

## **E-commerce in a digital economy, the challenges and advantages**

By

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### **Abstract**

*In recent years, by fast growth in information technology and communication and more important of it, developing Internet, we are observing changes in conditions and the method of process and experience new inventions every day and one of them is electronic-commerce. As a whole, tendency to make e-commerce has been observed and they are shown in e-commerce system. According to changing economic during time and traditional economic change to electronic, it requires new business too. One of the most important one is e-business. In this paper, at first we define digital economy and its important elements and the procedure of its formation, then we define e-business and its advantages and operating challenges in digital economic.*

**Keywords:** *Information technology, E-business, E-commerce, digital economy.*

### **1. Introduction**

Digital- economy is a convergence of communication, computation and information. In new economy, structural change from industrial economy to economy by information and services and parallel changes leads to new organization and forms is necessary (Gronstedt, 2001).

New economy or digital economy is almost unobservable form, information, innovation and creativity in developing economic potential and as exploiting ideas than materials (Sharma, 2004).

- Important elements of digital economy:
- Digitalization and using information and communication technology
- Knowledge making
- Information transforming to goods
- New method of organizing work and production

It means, accessing to all online services and spread information. Spread accessing to networks, internet, and distributed internet is the base of digital economy of skills in life and work in information society. In a digital environment, by internet growth and e-commerce, there are basic changes in government, society and economy and by social, economic and political consequences. (Boulton, 200, libert & samek)

E-commerce has caused improvement in business value by basic changes in the method of product designing in which has been provided, launched and supported in market.

Different communication and interaction of interested including customer, supplier, strategy partner, factors and distributor has changed drastically. E-commerce real influence is its ability to decrease costs and price and efficient business. This economy reaches to all chain and is influential on commerce interaction to other one. (Bernardes, 2000)

***Background:***

Whereas e-commerce develops rapidly, could have important effects on social and economical structure. The effect of these changes are varied and even could develop digital gap among countries and change business statues, dispute business market, and change tax (Anonymous, 2000).

Spread using of internet does have consequences for electronic business like spiritual ownership, supporting privacy, filtering data and etc. therefore, it is necessary to change in digital commerce and know how e-commerce influences on organizations and society about social and economical angers. Some of e-commerce influences are unwanted and creating unfeasible condition of business and personal situation could have social consequences. So many Researchers have studied the social and economical aspects of information and communication technology on more than 50years (Dutton, 1999).

Digital economy in which has been named by internet economy, network economy, web economy and new economy is simply an economy in which most of it is based on digital technologies including communication network, computers, software, and other information technologies , electronic commerce, electronic markets, receive and payment, intelligence cart and electronic money and financial interactions (Fathalian and *et al.*, 2011)

Digital economy is a revolutionary in the world economy derived from technology changes in global investment in which binds new information technology to management activities and business (Wilken, 2003).

Global and economic communication is an eras in which space, habitant, geography is not important. But place is important yet, and for a short time would be, too. Of course, new economic system acts more in virtual space than place and slowly, more volume of economic interaction would migrate there (Karimzadegan Moghaddam, 2010)

Developing communication substrate in third world and learning internet and network economy and new electronic commerce has discussed more about them and development in new information technology has provided new capability to market. Politics and business men knew internet as the most important market center in 21th century (Wilken, 2003).

## **2. Method of Research**

The method of study in this article is based on thesis study and sites, magazines, internal articles and foreign in digital economy and e-commerce.

***Digital economy forming procedures:***

In 90 decades, we observed two revolutions in which does have basic results. The first one, was globalization and the other one was information and communication technology in which as a result of them, a procedure in the name of “new economy “has formed. ICT revolution has provided higher efficiency for industries and establishments. New industry and services has emerged better than before and according it, the productivity in economy has increased and at last improved life standard. Digital economy has not emerged at once, but does have complementation process. Complementation process has led to digital economy and includes:

### ***The first eras, economy based on relative advantages***

The basic element of economy movement were industries in which were based on relative preference and production factors and raw materials in any country are the base and frequent in nature, are the base of preference and development and economy leading. In this era, communications were limited to railway, roads and airports. Because in this era, hardware and natural source were very important.

