

E-commerce in Iraq

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Abstract-

In the rising global financial system, e-trade has increasingly come to be a vital aspect of commercial enterprise method and a sturdy impulse for financial development.

One of the most enormous tendencies in commercial enterprise in latest years has been the increasing use of e-trade. It has revolutionized many marketplaces and started opportunities by no means imagined before.

Organizations that are not investigating the usage of e-commerce are in a amazing hazard of locating themselves being overtaken by way of others who're making use of this technology.

Iraq is characterized as one of the very few nations inside the global which are nonetheless thus far from the actual use of inevitable offerings of e-commerce.

often, Iraq suffers from some of capabilities that paintings as limitations to an effective use of e-trade in life including the lack of understanding and expertise of the gain of e-commerce, the shortage of facts and verbal exchange technologies (ICT) know-how and abilities, the risky bodily community infrastructure, protection and different privateness-associated problems similarly to problems associated with prices for the adoption of a new era.

Senior leaders of the u . s . must be privy to those rising, and increasingly complicated environments of e-trade with a view to compete on a worldwide (or maybe on a nearby) level.



The reason of this examine is two-fold. First, it seeks to analyze the hindrances to e-commerce adoption in Iraq. second, it seeks to suggest some tips for a hit applying of e-commerce. The paintings starts by analyzing e-commerce, its advantages, its demanding situations and market fashions of e-trade. The remainder of this paper is based as follows: in the subsequent section, an average implementation of e-trade is given, accompanied by means of the limitations to e-commerce adoption in growing countries and then limitations to its adoption in Iraq. Later, the conclusions and hints are presented and the paper is finalized with obstacle of look at and destiny paintings.

Keywords- E-commerce; E-commerce Adoption; M-Commerce; Internet; E-readiness; Developing Countries; Arab World; Iraq; Impediments; Security; ICT; Information Technology.

I. INTRODUCTION

It is in particular noteworthy that there is a scarcity of research specializing in the use of e-commerce inside the context of Iraq (with most effective few exceptions, consisting of in [28] where the writer tried to endorse techniques that might permit south of Kurdistan region to become an energetic player in the virtual economic system). due to the shortage of research on Iraq (which is attributed to the difficulties surrounding engaging in such studies), we had to utilize studies that addressed the Arab world, since the Arab nations are similar in many ways including faith, customs and values, history, and language.

In a few cases, we had to utilize studies dedicated particularly to growing countries (for the reason that Arab international constitutes part of this large circle). as an instance, studies such as [7] and [3] attempted to assess the performance of e-commerce markets in Saudi Arabia, whilst [49] tried to address the barriers of e-commerce adoption in Egypt, in addition to studies that taken into consideration e-commerce implementation in UAE, Iran, Jordan and other international locations.



for that reason, the prevailing have a look at attempts to bridge the information hole within the extant literature about e-commerce adoption and diffusion in Iraq.

A. Definition

E-commerce is generally define as the use of electronic communications and virtual data processing technology in commercial enterprise transactions to create, transform, and redefine relationships for fee creation between or among businesses, and among corporations and individuals [8].

3 key infrastructure developments that contributed to the rapid diffusion of e-trade: the net, the arena huge net and protocols (inclusive of comfortable HTTP) that paperwork as a mechanism for making an offer to complete a transaction in a comfortable environment [10].

E-commerce uses the net to construct and simplify relationships with customers, companions and different businesses. This entails the electronic processing of orders, managing customer support and cooperating with enterprise partners. Key precept in e-trade is that enterprise is completed with none direct physical contact.

B. Advantages

The advantages of e-trade may be categorized in important categories: tangible and intangible. Tangible benefits encompass business performance, accelerated automation of approaches, and transformation of conventional marketplace chain, retained and extended consumer base, decreased operation prices and acquisition of a gap market. Intangible benefits include enhancing nicely-being and training of customers, purchaser loyalty, aggressive gain and convenient purchasing [21].

From the pinnacle-management point of view, the blessings of e-commerce within the Arab global nations can be summarized in providing a faster carrier to customers, supplying an less difficult provider to customers, supplying a more reliable service to clients, developing new markets, improving the competitive role, decreasing operational costs, improving the



photograph, reducing administrative charges, assembly customers' call for for the service and reducing the workforce [2].

C. Challenges

E-commerce demanding situations are labeled specifically as: technological, managerial, and commercial enterprise related. Technological challenges include security, web site issues, and generation troubles (issues that encompass fees, software program and infrastructure). Managerial challenges include people and organizational issues, and acquiring senior management backing. Enterprise demanding situations include customer support, customers' vintage behavior and prison problems [21].

We are able to bear in mind, later, the challenges to a very good implementation of e-commerce, first in growing nations after which in Iraq.

