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Factors Influencing Acceptance of Technology in Context of Yemen: Review

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Abstract

Adoption of technology play a key role in the life of organizations; it help in general to support the organizations activities. This paper reviews other researches in the area of technology adoption in organizations. In addition, this paper proposes a theoretical framework that takes into consideration the main factors that might affect technology adoption in organizations.

1. Introduction

The majority of Arab countries especially in Yemen are still dealing with issues related to acceptance of the technology [1]. The Arabic world is considered as one of the least computerized and technologically underdeveloped regions in the world. Yemen is not exception for this rule and the technological sector is suffering many obstacles in a Yemeni context [2].

In addition, the issue of technological capability on competitiveness of a company has long been discussed in the literature. Recently, researchers especially in Yemen are more interested to study about technology adoption due to global development in various fields. The adoption of technology in organizations directly contributes to improve the technological capability of a company; which contribute towards the organizational performance. Organizational performance can be translated into higher productivity, efficiency, and profitability [3].

Moreover, the successful adoption of technologies in companies is much depending on technology characteristics, organizational characteristics, and user characteristics. However in reality these factors are much neglected by organizations especially among small companies in Yemen [4].

The use of the technology in organizations will help to increases organization profitability, increases organization market value, increases organization competitive advantage, reduces operational costs, enhance the revenue, and Overall, affect on the performance, thus, the revenues of these companies will increase and will have a positive role in improving the country's economy [5]. Most businessmen in Yemen are unaware of the importance of computerizing their systems and by how much their productivity could increase, and as a result they don't seem to be interested in IT products or services [2].

The use of the technology has become necessary for any organization to improve efficiency, productivity, and improve performance in general [1]. Information technologies are playing vital and expanding roles in business. Information technology can help all kinds of businesses improve the efficiency and effectiveness of their business processes, managerial decision making, and workgroup collaboration, which

strengthens their competitive positions in rapidly changing marketplaces [4].

In a poor country like Yemen, it has to capitalize on every resource we have, and brainpower is one of its best treasures. This could only be achieved by providing a suitable infrastructure for information technology, establishing training centers and research facilities, and encouraging investment in the IT market.

There are many theories that identify the Factors that affect on acceptance of technology. Today, Information systems and technology have become essential tools for organizations to achieve their goals. Therefore, many technology acceptance theories and models have been developed in the field [6].

2. Information Technology

Information Technology (IT) has grown and evolved over the last 50 years; you cannot think and plan a project, business or other initiative without the usage of this technology. When we say Information Technology that means not only personal computers or smart phones, but also modern machinery in factories, automotive industry, aviation industry, various household appliances etc., In one way or another this has not only facilitated our daily lives but it has also reduced cost and time in general [7].

This reflects the great opportunities that Information Technology and the Internet provide as an important tool for implementation in organizations and public institutions. Economists highly appreciate the importance of Information Technology in business growth, lowering costs and promoting the best products.

During recent years, globalization and computerization have redefined the industry, politics, culture, and social order. Globalization refers to ultimately integrate economic and cultural institutions. This integration occurs as a result of the use of information technology [7].

The technological revolution presupposes global computerized networks and the free movement of goods, information, and peoples across national boundaries. Hence, the Internet and global computer networks make possible globalization by producing a technological infrastructure for the global economy. Computerized networks, satellite-communication systems, software and hardware link together and facilitate the global economy [8].

Information Technology is used as a strategic tool for companies to enhance their competitive advantages at a time when uncertainty is increasing [9].

The idea that information technology can contribute to the optimization of enterprise resources, strengthen, enable and enhance business performance, is accepted and supported by many empirical studies [10-11].

3. Information & Communication Technology

Information and Communication Technology known as ICT technology has become the main tool in business activities in the modern world [12].

Using ICT also facilitates the production of goods in a short time with the help of computerized information systems, and services are quick and effective [13].