Second era, economy based on relative preference: criteria has changed slowly and the economy would change and competitive preference would be in attention, too. Of course, in this era some basic source and natural like energy source especially oil are very important. This era would not be based on what we have had.

In other words, having is not the base of preference, development and leading, but improving procedure, forming human investment would be important. But are not the basics. In this case, we have new players in international era and are important in organizing global economy and the government is not the only power to exploit natural sources and being the great geographical power or in fact based on nature could govern.

There is some institutions in international relations organizing. Institutions and international relations in economy instead of countries and government are very important and would substitute. Natural source would be changed by preference making capabilities.

We could not say, it is based on knowledge, but we would mention that in this era if knowledge is not the base of work, but it has important role in different eras. For example, according to growth model in economic eras, knowledge finds its place slowly. Of course, in other eras is the same as above.

Third era, digital economy: there are no borders. Because there is some maturity in digital technology and communication network in which they would be the base of new business. Specially, by time passing and investing, the procedure would lead to cost decrease and in this case, goods like computer chip, semiconductor, microprocessor, personal computer are the basic driver and investing cost would change to knowledge cost and does have important role.

In this era, technology changes would lead to innovation development. In industrial goods has produced in this era, they does not have unit form. In one era, there would be mass production without pay attention to customer requirement, but here we have mass production as before, but is different from the past. Because mass production is applicable according to activation, deepening and ready communication and we could receive regularly all interest and organize production.

In this era, the basic of economy is other than type and level of communication and in this case, there is no any mass production. In global economy, mass production is not very important and distribution is simultaneously. Therefore, in this era we have basic changes and internet emergence and technology and it's components be articulated, too.

### ***E-commerce***

E-commerce includes buying procedure, sale or products interchange, services or information through computer network and internet. Of the end of 1970, e-commerce has become important, at first "EET" has been provided in great organizations and financial institute. Then EDI has been provided in which includes non financial interaction, too. At last in 90 decades, by increase in internet application, e-commerce has been provided in current meaning (Fathalian and *et al.*, 2011).

***E-commerce evolution procedures:***

It includes three procedure :the first one is technology, economy, social and ruling substructure. In the second phases, after creating substructure, e-commerce is the base. Procedures improve in establishment business and country business. In other words, procedures would remedy and became electronic.

The third phase is general contract of e-commerce in country and revolution of variables and emergence of e-commerce advantages (Ibrahim, 2014).

We have paid to different unwanted social and economical influences and penetration by e-commerce in digital economy.

***Unwanted consequences of e-commerce (challenges)***

By developing e-commerce, its influences would be observed in personal and general level. We discuss some of its unwanted consequences in the next paragraph.

***Increasing digital gap***

We have used of ICT for deeper electronic commerce and increasing social and economical differences among peoples, business and international organization.

In one hand, e-commerce would create new opportunities for economic growth and in other hand, it creates social problem through digital gap.

Digital gap is the difference among those who use it and does have access to, and those who don't. More than 2/3world populations are deprived from information technology and communication. There is complicated integration of different levels of accessing to ICT, using information technology and communication, ICT application programs among different social and economical groups.

***E-commerce and dwelling in margin***

Using ICT for e-commerce has achieved many advantages to margins. These sensations has been reflected from global reports from business (2001) and say using technologies like e-commerce does have positive relation to economic growth in national and organizational level. In countries in which information technology and communication are more expensive, more people have been put in margin. These organizations could not response to those who have not any job and or any facilities. (Sharma, 2004)

***Social isolation***

E-commerce is the basic facilitator in new types of adaptive jobs. We could name place of work, by adaptive situations (like operative work, work from home, and work from satellite center). E-commerce does have access to social ground. In the one hand, there is easiness to buy from home and in other hand, it eliminate past interactional influence of social requirements.(Gershuny, 2000)

E-commerce creates facilities for consumer to buy from home and receive them there. But this phenomenon leads to social isolation and in this case, few people are active in their region.