D. E-commerce Market Models

we can perceive five essential types of e-commerce marketplace models: enterprise-to-business (B2B); commercial enterprise-to-consumer (B2C); business-to-authorities (B2G); purchaser-to-customer (C2C); and mobile trade (m-commerce) [20]:

- enterprise to- consumer (B2C): it's miles commerce between businesses and clients, includes clients gathering records; purchasing physical goods like books or travel or statistics goods like downloadable digitized fabric content, which includes software, music or electronic books (as an example: Amazon.com)
- enterprise-to-commercial enterprise (B2B): This type includes the usage of e-commerce in among and among companies. B2B region is in recent times growing much quicker than B2C and about 80% of the e-commerce is of this kind.
- customer-to-patron (C2C): This kind of e-trade happens among private individuals or customers (examples include eBay.com)



- commercial enterprise-to-government (B2G): This type includes trade between corporations and the public region. Examples consist of the use of the internet for licensing methods, public procurement, and other authorities-related operations.
- mobile commerce (m-trade): that is defined as a process of buying and selling of products or services through wireless strategies. The development of cellular telephones, PDAs and the roaming era has made the usage of m-e-trade offerings independent of region.

II. IMPLEMENTATION OF E-COMMERCE

according to [20], for e-commerce to be a very good alternative to traditional commercial transactions and for a commercial enterprise to maximise the blessings of e-trade, some of troubles must be taken into consideration. a normal e-commerce transaction loop involves the following six predominant players and their corresponding standards:

- * the vendor who should have a corporate net site with e-trade competencies, a corporate intranet and IT-literate employees to manage the facts float and maintain the whole e-trade system.
- *The Transaction partners that encompass banking institutions which give transaction clearing services, country wide and international freight businesses to permit the movement of physical items and authentication authority that serves as a third party to make sure the integrity and security of transactions.
- * purchasers who shape a important mass of the population with get right of entry to to the internet and possess a mind-set for purchasing goods over the net in preference to the physical inspection of gadgets.
- * businesses that collectively shape a crucial mass of agencies with internet get admission to and the capability to vicinity and take orders through the net.
- * government that should establish a criminal framework governing e-trade transactions (including digital files, signatures and so on.); and prison



institutions that would enforce the prison framework (consisting of legal guidelines and guidelines) and guard clients and corporations from fraud.

* The internet that ought to have a robust and dependable infrastructure and a pricing shape that doesn't make penalty on consumers for spending time on and shopping for goods over the internet.

For e-trade to develop, those requirements and elements have to be in motion. as an instance, a rustic with a very good net infrastructure will not have excessive e-commerce tiers if banks in that united states of america do not supply assist services to e-trade transactions.

III. E-COMMERCE IN DEVELOPING COUNTRIES

The term 'growing nations' usually refers to the newly rising and publish-colonial economies of Africa, Asia, South america and Pacific regions and once in a while called 'third world', 'less advanced States' or 'the worldwide South'. these international locations are regularly associated with terrible indices including poverty, lack of confidence and instability [22].

in line with [39], Iraq is taken into consideration a number of the developing countries along with countries together with Indonesia, India, Saudi Arabia, Turkey and Yemen. International locations which include United States, Canada, Japan, Germany and Belgium are taken into consideration developed countries.

A. E-Readiness Indicator

E-readiness, according to [45] manner the ability to use data and communicate technology to increase one's economic system and to foster one's welfare.

In terms of e-readiness, the very best-ranked areas of the sector are North america, Western Europe, similarly to some countries in Asia. then again, the bulk of the nations with decrease ranges of e-readiness are mainly located in growing and transition areas.



B. Impediments to E-commerce in Developing Countries

Preceding research, in step with [22] has found that developing nations have now not derived the anticipated benefits from e-trade. As a result, there is nevertheless doubt about how e-trade will virtually lead companies in growing international locations to new buying and selling possibilities.

most developing u . s . a . markets have now not always been a hit in adopting new technologies (which includes e-trade). therefore, studies so that it will discover the reasons for the shortage of reputation and adoption in those countries is especially needed [23].

a variety of of factors have hindered the boom of e-commerce in developing countries: the lack of community protection is considered to be the number one trouble, observed through gradual and risky connections, the dearth of technical abilities and the of lack expertise management on internet (ICTs in widespread), the serious loss of self assurance in e-trade, the shortage of facts era (IT) administrative structures and necessary experience, high charges and prices to begin e-trade by using using e-marketplaces in addition to the inadequate human resources and inadequate virtual infrastructure. also, B2B e-commerce may not provide more returns to firms in developing countries than other channels for engaging in trade [4].

furthermore, in step with [12], developing nations often lack the necessary monetary, criminal, and physical infrastructures for the improvement of e-commerce. additionally, developing international locations often have distinct cultures and commercial enterprise philosophies, which restrict the applicability and transferability of the e-commerce fashions offered via developed international locations.

IV. E-COMMERCE IN IRAQ

A. Iraq Facts and Statistics

Iraq is considered a western Asia country. Some facts about Iraq are as follows [29]:

- Population: 31.129.225 (as of July 2012)
- Location: Middle East, bordering the Arab Gulf, between Iran and Kuwait.
- Total area: 438.317 km².
- Border countries: Iran 1,458 km, Jordan 181 km, Kuwait 240 km, Saudi Arabia 814 km, Syria 605 km, Turkey 352 km
- Coastline: 58 km
- Natural resources: petroleum, natural gas, phosphates, sulfur.
- Irrigated land: 35,250 km² (2003)
- Natural hazards: dust storms; sandstorms; floods.
- Terrain: mostly broad plains; reedy marshes along Iranian border in south with large flooded areas; mountains along borders with Iran and Turkey
- Total renewable water resources: 96.4 km³ (1997).

