were implemented first in large companies [1]. The shift of societies towards the information society has had deep effects on numerous aspects of human life such as economic, social and cultural aspects [2]. The impact of information technology on human societies is not less than that of industrial revolution; therefore the information technology development and its applications are regarded as the fourth digital revolution [3].

As information technology grows, e-business applications are found all over the world. More and more companies recognize the benefits of e-business and move from traditional business to e-business [4]. E-management is the modern way to manage all e-business application [3]. It can also play a role in e-business and e-commerce [5]. The barriers that effective e-business are varied enough in the industrial world, but especially problematic in the developing world [3]. We use the term "e-management" to broadly describe the publishing of information and the performing of various transactions and services over the Internet, Extranets, or Intranets. It seems that the Internet and e-business have changed the way firms conduct business globally using e-management [6].

The implementation of e-management is related to all the employees of the company. That is why we have to consider the human factor as the most important factor impacting e-management [7]. The human factor plays a big role in e-management success and security [8]. Understanding how the Web fits into a country's culture is necessary to form successful customer relations [3].

Banking has also tried to benefit from the new environment to offer quality services and gain new customers. Online banking allows the customers to perform transactions, pay bills and check balances 24 hours a day, 7 days a week. The bank virtually never closes because it is accessible from any PC or laptop computer [9]. Through the Internet, transactions are typically performed and executed at a faster rate than traditional method. In the other hand, one of the biggest barrier which faces using e-transaction is the trust [8]. The customers may wonder if their transactions went through successfully or if they clicked on the correct button or not.

## Research theoretical

### E-management

E-business is the administration of conducting business via the Internet [10]. E-management will be critical for ensuring the availability of e-business applications anywhere and anytime [11]. The implementation of e-management is related to all the employees and customers of the company. That is why the human factor is considered as the most important factor impacting e-management [7], [11]. The culture and sensitivity to cultural differences plays a critical role in successful in-

ternational business, and just as much as for international e-business [3]. The most benefits from using e-management is the elimination of distances through providing linkage among separate computers in the Internet, and the computerization of systems and telecommunication which result in new capacities to transfer sounds and images [11]. Also it ensures the best utilization of resources, increases efficiency, and provides support to high management in planning, and managing human and financial resources [12]. E-management can play a role in e-business & e-commerce management, and gain some benefits such as [5]:- reducing costs, improving product or service quality, reaching new customers or suppliers, creating new ways of selling or providing existing products and services. The issues of security of transactions and privacy protection over the Internet are of concern to many consumers [6]. E-service is a part of e-management, it means services, action or set of actions of either a commercial or non-commercial nature, and includes the provision of information and/or e-government services [13].

### **E-banking**

E-banking is the electronic bank that provides the financial service for the individual client by means of Internet [14]. Meaning that, any user with a personal computer and a browser can get connected to his bank's website to perform any of the virtual banking functions. To make a step towards e-banking, a bank must commit itself to many substantial strategy changes such as it must allow the customers to participate more actively in the carrying out of the bank service [9]. There are

many functions that can be offered by e-banking. At present, the personal e-bank system provides many service, like; Inquiry about the information account, Card account 'transfer, Bank-Securities accounts, Account management [14].

### **Yemen banking**

The Cooperative and Agricultural Credit Bank (*CAC Bank*) has offered a *CAC Online* to meet the customers banking wishes and needs and facilitates their transactions via the internet. Through *CAC Online* service, the customers have access to and could review their accounts at any time and from any place. *CAC Online* provides: Confidentiality of data and banking operations according to the highest degree of security and advanced technology [15].

Yemen Commercial Bank (*YCB*) is a unique and modern banking launch represented in the executing comprehensive banking transactions and applying the electronic and prompt Network services among branches which made a distinctive transmission in the level of efficiency and performance of bank services. YCB was able also to utilize the modern technological progress to provide electronic banking services including ATM, Sale points, phone banking, SMS and money gram transfers and Speed Cash service [16].

Arab Bank has offered a convenient and secure way to manage the customer accounts, anytime and anywhere. The e-services includes; inquiring about the balance, viewing accounts summary, viewing, saving, printing account statement & transaction details, accessing cards to review details, paying credit card and viewing card transac-

tions, viewing fixed deposit details, paying utility bills, transferring funds between accounts, transferring funds to other Arab Bank customer within the same country, transferring funds to other accounts worldwide, changing your address, sending instructions or inquiries through secure email, setting up scheduled payment order [17].