Technological innovations, particularly in the field of information and communication, have played and still do play a central role without doubt. Internet represents a symbol for the phenomenon of globalization in many aspects. The globalization of the financial markets, the lightening-quick transfer of unimaginable sums of money around the globe would be impossible without this technology, just like the organization of transnational production would be and much more. The enormous increase in trade as a further central element of commercial globalization results not only because transport costs have sunk rapidly, and goods can be transported more quickly, but especially because products such as software or databases can be sent from one corner of the world to the other over data lines in seconds [7].

4. ICT Indicator in Yemen

ICT represented in Yemen by Ministry of telecommunication and information technology. The main role is activated to supervise all the Telecommunications and information technology sector in the all country.

There are only two Internet Service Providers for providing the Internet services owned by Government:

- a) Public Telecommunication Corporation know as (Yemen.net.ye).
- b) Teleyemen knows as (y.net.ye).

Public Telecommunication Corporation (BTC): responsible for operating and development of national telecommunication networks and services in Yemen includes fixed lines, mobile and Internet services, Central Statistical Organization (CSO) in the Ministry of Planning and International operation is the only government institution responsible for collecting, processing, disseminating and publishing data and information statistical.

It gives the official status for the statistical figures in the Republic. National Information Center is a center under presidential supervision and is taking care of collecting date about information society and makes the necessary studies for improving IT in the country [14].

In Yemen, the infrastructure required to use computers is still weak. It has no reliable power supplies to begin with; electricity blackouts have become a routine in daily lives. The telecommunication infrastructure is also weak with most of the country having no phone lines to say the least. Most rural areas, accommodating 70% of the population, have

virtually no network connectivity.

This contributes to the large computer illiteracy and makes information technology inaccessible for a large part of the population.

5. Internet

“E” as the last letter in Internet usage has assumed great importance not only in the world of information and communication technology but also in businesses. It has become an important component for a large number of areas of research. So we can mention: electronic marketing, electronic commerce, electronic finance, electronic

commerce, electronic learning, electronics markets and others [7].

Internet is becoming part of everyday life for the whole world. In recent times electronic business has developed in an important business discipline [7].

The Internet represents a technological innovation, whose effects range from communication to interaction; however, its potential has not been fully explored and studied [15].

Today, Internet service consider significant tool to communicate in society and especially in organizations, therefore internet users in the world became huge category which exceed half percentage of the world population.

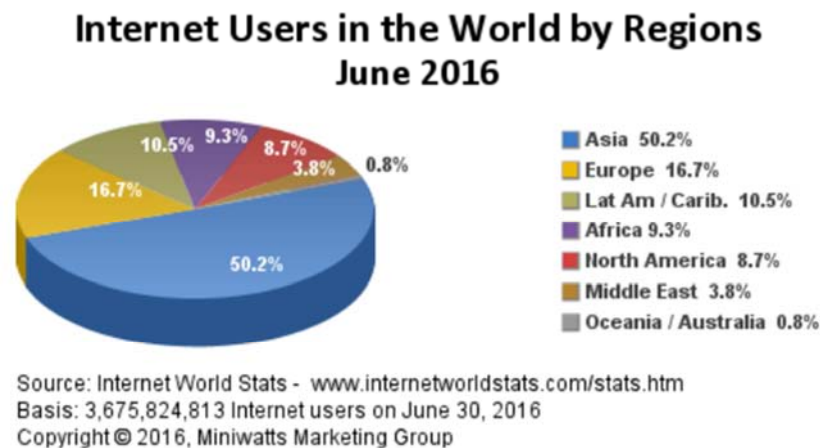


Figure 1. Internet users in the World.

Source Internet World Stats: www.internetworldstats.com/stats.htm
 Note: Basis: 3,675,824,813 Internet users on June 30, 2016

Based on the following data about the use of internet in the world on June 2016, there are more than 3.5 billion users of the network, thus constituting a percentage of 50.07% of all humans [16].

Information technology today has become a regular feature of the global society.