B. Impediments to E-Commerce in Iraq

some international locations are already profiting from the consequences received from e-trade (for example, e-commerce is rising at 12% annually in the U.S, and eu and it is expected that within few years the productivity gap between the ecu international locations and united states of america will near rapidly). these countries are actually in apposition to benchmark their economies with competition the world over [14].



As for [6], they argue that for decades, the Arab world countries have suffered of being isolated from the worldwide online trading which have an impact on the financial increase and improvement in those countries and that there are nonetheless uncertainties inside the significance of e-trade among clients in growing international locations and the Arab international (inclusive of Iraq.) So, the blessings and use of internet in those countries has now not been found out in complete.

A have a look at conducted in [2] famous that approximately eighty% of the surveyed Arab clients within the examine have favorable intentions to e-save sometime in the close to destiny, and that approximately 67% of the same pattern see that e-buying is an smooth manner to use/carry out obligations, and about sixty five% of them are completely satisfied with the idea of buying products and services online.

we can sub-classify the impediments that prevent from a real implementation of e-trade in Iraq as either international issues (the ones that still exist inside the worldwide economics) or troubles that pertain to Iraq.

Issues pertaining to Iraq:

1. Technical Issues

Some of the obstacles include lack of credit cards and convenient payment means, poor distribution logistics, lack of specialized, trust-worthy online merchants of reasonable size, imperfect legal structure, and lack of large scale telecommunication transmission capacity.

1.1 Information and Communication Technology

data and communique generation (ICT), is regularly used as an extended synonym for information technology (IT), but is a extra unique term that stresses the function of unified communications and the mixing of telecommunications (cellphone strains and wi-fi alerts), computer systems in addition to important agency software program, middleware, storage, and audiovisual structures, which permit customers to get right of entry to, save, transmit, and manipulate records [46].



Infrastructure for IT offerings stays underdeveloped in maximum parts of the u . s . , as it get entry to is restricted and uneven. schooling remains noticeably dependent on revealed materials [36].

ICT has the capability to stimulate productivity increase, employment, human assets, talents and skills, knowledge-based economic system which in flip promotes financial improvement.

despite the recent growth in the demand for ICT, it has a completely limited market inside the Arab location, restrained deliver and coffee investments in evaluation to the world overall. it may be noticed that the diffusion of ICT within the Arab region is characterized by way of a market concentration within the Arab gulf international locations and that there's an opening between the gulf international locations and other Arab nations in phrases of supply, call for, fees and depth of services [24].

Iraq has no strong ICT infrastructure for assisting e-commerce practices, and according to [37], the united states of america's ICT centers and packages are very susceptible as maximum teachers have both little or no or no ICT literacy in any respect, and as a result are ill-ideal to play their position to help create a new generation of ICT literate college students. also, the wide variety of human beings owing personal pc is best 12% of the populace [40].

Ref [24] explains the reasons at the back of the restricted market and the low diffusion fee of ICT in the Arab world (which includes Iraq). these problems consist of:

- inadequate funding and shortage of infrastructure.
- inadequate attention of the importance of ICT inside the new financial system.
- inadequate studies and improvement (R&D) operations in ICT-related troubles.
- poor offerings ensuing either from low speed charge or disconnection.



- the lack of a network machine minimizes the performance benefit of the services.
- Low demand through purchasers, due to both the confined capacity/availability or limited efficiency of the offerings, or the high costs.
- Uncertainty/chance aversion on the deliver side due to the fact poor and constrained demand discourage investments and enlargement of the services.
- Poverty in some international locations in the vicinity restricts call for.
- higher costs of the services discourage both call for and deliver.
- Language troubles because of the desire for Arabic, or unfamiliarity with other languages, which reduces within the most benefit to be won from the net, specially with reference to websites supplied in other languages.

1.2 Telecommunication Infrastructure

E-commerce achievement depends strongly on a number of technology infrastructures. Telecommunication infrastructures are required to attach diverse regions within a rustic and across distinct nations. within the absence of an adequate basic infrastructure, it's far viable that the preferred benefits of the usage of e-commerce grow to be dangers.

1. The cellphone network: The phone network includes fixed smartphone traces that join a subscriber's terminal device to the general public switched cellphone network and which have a port on a smartphone trade. incorporated services virtual community channels and stuck wi-fi subscribers are blanketed. The range of smartphone lines in Iraq changed into reported at 1600000 in 2010, in line with [35] record posted in 2012. Unreliable cellphone connections may additionally bring about slim bandwidths presented by way of many ISPs, with consequent low connections. additionally, the range of mobile and stuck-line telephone subscribers in Iraq, which become stated through [33] says that the wide variety was at 18611300



in 2008. (cellular and stuck-line subscribers are general phone subscribers, constant-line plus cellular).

