Analysis of the role of culture, policy and technology in e-commerce in Iran

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Abstract

Nowadays, it is widely accepted that e-commerce increases efficiency and effectiveness of each country’s economy and would allow developing countries to participate in the global economy (Mansel, 3, 2001; Gibbs, Kramer and Dedrik, 4, 2003).
While the pace of deployment of e-commerce in developing countries is low, the benefits of its use have always been explicit. G8 countries issued a statement, saying that “e-commerce is beneficial for the people in the worldwide; make them powerful and connect them with each other. Thus, access to digital opportunities is possible for all people”.
In particular, the use of Internet technology and the comparative advantages that it can provide are saving costs. They can now ignore the technology development phase that developed countries had to go through (Panagrya, 2000). Developing countries that are further away from pioneering in technology have many potential benefits to move towards it.
E-commerce boom in the three dimensions of culture, policy and technology is based on a system of interaction between the dimensions, resulting in the economic boom in developing countries such as Iran.
E-commerce is simply and with great enthusiasm used in most developed countries.
This article analyzes the interaction between the three dimensions of culture, policy and technology to improve readiness and the e-commerce boom. In addition, it states the necessity of boosting e-commerce in Iran as a mechanism.

Keywords: Electronic- Business, Culture, Policy, Technology, Efficiency, Effectiveness, relative advantage.
Introduction

1. Culture: Edward Taylor (1832-1917) defines culture as a complex set of knowledge, beliefs, arts, rules, morals, habits, and everything that a person as a member of the society learns. Each region of the country may have a culture which is different from other regions of the country. While genetics is transmitted by heredity, culture is transmitted to the next generation by training. Culture is a common way of life, thought and human action.

   Culture includes things as follow:
   - Overall consistency with economic needs and the geographic periphery.
   - The common organization to alleviate the social and political needs of the environment.
   - A common set of ideas and achievements.
   - Culture includes art, literature, science, creation, philosophy and religion.
   In the twentieth century, "culture" was applied as a pivotal concept in anthropology that included all human phenomena and was not considered as a mere result of genetic affairs.

   The first dimension in the field of culture is trust. Several studies have shown that the level of trust between actors in the economy can affect economic efficiency (bronze and Brady, 1996; Palmer, 2000).

   There are many differences between cultures of different countries. In fact, different cultures have different views about the phenomenon of electronic commerce and its role in the global trade arena cannot be ignored.

   The second dimension of the culture is the level of corruption in society. Corruption is essentially a factor separating the developed economies from developing economies; for example, corruption at the level of companies and the influence of companies on governmental policies and domestic trade networks. There is evidence of corruption in different countries in different ways; for example, tax evasion, bribery, and other illegal methods.

   The third dimension of culture in this context is the communication pattern that is common between the nations. This dimension is sub-divided into two parts:
   A) The distance of power between members of an economic
   B) The richness of interpersonal communication that is usually associated with each transaction.

   Typically cultures that have high power distance will face bigger problems when they trade via the Internet. According to the study of the Gallup World Institute conducted by Hofstede, distance power in Iran is high. Thus, transactions on the Internet are more difficult in these conditions.

   In cultures with enriched personal communications, face to face interactions involve a lot of socialization. Thus, verbal communication and body language are used (Lee, 2000). Given that the transactions via Internet limit communications, they create defenders for the use of Internet in business.

2. Policy

   Easton (1971) defined policy as the relationship between the governmental department and its environment. Although this definition is general and understanding of this relationship is not detectable and can encompass everything.
Dai Thomas (1984) claimed that policy refers to whatever governments choose to do or not do. Richard Rose (1969) defined policy as follow: The policy consists of a set of interrelated activities that is implemented in a period of time and has the consequences for people and is not just a definite decision. Considering the above definitions, the definition of Anderson (2000) is considered to be comprehensive: “policy represents a relatively fixed set of measures which will be pursued by a boundary or a set of actors to deal with a problem”. Thus, the policy refers to a set of governmental measures that are done to solve a public problem in a relatively stable way and purposefully.