Statistics show the ongoing Internet usage by Continents [7].

The Internet Usage Statistics published that the number of internet users in Yemen is about 6,773,228 Internet users as of June 30, 2016; which represents 24.1% of the population, according to Internet World State [16]. Whereas percentage on June 2012 14.9%.

We could say there is growth of percentage 9.2% between 2012-2016, IT environment in progressive, In addition the perceived of IT need by human was realized.

6. Technology and Organization

Each technology is associated with a particular organization structure and has to be nurtured, nourished, and improved as a continuous process. Moreover, technology also influences the needs of the organizations, customers as customers are the one who purchase the organizations output

in the form of goods or services. Customer is the main protagonist who has complete authority and choice whether or not to accept the organizations goods or services [17].

Conjunction between technology and organization was illustrated by Joan Woodward in mid 1960s. Woodward (1965) classified organization technology into three categories- unit or small batch technology- which means a technology where units are custom made and work is non routine; large batch or mass production technology- where technology produce on large or mass basis; continuous process technology- highly controlled, standardized and continuous processing technology [17].

7. Advantages of Information Technology

7.1. Globalization

IT has not only brought the world closer together, but it has allowed the world's economy to become a single interdependent system. This means that we can not only share information quickly and efficiently, but we can also bring down barriers of linguistic and geographic boundaries. The world has developed into a global village due to the help

of information technology allowing countries like Chile and Japan who are not only separated by distance but also by language to share ideas and information with each other [18].

7.2. Communication

With the help of information technology, communication has also become cheaper, quicker, and more efficient. We can now communicate with anyone around the globe by simply text messaging them or sending them an email for an almost instantaneous response. The internet has also opened up face to face direct communication from different parts of the world thanks to the help of video conferencing [18].

7.3. Cost Effectiveness

Information technology has helped to computerize the business process thus streamlining businesses to make them extremely cost effective money making machines. This in turn increases productivity which ultimately gives rise to profits that means better pay and less strenuous working conditions [18].

7.4. Bridging the Cultural Gap

Information technology has helped to bridge the cultural gap by helping people from different cultures to communicate with one another, and allow for the exchange of views and ideas, thus increasing awareness and reducing prejudice [18].

7.5. More Time

IT has made it possible for businesses to be open 24 x7 all over the globe. This means that a business can be open anytime anywhere, making purchases from different countries easier and more convenient. It also means that you can have your goods delivered right to your doorstep with having to move a single muscle [18].

7.6. Creation of New Jobs

Probably the best advantage of information technology is the creation of new and interesting jobs. Computer programmers, Systems analyzers, Hardware and Software developers and Web designers are just some of the many new employment opportunities created with the help of IT [18].

8. Disadvantages of Information Technology

8.1. Unemployment

While information technology may have streamlined the business process it has also created job redundancies, downsizing and outsourcing. This means that a lot of lower and middle level jobs have been done away with causing more people to become unemployed [18].

8.2. Privacy

Though information technology may have made communication quicker, easier and more convenient, it has also brought along privacy issues. From cell phone signal interceptions to email hacking, people are now worried about their once private information becoming public knowledge [18].

8.3. Lack of Job Security

Industry experts believe that the internet has made job security a big issue as since technology keeps on changing with each day. This means that one has to be in a constant learning mode, if he or she wishes for their job to be secure [18].

9. Factors Influencing Acceptance of Technology in Organization: Context of Yemen and Conceptual Framework

9.1. Technology Anxiety

Computer anxiety refers to the tendency of an individual to be uneasy, apprehensive, and/or phobic towards current or future use of technology in general [19]

The organization in Yemen feel apprehensive about using technology, scares to think that they could cause the computer to destroy a large amount of information by hitting the wrong key, hesitate to use technology for fear of making mistakes cannot correct, and technology are somewhat intimidating to them.

9.2. Technology Self-Efficacy

In order to exhibit the importance of computer self efficacy and its effect on individual beliefs, this study defines computer self-efficacy as the judgment of the user's ability to perform the computer related task [20].