2. The net get right of entry to: Iraq is a submit-warfare society. there's extensive usage of internet and cell phone gadgets among more youthful generations in urban regions, but there is little penetration of those technologies into the extra economy [36].

The Arab global has been investing in constructing its communications infrastructure and adopting the usage of the internet in view that 1995 as a crucial tool for improvement [5].

however; the Arab nations need to make many improvements of their simple net abilities earlier than achieving at least the cutting-edge level of net performance present within the advanced countries. In maximum cases, Arab governments, and for political reasons, try to create a monopoly inside the ISP marketplace by way of prohibiting new establishments from entering the market. every other purpose why internet costs are excessive and connection speeds are low in Arab international locations is due to the fact internet provider providers are not allowed to offer their personal international gateways [2].

The access to the internet in Iraq remains very slow and pricey. it's also unreliable because of the terrible phone communications and the inadequate energy supply, as the total manufacturing of energy in Iraq by way of 2010 was 48.96 billion kWh against 55.66 billion kWh of consumption, with 6.7 billion kWh being imported from neighboring nations [18]. On common, households acquire 14.6 hours of power each day, thru a combination of the public network and personal turbines [40].

It become simplest in late 1999 that net get entry to became available to the majority via confined net centers/cafes. The quantity of net users in Iraq became 800,000 in 2010 [32] or 325.000 customers [16]. In June 2012, the quantity jumped to two.211.860; but, this constitutes most effective 7.1% of the full expected population of Iraq in 2012, which is 31.129.225 [16]. In a country like China, that's the arena chief within the range of net users, this



wide variety become 538.000.000 in June 2012 forming approximately forty% of the populace of China in the identical yr, that's 1,343,239,923 [17].

The worldwide internet bandwidth (in Mbps) in Iraq changed into reported at 40 in 2008, in step with the [31]. international net bandwidth is the shrunk capacity of global connections among countries for transmitting internet site visitors.

purchasers' internet information which includes the internet utilization abilities, search features, and search skillability makes them more confident to take part in on-line transactions. additionally, customers who spend more time using the internet might generally tend to reap more expertise and understanding of the online structures [23].

according to [23], the general public of the internet customers within the Arab global are focused in the Gulf international locations, whose populace does no longer exceed 11% of the whole vicinity's overall populace.

Ref. [5] has summarized the net limitations within the Arab global as follows:

- The incapacity to adopt this vital project as a concern.
- The incapacity to initiate the distribution of get admission to and to encourage the huge use of the internet.
- The absence of mutual strategic cooperation to expand the use of the internet among the Arab nations.
- most Arab countries locate it extra tough even to partly pay their contribution masking internet expenses.
- Ministries of training and better training in pay less interest to the training programs concentrated on instructors on the way to use the net.
- The barrier of language.



- The absence of effective legal guidelines and legislation that govern the net use and e-trade.
- insufficient rewards which might be given to agencies or people that show a desire to provide the internet offerings.
- The absence of a personal zone position
- the issue of user popularity of a brand new era.

three. the relationship value: internet get right of entry to fees are a key determinant of internet and e-commerce use by using people and groups. nations with decrease get right of entry to fees generally have a greater wide variety of internet hosts. the supply of a huge range of net connections and other verbal exchange offerings, at competitive costs, may also have an effect on customers' decisions to adopt e-trade and permits customers to choose one of a kind and appropriate services in step with their precise desires.

The fee of the net get entry to in Iraq makes it inaccessible to maximum users, because the monthly connection value of the net represents a burden on a large part of the population. in step with [9], Iraq and Lebanon have the highest ADSL expenses, at the same time as Morocco and Egypt have the lowest expenses. The price of internet (6 Mbps, limitless records, Cable/ADSL) in Iraq, in keeping with [25], is ready \$50.76

4. Broadband Connection: Broadband connectivity is a key component in ICT improvement, adoption and use. It accelerates the contribution of ICTs to financial increase, enables innovation, and promotes performance. in step with [30] published in 2012, the variety of constant broadband internet subscribers in Iraq turned into simply 77 in 2010 (fixed broadband internet subscribers are the variety of broadband subscribers with a virtual subscriber line, cable modem, or other excessive-speed technology). however, according to [42], by 2013, there has been a total quantity of 108 broadband internet service carriers in Iraq.



2. Social and Cultural Issues

The social and cultural characteristics of the humans of Iraq and the ideas associated with online transaction pose a much extra venture and act as a primary impediment to the adoption and diffusion of e-commerce.

2.1 the character of conducting enterprise

The success of doing business in many countries (which include Arab world international locations) relies upon strongly at the first-class and quantity of personal relationships. consequently; a typical employer is generally no longer best a natural economic issue but a socio-financial one as properly. A sturdy man or woman relationship and long term association between the events offer a sense of community and later ends in economic engagement.

2.2 Language

Language has been identified as a socio-cultural obstacle that hinders each the get entry to to information and to the net and participation in e-trade. A large part of people in Iraq are illiterates, and uneducated people have a tendency to have restrained access to data on the net because facts is generally in a language. The much less knowledgeable and illiterate humans can't apprehend the languages which can be used to disseminate statistics at the internet.

the difficulty associated with language is essential because it's far a gateway of statistics and information switch inside the virtual global. English is a primary language used in lots of Western countries in which new technologies get up. it's far the fundamental language for development of IT and e-commerce and it's far the main language used at the web.