Yemen Bank for Reconstruction and Development has started using technological progress to satisfy the needs of their valued customers. They extended a collection of distinct services round the clock (24 hours) during the week days [18].

Tadhamon International Islamic Bank (*TIIB*) provides its customers with new developments in banking services and offers the services to customers. *TIIB Online Banking* allows their customers to keep track of their finances in a safe and secure environment, 24 hours a day, 7 days a week [19].

Shamil Bank of Yemen & Bahrain has launched Internet Banking (*Shamil Online*) at the beginning of 2013. This service enables a bank customer to examine the details of his account and performs many bank transactions through the internet web, without visiting the Bank premises. It also enables the customer to manage his/her accounts in privacy and safety [20].

Saba Islamic Bank provides their customer with many services through their site, such as keeping track of their finances in a safe and secure environment [21].

### Literature Review

Rahman *et. al.* [11] indicated that the e-management is an umbrella name for several e-

business modules. Some barriers have addressed which have impact in e-management implementation in Iran:- (1) Managerial Factors, e.g. lack of technological awareness among managers, lack of awareness among the managers about the advantages of IT; (2) Humanistic Factors e.g. lack of IT specialists in organizations, employees' lack of interest and motivation to apply new techniques; (3) Cultural-Social Factors e.g. the non-developed culture for proper application of IT, unfamiliarity of users with IT and unfamiliarity of citizens and authorities with IT performance; (4) Organizational-Structural Factors e.g. weakness of communication channels in organizations, and lack of financial resources; (5) Technical-Technological Factors e.g. lack of sufficient software facilities, incongruity between systems and users; (6) Environmental Factors: e.g. no integrated network in country, lack of necessary rules and regulations in country.

Some of the e-management challenges which have been addressed are expanded competition, increased customer power; network security has developed, reliability of website technologies and network uptime and speed [11]. In Yemen the implementation of e-management in governmental and private organizations in the city of Aden has been addressed [22]. The results showed that there is awareness at the governmental organizations to offer the management and human recourses needed for the implementation of e-management. Furthermore, good understanding of the importance



offering the security measures needed to implement the e-management was updated [22].

Sikdar *et. al.* [23] have studied the e-banking in India. They introduced the concept of e-banking and its benefits provides from bank's customers as well as banking organization's point of view. The Commercial banking operations in the long-run can be optimized by minimizing the branch based interactions with the customers, enabling the banks to focus on direct selling and other activities requiring higher focus on the part of commercial banks. e-banking as a tool can be used in two objectives.

First bank can optimize its branches operations by doing away with large volumes of routine transactions at individual branches. Second they can expand their geographical presence by reaching the interior parts of the country hitherto cut-off from the ambit of banking services. This will also help in achieving of inclusive banking, strongly propagated by the national banking regulator Reserve Bank of India (RBI).

Jun *et. al.* [24] have studied the issues associated with e-banking service quality. They identified a total of 17 dimensions of e-banking service quality, which can be classified into three broad categories customer service quality, banking service product quality, and online systems quality. Every classified category has many dimensions. Customer service quality dimensions are reliability, responsiveness, competence, courtesy, credibility, access, communication, understanding the cus-

tomers, collaboration, and continuous improvement.

Online systems quality dimension are content, accuracy, ease of use, timeliness, aesthetics, and security. Banking service product quality has one dimension of product variety/diverse features.

Ta-Wei *et. al.* [Ta 25] investigated the relationships among brand equity, loyalty, trust, satisfaction, and e-service quality in e-Banking. The significant simultaneous relationships between satisfaction and loyalty and between trust and loyalty are confirmed in this study, implying that these relationships must be determined simultaneously, rather than sequentially.

Usman *et. al.* [26] studied e-Banking security, they pointed out that fraud is an issue being experienced globally and is continuing to prove costly to both banks and customers. Frauds in e-banking services occur as a result of various compromises in security ranging from weak authentication systems to insufficient internal controls. Security issues are major barriers to internet banking and e-commerce activities among consumers. This is achieved by understanding business goals, objectives and critical success factors when planning the security strategy, as well as the impact on the business if they are not achieved [Usman].

Fragata *et. al.* [27] proposed two models for the determinants of e-banking loyalty for large business customers. The results demonstrated that five main quality dimensions were identified for the e-

banking portals: assurance, reliability, convenience and quality monitoring by the financial director of the company.

These results also confirmed that both switching costs as well as e-banking quality have a strong impact on e-banking loyalty. The last is being achieved via the mediating effect of e-trust [27].