Self-efficacy refers to an individual's belief that he or she has the skills and abilities to accomplish a specific task successfully [21].

9.3. Technology Infrastructure

The social change that was introduced by the new IT infrastructure has a dual effect of greater efficiency and cost reductions. Based on a sample of over 1,000 companies, the effects of early adoption of IT technologies on cost reducing which could lead to a significant reduction in the company's mortality [22]

The Arabic world is considered as one of the least computerized and technologically underdeveloped regions in the world this back lag makes it absolutely impossible for the Arab World to compete at an international level in manufacturing technology or providing high quality advanced services [2].

According to the same study there are many reasons for such technological backward ranging from the absence of a suitable infrastructure, to the lack of qualified persons in technology and the weak IT market. Yemen is not exception for this rule and the technological sector is suffering many obstacles in a Yemeni context.

9.4. Attitude Towards Using Technology

Due to the persistence and importance of this factor, explaining users' acceptance of technology has been a long time study issue in organizations and information systems research [23], Demographic factors (eg. Age) influence on

9.6. Conceptual Framework

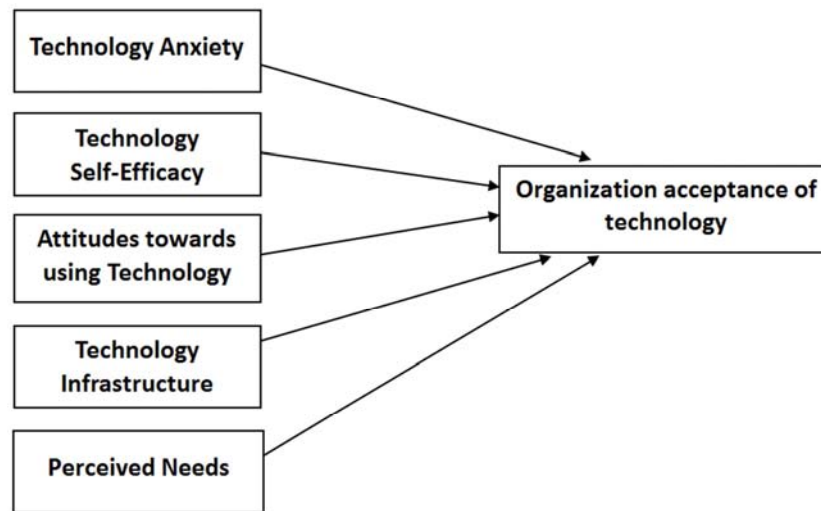


Figure 2. Proposed Conceptual Framework.

The proposed hypotheses are:

H1: There is negative significant relationship between technology anxiety and Technology Acceptance.

H2: There is positive significant relationship between technology self-efficacy and Technology Acceptance.

H3: There is positive significant relationship between Attitude towards using technology and Technology Acceptance.

H4: There is positive significant relationship between technology infrastructure and Technology Acceptance.

H5: There is positive significant relationship between perceived needs and Technology Acceptance.

10. Conclusion

The purpose of this study was to identify the factors that affect on acceptance of technology in context of Yemen. The author advocates that, the organizations must understand the factors that affect successful adoption of technology. The proposed model of this study is built from review of literature. The proposed model, as depicted in Figure 2 consists of five independent variables: technology anxiety; technology self-efficacy; Attitude towards using technology; technology infrastructure ; and perceived needs, and one dependent variable: organization acceptance of technology.

the personality attitudes. Another study states that “understanding IT acceptance is important because the expected benefits of information technology [24].

9.5. Perceived Need for Technology

Most businessmen in Yemen are unaware of the importance of computerizing their systems and by how much their productivity could increase, and as a result they don't seem to be interested in IT products or services [2].

The unconsciously the need of technology consider one of the factor influence on technology acceptance.

Where the implementation of this model in Yemeni organization will affect on acceptance of technology.

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Biography



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