82% of internet websites are in English and that could be a massive impediment for Arabic speaking natives who can simplest write and study Arabic [14].



Familiarity with fundamental English is discovered to be essential for using the internet. This barrier, coupled with shortage of Arabic software program, additionally contributes to the hesitation of Arab clients [23].

In Iraq, the quantity of people who speak English (as a 2d language) constitutes approximately 35% of the populace of Iraq in 2012, which is 31.seven-hundred.000 [47].

the extent of English language skills average is low, even among educated experts and academics. a few students have get entry to to the net and private computer systems at home. but, bad English language skills limit their get entry to to English-language internet web sites and services. English language teaching and education at the university degree is enhancing, but it's far hindered by means of insufficient schooling, huge elegance sizes, outdated teaching methodologies, and lack of talent amongst coaching experts [36].

3. Social and Economic issues

it is necessary to cope with some of socio-economic and regulatory impediments earlier than Iraq can take part in digital commerce. those impediments are:

3.1 financial situation

considering the fact that e-trade relies upon on some era infrastructures that are incredibly pricey, it's far not likely beneath the contemporary circumstances that Iraq can be concerned in e-commerce. The Gross home Product (GDP) and income according to capita are not unusual indicators for the financial situation of a rustic. for example, the unemployment charge in Iraq in 2010 was 15%, the inflation rate turned into 6% by means of 2011, the industrial manufacturing increase charge in 2010 became 4.8%, general external debt as of December 2011 was \$forty five.29 billion, and population underneath poverty line in 2008 turned into 25% [18].

The price of net get admission to has dropped in current years; however, it remains a extensive barrier to e-commerce adoption.



3.2 instructional device

The bad state of instructional system in Iraq is seen as impediment to e-commerce adoption, as the literacy rate of the Iraqi adults in 2009 become 78.06% [48] and [38]. It means that one out of 5 Iraqis between the ages of 10 and 49 can not examine or write a simple statement². even as Iraq boasted a report low illiteracy rate for the middle East in the Eighties, illiteracy jumped to at least 20% in 2010 similarly, illiteracy among girls in Iraq, at 24%, is extra than double that of men (11%) [15].

in line with [36], books, periodicals, and magazines are especially prized and revered. every college at a college has its very own library for college kids in that discipline. Lending libraries do now not exist, and maximum college students can't easily get admission to the assets to be had on campus, most of that are old and outdated. Universities have confined net potential, maximum university faculty does not have normal get admission to to computer systems at work; computer labs for student use are insufficient and often non-useful. Many university faculty and staff lack fundamental computer capabilities and net experience. outside of main city facilities, many teachers and college students do no longer have electronic mail addresses.

the shortage of IT abilities and commercial enterprise abilities are giant obstacles to powerful adoption of e-trade. the dearth of appropriate IT schooling is seemed to be a motive why the capacity value of computer systems and the net as a method to take part in e-trade is not favored. normally, college curriculum does not encompass pc training. there's a need for early pc education in order that people may want to grow to be laptop literate in college. human beings would must gain knowledge of and knowledgeable earlier than they could benefit from the blessings presented to them by the internet and e-trade.

three.3 payment system

The performance of the bills machine can assist or hinder the improvement of e-trade. A supportive electronic payments infrastructure is vital to promote e-trade, which exposes a key hyperlink between e-trade and the economic foundation of the financial system.



in lots of growing countries, cash continues to be the preferred technique of charge not simplest attributable to protection but also for the sake of anonymity, that is beneficial for tax evasion functions or for keeping secret what individual's money is being spent on [27].

Few people in Iraq have credit cards, as most banking sectors lack a national clearing machine and potential clients are suspicious of being cheated. complete performance and consciousness of the blessings of e-trade depends on rapid authorization, bills, and agreement of accounts. Iraq does no longer have financial establishments or valuable bank payments mechanisms which can be prepared for this challenge. Iraq credit score cards aren't yet famous in the home financial system. people primarily use those for making payments whilst travelling overseas. The Iraqi market is coins-dominated.

In international locations together with Yemen and Iraq, there are still constrains on hard currency transfers and customers will locate it tough to complete transactions and make payments on-line [23].

The low boom rate of the Iraqi credit score cards enterprise is attributed to the subsequent [13]:

- the lack of appropriate infrastructure, inclusive of POS terminals and internet connectivity.
- credit score card merchandise are available simplest to a completely small portion of Iraqi citizens.
- The regional set up, governed by means of Islamic laws, allows the usage of credit playing cards however inside certain situations.

three.four Transportation network

E-trade depends in large part at the network of transportation inside a rustic. Inadequacy in essential offerings inclusive of postal provider together with shipping required in an international transaction can demoralize the fulfillment of the transaction itself. pace is one of the most important features of e-commerce. The inadequate distribution and burdensome delivery



systems and the dearth of proper shipping, and postal system are number one impediments to the growth of e-trade in Iraq.