### **Aim**

This research attempts to investigate the availability of the Banking e-services requirements in Yemen. We investigated the availability of the factors that are critical in the adoption of e-services in banking. This study make a new contribution as it is one of the first researches in Yemen to highlight and draw attention to the situation of the e-services in Yemen banking.

### **Research Methodology**

From the literature studies we can set five main factors to verify the availability of the essential requirements for implementation of e-services in banking including: (1) *Managerial Factor*: to measure the availability of the support of the top management and their awareness.

(2) *Management Factor*: to measure the availability of the e-services processes and procedures. (3) *Technical infrastructure Factor*: to measure the availability of the well-built technical infrastructure required for e-services. (4) *Employment Factor*: to measure the availability of skilled employees required for the new environment and their motivation. Finally (5) *Clients Factors*: to meas-

ure the availability of their interest and ability to communicate with the e-services.

The methodology of the research is based on a questionnaire to gather the required information from the top management and managers of the e-services department in each bank (see table 1,2,3,4,5).

The questionnaires have been distributed by email for each key person (top-manger and e-services manager) in each bank. When the questionnaires were returned, they were analyzed and the results were presented.

### **Results and Discussion**

After analyzing the results of the distributed questionnaires we came out with six figures that present the results. We used tables to clarify the statements under each factor.

*“The requirements that are supported by the top management”* is the first factor. It aims to gather information about the following statements: top management is aware of the importance of the e-services in supporting the bank’s work, top management understands the e-services implementation barriers, top management works on overcoming the e-services implementation barriers, top management encourages employees to make their own decisions in their departments, top management cares about offering development training for its employees locally, top management cares about offering development training for its employees abroad, top management cares about setting the balance for e-services (see table(1)).

The requirement that are supported by top management factor	
A	Top management is aware of the importance of the e-services in supporting the bank’s work
B	Top management understands the e-services implementation barriers
C	Top management works on overcoming the e-services implementation barriers
D	Top management encourages employees to make their own decisions in their departments
E	Top management cares about offering development training for its employees locally
F	Top management cares about offering development training for its employees abroad
G	Top management cares about setting the balance for e-services

Table (1): The requirements that are supported by top management factor

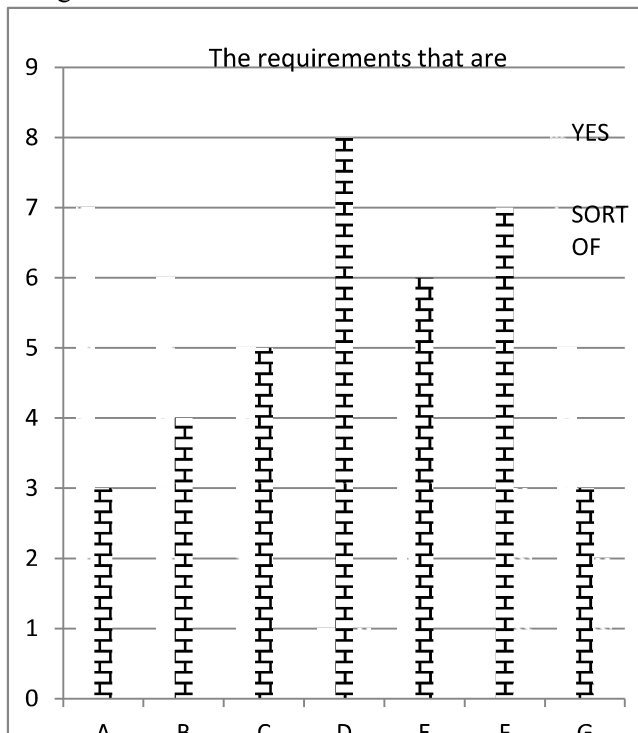


Figure (1): The requirements that are supported by top management factor

importance of the e-services in supporting the bank’s work as well as of the barriers, although it did not always overcome them, where we found that 50% of respondents indicated that.

From our previous studies, the importance to encourage the employees to take the decision at their departments was recommended, as this makes them more understandable with the new services. This point was one of the weakness points for this factor. 10% only from respondents indicated that the employees have been involved in decision taking. Also, top management does not care about offering development training for its employees abroad. The balance for e-services was one of the problem facing e-services.