The effects of policy can be divided into two categories: general and special:

A) General policies are associated with Business public economy.
B) Special policies that increase the ability to use the Internet and e-commerce.

Examples of the first category include: copyright policies and protecting intellectual property rights, tax laws among the various economic sectors and rules related to the deficiency of limitations in civil courts.

Examples of the second category include: tax breaks for costs of communication equipment and costs to upgrade the education of Internet and its use.

A country that considers lower taxes for electronic trading, it is more likely to activate e-commerce (Gate, 2002). If the positive law is stronger in the civil courts, it will enhance the possibility of conducting transactions electronically and will also be more active in investment, the purchase and use of communication tools and education, use of the Internet and e-commerce (Moriti, 2000).

3. Technology

Technology is a human activity. Thus, it is more ancient than knowledge and engineering. It can be said technology is a mixture of art and skills with knowledge. It can be said that the wise men achieve the general rules of the nature by the interaction with it and create the desired applications by the rehabilitation of the rules through the knowledge in the environment. In short, technology can be interpreted as the collection of human knowledge and the tools to overcome the physical weaknesses and limitations in the environment.

Technology means the regular use of scientific information and other organized knowledge to perform scientific tasks.

Technology can be defined as the knowledge, processes, tools, methods and systems used in manufacturing products and providing services.

Technology is the scientific use of knowledge and tools to help human endeavor. According to Larousse dictionary, technology is the study of tools, practices and procedures in various fields of industry.

Technology is a factor to convert natural resources, capital, and human resources into goods and services. Its elements include: hardware, human resources, specialist, technology in the documentation or information, and organizations or institutions.
Technology is the regular use of scientific data and systematic awareness to carry out scientific tasks. To put it simply, technology is the scientific application of knowledge and expression to help human endeavor and has a great impact on the development of human societies. Internet has provided an opportunity for developing countries to provide different IT training courses and equally reach global markets like the developed countries.

There are three levels of technology that fundamentally affect the use of the Internet:

A) Level of connectivity hardware structures that exist in an economy.
B) Level of Internet skills in an economy.
C) Level of software infrastructure in an economy.

While high levels of infrastructure will significantly promote e-commerce, the infrastructure cannot often be found in developing economies. For example: a mismatch between speed Internet lines, low access to a network of web by organizations, the lack of providers of Internet services, the lack of appropriateness of broadband Internet lines, the lack of local experts, the low level of technical knowledge of experts as barriers to the spread of e-commerce for Iran.

What is e-commerce?

In general, e-commerce refers to electronic transactions that are carried out through communication networks. E-commerce is the electronic exchange of data. In short, we can say that electronic data interchange is production, processing, use, and exchange of information and documents between computer systems in an automated and electronic way and on the basis of common language and certain standards and with minimal involvement of the human factor. However, e-commerce has a much wider range in comparison with electronic data interchange and it is a revolution in communications. The simplest definition of e-commerce includes: finding sources, evaluation, negotiation, ordering, delivery, payment and supporting services which is done electronically. Therefore, e-commerce is a method based on which information, products, and services are bought and sold through computer communications networks.

E-commerce is performing all business activities through computer communication networks, particularly the Internet. E-commerce is a business without paper. By e-commerce, information exchange of buying and selling and necessary information for the transportation of goods will be carried out with fewer hassles and the banking exchange will be done quickly. Companies will not have the current limitations to communicate with each other, and their relationship will be easier and faster. Customers can contact sellers one by one and with a low cost.

In many cases, it is seen that electronic data interchange is synonymous with e-commerce. The two technologies are not at all similar, and quite distinct. However, e-commerce is a complement for electronic exchange.