4. Social and Psychological Issues

four.1 Resistance to exchange

Resistance to exchange is one of the most traditional troubles in any attempt to bring about technological exchange which include e-trade). corporate leaders are used to doing business in a sure manner and they do now not want to alternate, which represents a widespread hurdle in itself [14].

4.2 Territorial conduct

corporate leaders generally exert territorial behavior, which means that they want to have manage over their commercial enterprise area. They trust that if they have been to have interaction in e-commerce, they would be losing manipulate over the business enterprise assets [14].

four.three era hole

Many business enterprise managers do not use email for the reason that they were now not brought up within the information age. This fact is coupled with their mind-set of reluctance to invest in IT and their failure to imagine the added cost [14].

5. Political and criminal problems

authorities initiatives are crucial inside the adoption of e-commerce and other ICT in standard. No progress is possible in the absence of clear policies and the determined implementation of such regulations. the lack of a policy to guide e-commerce expansion in Iraq is a first-rate hassle to the adoption of e-commerce. also, different problems that are seen as impediments to e-trade adoption are unfastened alternate, the monopoly which countrywide governments workout over countrywide telecommunications, import obligations on IT device like hardware and software. changes in authorities policy are imagined as being essential to developing an environment for the extensive use of the net in many sectors of developing countries.



complex and uncertain business rules shape one of the most important barriers in the direction of e-commerce; one which exists in Iraq and in lots of growing countries. The authorities must try to encourage consumers and businesses by using developing a clean harmonious set of regulations.

6. customer awareness

customer attention is a time period used to explain the notice of a potential or cutting-edge buyer approximately a selected product or employer. purchaser attention may be as easy as a consumer remembering a television commercial or as specific as a purchaser delving into the manufacturing origins of a particular product [41].

7. corporate consciousness

at the corporate degree, the scenario is not one of a kind from the patron stage; the non-public zone nonetheless ignores the importance of this point.

eight. economy's performance

Iraq's economic system is dominated with the aid of the general public sector's pastime with a confined role for the non-public sector. The oil quarter presents about 95% of forex profits [44].

at the purchaser-to-consumer level, we are able to discover neighborhood well-known net web sites that are devoted to the digital sort of trade, and these are: hrej3 and mredy4 that offer B2B services which includes selling/renting cars, homes, digital devices and others.

nine. loss of certificates Authority

The nonexistence of a certificates authority (CA) serves as an obstacle closer to the adoption of e-trade on a national level. furthermore, the form of this CA- whether or not personal or authorities-owned - should also be determined [14].



Global Issues of E-commerce:

further to the issues that save you from an powerful implementation of e-trade, which pertain in particular to Iraq, there are other problems that also shape a barrier in opposition to more evolved use of e-commerce within the whole global

1. safety

E-commerce is growing in a worldwide angle. however, it comes with a risk that some part of the transaction is compromised which might also result in monetary loss or unintended shared non-public records. consequently, the safety of e-trade transactions is a vital part of the ongoing achievement and growth of e-trade [43].

In terms of at ease servers⁵; the developing and transition nations have now not but advanced the technological infrastructure to compete with the maximum advanced international locations in phrases of e-commerce [4]. as an instance, in Iraq, as of 2011, the wide variety of cozy internet servers was simply 4 [34].

E-trade security necessities may be studied by way of examining the overall method, starting with the patron and finishing with the commerce server. here are some of the most triumphing safety attacks [27]:

- active content material: lively content material refers to programs which might be embedded transparently in internet pages and that motive motion to occur. those packages can display transferring snap shots, download and play audio, or enforce internet-based spreadsheet packages. all people can embed malicious active content in net pages. This transport method, which is referred to as a computer virus, right now begins executing and taking movements that purpose harm.
- Malicious Codes: those encompass pc viruses, worms and Trojan horses A computer virus is a application which performs a useful feature, but plays an unexpected movement as nicely. Virus is a code phase which replicates with the aid of attaching copies to existing executable documents. A computer



virus is a software which replicates itself and reasons execution of the brand new reproduction.

- Server-side Masquerading: Masquerading lures a sufferer into believing that the entity with which it is communicating is an extraordinary entity.
- Verbal Exchange Channel Threats: These are the threats that messages enjoy at the internet journey from a supply node to a vacation spot node through a number of intermediate computer systems at the network, as it's miles not possible to guarantee that each computer at the internet is secure and relaxed.
- Confidentiality Threats: These are threats to confidentiality, that's the prevention of unauthorized disclosure of facts.
- Integrity Threats: An integrity threat happens when an unauthorized birthday party can modify a message circulation of facts.
- Availability Threats: The reason of this type of threats is to disrupt regular pc processing or to disclaim processing in entire.
- Server Threats: This type of threats can reason destruction to the server or to illegally accumulate records.
- Database Threats: These are the threats that consist of obtaining user authentication facts (username/password pair) that are usually stored in database, then masquerading as a legitimate database consumer to show personal and expensive information.
- Not Unusual Gateway Interface Threats: A commonplace gateway interface CGI (which transfers information from a web-server to any other program, together with a database program) and the applications to which they switch records provide active content to net pages.
- Password Hacking: The most effective attack towards a password-primarily based device is to wager passwords. The attacker can use the password hacked to get entry to the system.



it's far feasible to overcome the problem of security and confidentiality of statistics with the aid of adopting specific security measures such as encryption, cozy Socket Layer (SSL) certificates, certificates with extended Authentication Validation (EV) and Trustmark [6].