***Privacy***

Spread technology emergence and penetrating mass shows threat not only to maintaining privacy, but also basic freedom of citizens (Ambrose & Gelb, 2001).

Computers could control every aspects of our on-line activity. In work place, electronic control of employee is not unusual. Threat to our freedom is above our imaginations (Gupta & Sharma, 2001).

Maintaining privacy is very important to do e-commerce. 2/3 of internet user has afraid of internet privacy and the same number know internet as threat to their privacy. (Cole, 2001)

Privacy threat could decrease the number of on-line business organization and social one and it is the basic anger of new users. Analyzing e-commerce sites content by federal business commission has shown only 20% have has agency standard (FTC, 2000).

These guide directions followed by privacy maintaining politic disclosure, providing consumer selection and satisfaction, accessing to their data, and their security has shown independent study in the method of maintaining on-line privacy (Culnan, 2000).

### ***Regional business survival***

Whitten و Steinfield has shown by growing e-commerce, it became side effect on social and economical situation and increases competition to traditional business in any society.

Study has shown regional business men do have required readiness to use e-commerce (Steinfeld, Mahler, & Bauer, 1999a, 1999b).

### ***E-commerce advantages***

Remote network-commerce have has so many advantages to regional commerce. By the aid of interaction cot theory, we conclude e-commerce means new competition for regional retailers, especially those products in which could be easier provided and transported.

### ***E-commerce influence on society***

It has positive influence on personal level and regional buyer could reach to higher benefits and does have more access to suppliers. But the advantages in higher level could be disadvantages to regional habitants (Steinfeld & Whitten, 1999).

### ***Influence on tax, business and regulation and politics***

E-commerce does have important effect on paying tax and tax policy. There is worry about removing tax base by e-commerce. One of tax type is tax on consuming in which is paid on the place of consuming and it is different in any country. Programming e-commerce different from tax programming is tradition to organizations and historically, an income is related to physical presence and permanent and is the first competency for tax to income. Whereas growth in e-commerce including digital market/ virtual society/on line portal bid allows tax payer to do work without physical presence, this change in programming from traditional to new could make challenges and provide opportunities along them (PENBERA, 1999),

### ***Influence on employment and its policy***

In e-commerce, we create more products based on knowledge, there is possibility to change labor, and their orders required for production and provide a product in which it requires change in skill. It means, we should increase our skills in any time required and leads to allocate new labor in business (Sharma & Gupta, 2003).

### ***Competition environment and its influence on exclusive process***

E-commerce has gone more than geographical borders and more great organization are to spread their business and even do new job. In e-commerce, organizations success depends on having more market share and grows more and more. In this case, there would be problems in competition and some wants to be exclusive in which does have more consequences (Uzzi, 1997).

### ***Future tendency:***

Internet has provided so many opportunities for companies including simplifying business operations, more choose and cheaper to on-line customers, achieving related information to products before

producing or a new store. Nowadays, many companies are internet-based and it increases efficiency, decreases cost. Producer and seller could cooperate in forecasting production procedure and the amount of asset. Retailers allow customer to select their product and create a value chain as a whole. In e-commerce, the cost is lower, information access is better and competition increases.

Other advantages of e-commerce include:

- Creating New opportunities and changing scales
- E-commerce provide opportunity to use the least facilities for getting more opportunity in market and removes marketing obstacles and limitation, too.
- removing obstacles in export development
- speedy reaction to customer and on-line communication
- production establishment could adapt interest to style and improve self-structure.
- decreasing high cost in maintaining
- variable improve in micro- macro scale

### 3. Discussion and Conclusion

By growth in e-commerce, there would unwanted effects .although e-commerce facilitate in social and economical growth of organizations and societies and provide more opportunities for business. But creates some challenges in different social and economical eras. We tried to compensate some unwanted effects of e-commerce through alternatives provided as advantages of these commerce's.

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