Electronic data interchange is defined as a mechanism whereby the transmission and exchange of data are in line with performing business activities and the use of internationally standard messages is done by electronic tools from one computer to another. Therefore, e-commerce is the trade without the use of paper in which electronic data interchange is considered as a tool along with e-mail, electronic bulletin boards, electronic transmission, or other network-based technologies. In other words, electronic data interchange serves as the backbone of e-commerce.
There is a long relationship between business and technology. E-commerce is linked with a history of old inventions such as cable, modem, computers, and the Internet. E-commerce has been realized in its current form in 1991. Since that time, thousands of businesses and businessmen have entered this world.

E-commerce in Iran is very young in the early stages. But, the importance of information technology has led to the formulation and implementation of laws and regulations required in this area. It seems that in spite of numerous courses and workshops, the knowledge of businessmen is low about how to use the facilities for e-commerce. On the other hand, the lack of knowledge for the security of national and global networks will lead to the lack of essential assurance. However, some online stores have tried to attract buyers’ attraction using methods such as: symbol of trust, home delivery, and money-back guarantee.

Types of e-commerce (three models)
1. Businessman to businessman: Different countries have different policies, structures and technologies to support activists in the field of e-commerce. Businessman to businessman business is through communication based on conversation. It limits developing countries because of the absence of such structures. According to cultural aspects, businessman to businessman business is limited by a business trust to others. Users’ resistance from the traditional system in Iran is an obstacle to e-commerce. Effective communication between businesses is low due to lack of technological and cultural structures. Less communication between businesses in terms of the culture will lead to more mistrust. The cultural perception of the Internet can be limited. Thus, there is no true cultural understanding about the Internet in Iran and it is the most important obstacle to improving e-commerce.

   The economic policies of countries in e-commerce also affect e-commerce of the type of businessman to businessman. National borders can be considered as restrictions to transfer data for effective communication between businesses.

   Tax laws and civil rights laws vary between countries. Some policies impede investment in technology and reduce competencies and capacities of businessman to businessman. Developing countries are often excluded from participating in businessman to businessman businesses due to lack of IT structures.

   Low space and slow speed of the telecommunications sector, problems of technical standards, high cost of extensive connectivity to the network, and inadequate skills in e-commerce provides restrictions for businessman to businessman businesses.

2. Businessman to Customer: consumers who trade electronically will have high expectations. Consumers using a credit card to buy online have little trust to businesses in developed countries. Physical and cultural distance between the consumer and the businessman creates distrust. Consumer characteristics can also affect this business.

   Policies which affect e-commerce and businesses in Iran do not meet customer to businessman needs. Tax laws on electronic transactions are flawed. The laws have many controversies in many sectors. The multiplicity of decision making centers in the field of e-commerce and the lack of a
national program in this field are the most important challenges which are contrary to the principles of the development of e-commerce.

Empowerment policies of telecommunications have enormous impacts on e-commerce of businessman to customer. Lack of technological infrastructure would prevent businessmen in developing countries to sell their goods to customers. This prevents consumers in developing countries to buy goods from merchants in developed or developing countries.

In the relationship between businessman and customer, structural shortage continues to be an old problem that is affecting the completion of the transactions. Lack of training due to lack of computer skills and technology in developing countries businessman has an impact on the lack of interaction between businessmen and customers.

3. customer to customer

Using the online exchange dramatically affects the relationship between individuals and consumers. Culturally, consumers have an uncertain view on unknown consumers; especially when they have an international contact. Generally there is a lack of confidence between cultures, and the lack of trust increases with the lack of mechanisms of telecommunications in developing countries. The lack of technology cannot satisfy the needs of customers to sell their products to other customers. However, the technology plays a cultural role.

The interaction between customer and customer is considered as a means of income generation for many consumers. Thus, there are policies to increase security for this type of transaction. Finally, there must be technology to complete the transactions between consumers. The lack of technological structures does not allow consumers to exchange with each other in developed and developing countries. Digital barriers directly limit the relationship that can be found in way.