2. privacy

privateness now is an quintessential part of any e-trade approach and investment in privacy protection has been shown to growth purchaser's spend, trustworthiness and loyalty. It has come to be a main problem for clients specially with the upward thrust of identification robbery and impersonation, and any concern for customers have to be treated as a chief challenge for e-trade providers themselves [26].

The mixture of contemporary business practices, consumer fears, and media strain has ended in making privateness a possible problem for e-commerce [1].

three. Integrity, Authentication & Non-Repudiation

In any e-commerce device, factors which includes statistics integrity, consumer & patron authentication and non-repudiation are essential to the achievement of that on-line enterprise [26].

- information integrity: it's miles the assurance that facts transmitted is regular and accurate and that it has no longer been altered in any way throughout its transmission.
- Authentication: it's miles a means by which each events in an internet transaction may be confident that they are who they are saying they're.
- Non-repudiation: it's miles the concept that no birthday party can dispute that an real event on line came about. It prevents the sender of a message from sooner or later denying that he/she sent the message.

those 3 styles of problem have led to the want for the development of robust verification and protection measurements including public key infrastructures (PKI) and virtual signatures.



four. agree with

self belief and accept as true with is an critical requirement for comfortable electronic trading. The geographical separation of consumers and dealers creates a strong impediment to e-trade adoption.

E-commerce is at once affected as customers are nevertheless wary of providing their non-public and monetary information to an internet save in case a breach occurs of their records. studies have showed that consumers are cautious of buying on-line and one such observe in 2005 of five,000 net consumers got here to the conclusion that 32% are more cautious when they store online, and 14% purchase fewer gadgets because of security issues [43].

research, together with [23], have discovered that expertise and competencies received via the use of the net and laptop facilitates to lessen customers' perceived danger in on-line shopping. The identical preceding study states that expertise, threat notion and agree with are critical factors that affect customers' e-commerce adoption inside the Arab nations, with information being the maximum vital component among these kind of elements.

For [6], they determined that agree with is a key thing in affecting the belief toward e-commerce adoption and that right safety associated with correct consider will ultimately result in growth the adoption of e-commerce inside the Arab world.

5. Social Engineering

Social engineering is the artwork of the use of people into appearing movements for the sake of divulging private statistics. techniques of social engineering encompass pretexting (in which the fraudster creates an invented state of affairs to get the victim to divulge records), Interactive voice recording (IVR) or telephone phishing (where the fraudster gets the victim to disclose critical statistics over the cellphone) and baiting with Trojans horses (wherein the fraudster 'baits' the victim to load malware unto a gadget) [26].



V. CONCLUSIONS AND RECOMMENDATIONS

Our findings show that the primary barriers to e-trade adoption in Iraq are the technical, social and cultural, social and economic, social and psychological, political and criminal, patron focus, neighborhood marketplace size and absence of certificate authority troubles, further to international troubles such protection, privacy, agree with etc.

unless the coverage makers in Iraq and corporate leaders understand and address the numerous particular troubles that pertain to the u . s . , and relate to off-website online transactional procedure, the massive scale diffusion and fulfillment of such endeavors may be significantly impeded.

a few experts are expecting that it will likely be increasingly more tough for smaller agencies to hold their life. We can not keep away from coming to a end that there are huge possibilities for e-commerce and it'll really growth exponentially.

The destiny growth of e-trade will be pushed by way of the diffusion of the net from evolved to developing international locations and from huge businesses to Small and Medium businesses (SMEs). E-commerce sales will grow and the net will sincerely become the arena huge web as greater countries, SMEs, and consumers benefit get admission to to reliable net connections thru services consisting of broadband cable and DSL technology.

The personal sector have to play the lead function inside the development and use of e-commerce. however; the authorities can play an vital function in encouraging e-commerce growth thru taking measures along with the advent of a favorable policy environment for e-commerce and turning into a main-part person of e-commerce and its diverse programs.

As a case study, the united states authorities (throughout 1998-2000) has adopted a number of policy prescriptions to encourage e-commerce growth in the country. The techniques covered annoying the sector change enterprise to declare the internet to be a tax-unfastened environment, recommending that no new tax regulations be imposed on net trade, stating that international locations expand a "uniform business code" for digital trade, requesting that highbrow assets safety be regular and enforceable, that international locations



adhere to worldwide agreements to guard the security and privateness of internet business transactions, that governments and

businesses cooperate to broaden and extend the infrastructure of the net; and that businesses need to self-modify e-trade content material [11].