“The managerial requirements to support e-services” is the second factor. It aims to gather information about the following statements: the e-services procedures are clear for the client, the bank has a specialized department for developing and monitoring the e-services, the e-services procedures are clear for the employee, the procedures manual is used to execute the e-services, the bank complies with the set times to execute the e-transaction, the bank complies the awareness of the importance of the e-services, and the bank complies to separate the e-culture among the client and employment(see table(2)).

Table (1) and Figure (1) show that the strength point was that the top management is aware of the

The managerial requirements to support e-services factor	
A	The e-services procedures are clear for the client
B	The bank has a specialized department for developing and monitoring the e-services
C	The e-services procedures are clear for the employee
D	The procedures manual is used to execute the e-services
E	The bank complies with the set times to execute the e-transaction
F	The bank complies the awareness of the importance of the e-services
G	The bank complies to separate the e-culture among the client and employment

Table (2): The managerial requirements to support e-services factor

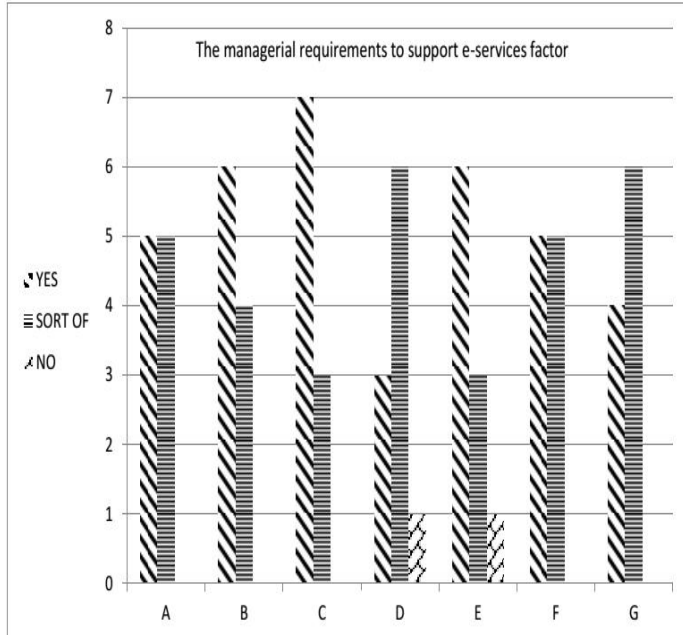


Figure (2): The managerial requirements to support e-services factor

Table (2) and Figure (2) show that the strength points are that all banks have specialized department for developing and monitoring the e-services, The e-services procedures are clear for the employee, the bank complies with the set times to execute the e-transaction. Although most of the respondents agreed that the e-services procedures are clear for the employee, they pointed out that it is not the same way for the clients. The weakness points in this factor were that the bank did not make the announcements of the importance of the e-services, nor separate the e-culture among the clients and employees.

“Infrastructure requirements” is the third factor. It aims to gather information about the following statements: the bank has powerful database systems, the bank has powerful security programs to protect its systems, the bank has a dynamic website on the Internet, the bank has systems on its website allowing clients to interact with it, the bank has security systems to protect its transactions over the Internet, the bank has good maintenance to support its networking and software, the bank offers various training courses to develop its employees in using modern technologies, there are clear laws for the e-services, and the bank works on awareness for clients through showing the importance of the e-services(see table(3)).



The infrastructure requirements factor	
A	The bank has powerful database systems
B	The bank has powerful security programs to protect its systems
C	The bank has a dynamic website on the Internet
D	The bank has systems on its website allowing clients to interact with it
E	The bank has security systems to protect its transactions over the Internet
F	The bank has good maintenance to support its networking and software
G	The bank offers various training courses to develop its employees in using modern technologies
H	There are clear laws for the e-services
I	The bank works on awareness for clients through showing the importance of the e-services