Forces which affect the use of e-commerce in the economy are as follows:

- Influential cultural forces

Cultural aspect includes trust, corruption and communication patterns. Therefore, from the cultural perspective:

A) Cultural forces affect culture:

Trust and Ethics can also be provided in the fields of educational programs and business schools. At the national level, confidence not only for the economy but also for its impact on foreign investment is considered as an important factor that can provide the necessary training. At the same time, it needs to provide training and advertising to specify the adverse effects of corruption, not only for the scammers, but also for the mass of people. Finally, limited training should be provided for the use of chat and other communication methods, such as: E-mail at all economic levels.

B) Impact of the policy on culture

Policies affect the culture in many ways. If the laws of consumer protection are seriously strengthened, the level of confidence in the economy can increase. If the government adopts strong laws against fraudsters and considers punishments for those who do not follow the laws, consequently, the level of corruption will be reduced. Finally, if tax incentives are considered with strong incentives to offer networking for consumer, communication patterns can be affected.
C) Impact of technological factors on culture
In terms of technology, the government should help to provide the safe use of high technology in practice.
Websites that provide feedback about the store and goods should be created at the national level and should make information and processes between institutions transparent at lower levels as far as possible. Easy access to information about sponsors should be provided. Communication patterns can also favorably use chat rooms and access to email and messaging.

- Factors affecting policy
A) Cultural factors affecting policy
If public efforts are made to educate all people about entrepreneurship in businesses, the policy will be affected favorably. With the increasing of the number of people who are aware of entrepreneurship, the pressure on policymakers increases to pass favorable laws for e-commerce.

B) Impact of decision-makers on policy
Decision-makers understand the benefits of the favorable policies more than other people. If legislators are not ready to pass laws, a small start with a lot of policies that have a positive impact can act as a catalyst for future policies and prepare the ground for further reforms.

C) Impact of technological factors on the policy
If decision-makers are subject to the application of technology, they will be familiar with the problems that must be resolved through legislation. If decision-makers are subject to the primary online shopping and do significant proportion of shopping online, this issue will possibly be discussed in the parliament soon. In this respect, it should be noted that developing countries have more benefits.

- Stimuli affecting the technology
Three sub-categories are defined for technology:
1. The hardware infrastructure
2. The software infrastructure
3. Experts and computer engineers and capabilities available in the national economy.

A) Cultural variables affecting technology:
The goal is to be positive in the field of e-commerce and technology emerges in the minds of people to see this phenomenon in a positive way. However, schools must teach the technology and its use at an early age so that people are familiar with the technology. The university should promote the technical competence level of citizens by creating incentives and providing valid documents for computer engineering. Advertising can also promote high-tech jobs and introduce them high income. All these tools together will be able to increase cultural readiness for technical and technological issues.

B) Policies affecting technology:
In terms of policy, technology will be influenced in different ways.
Decision-makers can enact tax incentives or even provide direct financial assistance for those who can create hardware and software infrastructures. Developing countries do not need to invest heavily in hardware networks because very cheap software structures are available for them. A
part of the law on infrastructure is also impressive. Decision-makers can also provide incentives for schools and colleges to give computer training for students who choose this field. 
C) Technological factors affecting technology
Advances in technology standards, lower hardware costs, and increasing ease of use of the software affect the use of IT in a nation. Thus, it is obvious that the creation of structures of electronic commerce in a country and access to the Internet and e-commerce do not cost a lot for the general public. Many developing nations can invest in these processes to be at the level of developed countries which already invested in the development of infrastructures to access to the Internet.

Conclusion
Nowadays, it is widely accepted that the issue of promoting e-commerce in less developed countries such as Iran cannot be resolved by adding more technology without changing the culture and economic policy.
What needs to be done to promote e-commerce is providing a structured strategy that justifies how the three categories of culture, policy (politics) and technology (IT) affect each other.
References