ICT has the capacity to accelerate financial improvement in Iraq. To sell ICT services inside the Arab world (including Iraq), some of measures ought to be followed by way of the government [24]:

- Consolidating financial boom with the aid of facilitating the era or growth of some other resources of profits and investment.
- enhancing employment opportunities.
- improving the knowledge-based economic system.
- selling the degree and the efficiency of the work employer.
- Accelerating the catching-up impact. The diffusion of ICT may be used to accelerate and facilitate efforts to bridge the space with the advanced nations.
- Minimizing poverty within the place by using growing additional employment possibilities.
- Advancing R&D efforts.
- Insuring gender equality in the place.
- selling e-commerce. Investments in ICT have the ability to enhance e-commerce.

a number of the public policy troubles in e-commerce that the government need to deal with are:

- selling get right of entry to to less expensive and smooth get entry to to statistics Networks: The last goal of the government ought to be offer a ordinary get entry to or great get right of entry to to reliable information and conversation offerings at an inexpensive cost and its availability at an



inexpensive distance. government rules should inspire open get admission to, open architecture and bendy get entry to.

- legal shape: preparing a prison environment coping with the internet, such as issuing suitable e-commerce legal guidelines which include the digital signature, the digital identification, tax remedy, customer safety, etc. [2].
- The safety of purchasers from Fraud: this will save you from stealing credit score card information to credit below false identity.
- The protection of purchasers' right to privacy: privacy entails that data should be stored from unauthorized parties.
- The felony protection against Hacking: Hacking consists of gaining unauthorized get admission to to touchy facts.
- The protection of highbrow property: This includes the protection of copyrights for literary, musical, dramatic, and creative works, as well as of sound recordings, movies, pronounces, and cable programs. it's also the safety of logos, as domains can be visible as a version of such. eventually, shielding patents in e-trade settings is also an trouble [19].
- nice and velocity of Distribution Logistics: terrible roads and bridges, inefficient transportation structures, coupled with the excessive fee of global parcel offerings are foremost boundaries within the adoption of e-trade in Iraq. The authorities must consequently create a policy surroundings that encourages investments within the countrywide present transportation infrastructure and offers for electronic customs clearance processing to streamline the paperwork and permit for extra obvious, predictable and green customs operations.
- focus marketing campaign: The government and private region massive businesses can have interaction in a campaign to publicize information to human beings and merchants about e-commerce advantages, fine practices, achievement memories, and possibilities and boundaries regarding the usage of e-trade and ICTs. those campaigns should include free-education publications and workshops on e-trade, safety and privateness similarly to awards programs.



- computer Labs: government initiatives, which include computer laboratory installations in colleges, are enormously applicable.
- IT workforce coaching: Structuring and implementing included instructional and education plans that goal to prepare a qualified technical team of workers that is able to growing and walking net applications [2].
- E-government: the authorities ought to be the lead-user of e-commerce in order for numerous commercial enterprise and private-region associated activities are to be precipitated to transport on-line. In effect, the authorities will have a wonderful have an impact on.
- network Infrastructure and Localization of content: An vital approach on this regard is the establishment of “telecasters” or digital community facilities that might work as a network-shared get admission to and connectivity platform, specifically in rural regions (for example constructing an digital agri-statistics middle that offers market statistics to farmers). these telecasters also can be a venue for ability constructing, abilities enhancement, schooling, communications and content material development.
- The man or woman credit score system mission: (equivalent to social security numbers inside the U.S.) should be followed by means of the Iraqi authorities, in which each Iraqi citizen obtains a completely unique identifier. This variety is placed in a computer database that serves as a national demographic facts repository.
- Strengthening client safety: The government have to don't forget: wherein and the way fee takes place, when settlement takes area, who settles, whether or not the transaction is B2B or B2C and whether or not settlement may be traced. The authorities can also adopt procedures to make sure security in e-trade transactions by the establishment of a Certification Authority CA (which verifies seller and client identities), examines transactions and protection processes, and problems virtual certificate to those who are capable of meet the set safety requirements. The government can also design and establish a prison and judiciary framework that provides for minimum standards of and necessities for transparency, impartiality and timeliness.



- Human sources improvement: The authorities can provoke pilot initiatives and packages for functionality-constructing, training and e-trade support offerings, which include web design.

VI. LIMITATION OF STUDY AND FUTURE WORK

One trouble of this take a look at is the dearth of literature at the adoption of e-commerce in Iraq markets. however, we attempted to do our satisfactory to utilize the available on-line assets (although, every now and then their values were no longer same seeing that these are simplest estimates), in addition to using research focusing on the Arab land and studies on developing countries. also, the look at had lacked some critical facts amassing techniques, which include surveys and questionnaires, because of difficulties encircling conducting such sorts of studies.

even as the cutting-edge look at relied specially on online resources, further research should recall undertaking discipline strategies, including interviewing college students, managers or employees and file their reviews closer to some of troubles along with on-line transactions.

further research can also look into the relationship between the use of ICT and e-commerce and the way it technology can assist sell using e-commerce in Iraq.

For coverage makers and company leaders, this observe gives insights as to why Iraq is up to now from a actual implementation of e-trade. by means of expertise the motives behind non-adoption, appropriate approaches and incentives system can be better furnished to inspire e-commerce adoption. similarly, the ranking of issues allows capacity adopters to focus their attention on crucial problems.



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