Table (3): The infrastructure requirements factor

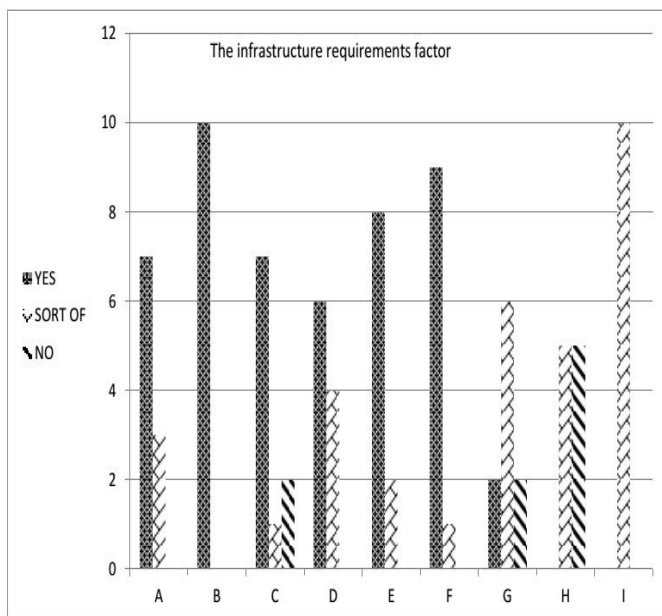


Figure (3): The infrastructure requirements factor

Table (3) and Figure (3) show a positive side for the e-services at Yemen bank, all respondents agreed that their banks have powerful databases systems and powerful security programs to protect their systems; also it has good maintenance systems to support networking and software. The weakest point in this factor was the lack of clear laws for the e-services. The absence of the clear laws and legal rules affected the e-services in great deal where no respondent indicated the exits of these laws and rules.

“Employees” is the fourth factor. It aims to gather information about the following statements: the employees have enthusiasm to work through implementing e-services, the employees have the skills to use a computer in a good way, the employees have the skills to work on the Internet, the employees are encouraged to participate in the decision making process, the employees have full comprehension of the importance of the e-services, the employees have the skill to use the hardware and software, and the employees have high salaries(see table(4)).

The Employees factor	
A	The employees have enthusiasm to work through implementing e-services
B	The employees have the skills to use a computer in a good way
C	The employees have the skills to work on the Internet
D	The employees are encouraged to participate in the decision making process
E	The employees have full comprehension of the importance of the e-services
F	The employees have the skill to use the hardware and software
G	The employees have high salaries

Table (4): The Employees factor

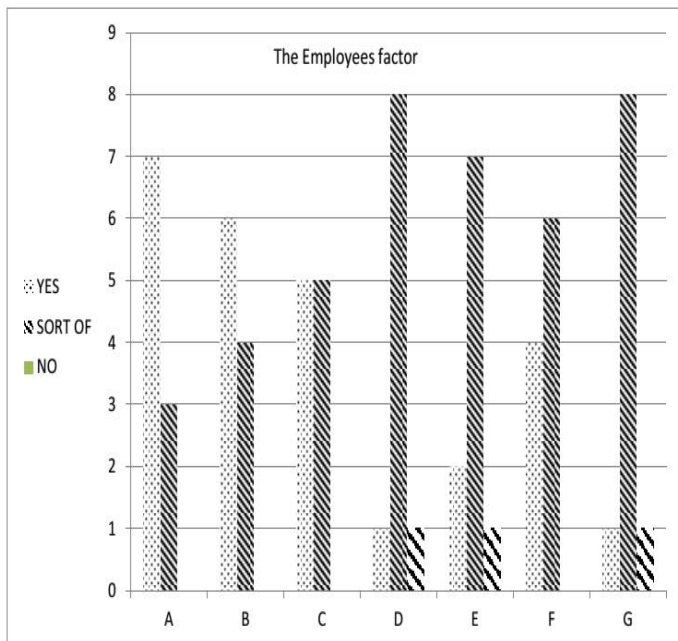


Figure (4): The Employees factor

Again the humanistic aspect is still the weakness point; table (4) and Figure (4) show that the employees don't have full comprehension of the importance of the e-services to understand the importance of the e-services. All respondents indicates that employees have good skills to use computer but they do not have enough skills to use Internet, also the employees do not participate in decision making and this point makes them far from the reasons and benefits of the new developing. When we came to the economic aspect, we can see that 80% of the respondents pointed that the employees do not get good salaries.

“Clients” is the fifth factor. It aims to gathering information about the following statements: the clients interact with the bank website, the clients show trust in the bank systems on the Internet, the clients have proper skills to use the e-services, the clients find quick responses to their inquires in general, the clients find quick responses to the problems they face during electronic transactions, the clients can follow the progress of their transactions through the bank website, the e-services is executed faster than the traditional way(see table(5)).

From our previous studies we can understand the importance of clients for success of e-services. They are the only part which makes the e-services useful and gets the benefits.

The Clients factor	
A	The clients interact with the bank website
B	The clients show trust in the bank systems on the Internet
C	The clients have proper skills to use the e-services
D	The clients find quick responses to their inquiries in general
E	The clients find quick responses to the problems they face during electronic transactions
F	The clients can follow the progress of their transactions through the bank website
G	The e-services is executed faster than the traditional way

Table (5): The Clients factor

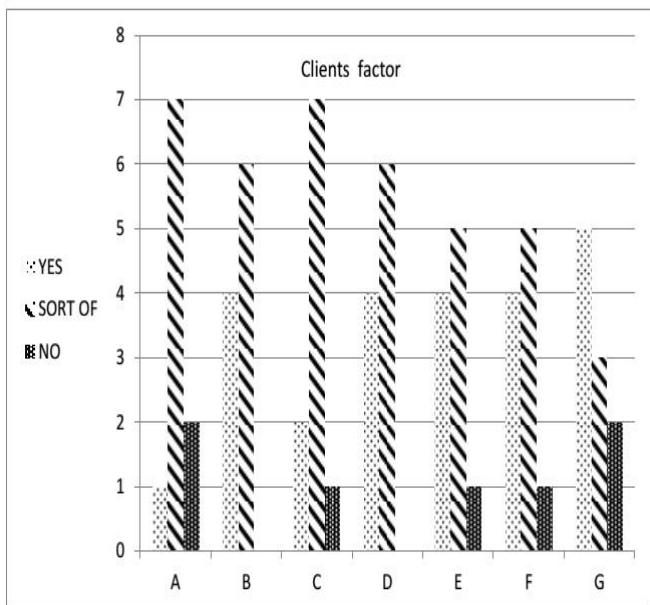


Figure (5): The Clients factor

Table (5) and Figure (5) show that there is a limited interaction between clients and the bank e-services. Many reasons might be behind this, first and as shown from the respondents answers the clients do not get quick responses to the problems

they face during electronic transactions, the clients can not follow the progress of their transactions easily, and the trust is still a main problem between the clients and the e-services.

**Conclusion**

From table (6) and figures (6-a, 6-b, 6-c) which presented our five main factors; The requirements that supported by top management factor, The managerial requirements to support e-services factor, The infrastructure requirements factor, The Employees factor, The Clients factor. We can come up to the following results; the Yemen banks have good infrastructure requirements, good top management supporting especially in the understanding of the importance of e-services.

A	The requirements that are supported by top management factor
B	The managerial requirements to support e-services factor
C	The infrastructure requirements factor
D	The employees factor
E	The clients factor

Table (6): Factors Information

Figure (6-a): YES

■ A ■ B ■ C ■ D ■ E

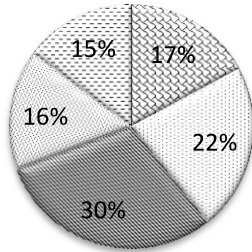


Figure (6-b): NO

■ A ■ B ■ C ■ D ■ E

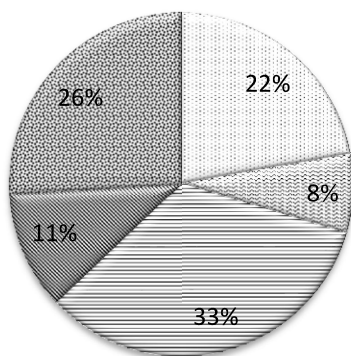
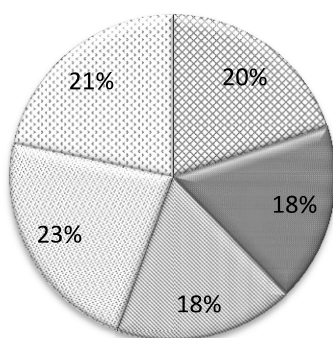


Figure (6-c): SORT OF

■ A ■ B ■ C ■ D ■ E



completely and clearly. The human aspect and e-culture still impact the success of e-services; employees do not have good training courses, they do not have good salaries to encourage them to work with e-services. The clients' attention isn't drawn to the importance of the e-services and the trust isn't built strongly between the clients and the e-services.

### Recommendation

Yemen as one of the developing countries face a lot of economic problems which are always consider as big barriers when apply the new technology as e-services. From our research results and analysis we can come up with the following recommendation:-

- The e-services laws and protection rules should be set and announced to build the trust and confidence to use e-services.
- Paying attention to qualify the employees and offer local and abroad training courses.
- Building new relationship with employees by giving them more shares in the decisions taking and respects their suggestion.
- Building strong trust between clients and the e-services by the applying a quick response to their queries and problems they face during their use of e-services and give them the methods and ways to follow their transactions progress.

On the other hand the main problems were; the e-services laws and rules have not been established



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