Optimized Roles and Data Mining Methods in Electronic Commerce and E-government for Increasing the Efficiency

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Abstract—The use of information technology in various fields of business is one of the necessary tools to increase business efficiency. Startup e-commerce in terms of competition market and improving quality and Accelerating the exchange and strengthen the competitive position of countries in the world and take advantage of fleeting opportunities in export and even time purchase of goods from other countries is with numerous benefits in terms of reduced costs and increased productivity, inflation. E-commerce includes suit of services in many parts that only way is to gain advantage of competitive and become first in market, presenting e-service with high quality, Most successful companies experience that use the web experience shows that the important factor of their success or failure or network only because of lower prices, but also due to deliver high quality electronic services is Not only because of the network or lower prices, but also due to deliver high quality electronic services. In this paper, the necessity, benefits, goals, and strategies of e-commerce to increase the efficiency are discussed.

Index Terms—E-commerce, Increase efficiency, Structural constraints, Competitive advantage.

I. INTRODUCTION

Presence in international markets through the successful and efficient methods which portrays a view of the country's economic ability, is Including requirements to conform to the current international system in terms of its economic and industrial progress in the fields. Undoubtedly, the use of information technology is important factor to increase the efficiency of business in the national economy. Achieving the goal of increasing efficiency requires action on the basis of commercial information and trade facilitation. Business Information, with breaking the monopoly of information, the field of competition and consequently, improve productivity, and make the great step in social justice. The axis business facilitates should utilize new trade methods, including the use of the symbol (barcode), standards for the exchange of electronic data and trading on e-commerce without the paper. One of the important characteristics of electronic commerce is Lubricant Of activity and to reduce the costs of business action. The results show that the use of e-commerce provided 21 to 70 percent savings on the costs of activities. Commercial facilities is suit that can be cause more presence of international trade and to facilitate communication between the supply and purchase of goods and services trade more, and the exchanges would be quick, secure and more efficient. But this process requires dynamic measures and initiatives to improve the structure and remove environmental barriers [1, 2, 4 and 5].

The main advantages of e-commerce are more access to technical global markets for very small enterprise. This feature makes that Volume of world exports via the internet have increased every day. Basically, the growth of electronic commerce in the world causes that in the near future industries that cannot adapt itself to this technology will be eliminated from the competition. Primarily for the industries and companies that have deployed e-commerce system in their organization Economically trade and relationship would not be cost effective with the industry without this system [1, 3, 5, 6, 7, 8 and 10].

Due to its importance, in this paper first we will describe the advantages and characteristics of e-commerce and then necessity of deploying e-commerce system is discussed, followed by required agents and infrastructure for the deployment of e-commerce and the end results will be discussed.

II. DEFINITION, ADVANTAGES AND CHARACTERISTICS OF E-COMMERCE

During the use of ICT in economy, trade and commerce, electronic commerce phenomenon with numerous definitions are presented, discussed and used over time. Word of electronic commerce is formed by commerce and electronic. Commerce defines the content of practice
or process that is performed. And electronic is an adjective for commerce that means doing processes of commerce through new technologies of electronic. Processes of e-commerce are price quotations, tendering, negotiation, contracting, delivery, payment, etc. concept of new e-technology refers to technology that it is possible to perform all the activities required for each of the above processes. Features like as Multi-channel, the comprehensiveness of universality, timeliness and bilateral needing for a technology that must meet to be recognized as a new technology. Such as these Technologies is internet, intranet, extranet, and etc. many researcher believe that e-Commerce is any kind of trading or Transaction that occurs between organization and peripheral component Like customer, Partner companies or government with the use of electronic devices [1, 4, 9, 11, 14, 17 and 18].

Some others also know them just including e-Buy and Sell of good on electronic network(9). Turban believes that e-commerce include in proses of good trading service and information through computer network such as internet. According to the WTO, definition of e-business is any trade that both sides instead of physical contact use equipment, standards, rules, networks, protocols and applications.

A total of above definition, in total Conclusion, e-commerce does commerce Process such as trading goods, services and Supporting activities of them include negotiation, tenders, bids, contracts, payments, delivery via new information of technologies. When process is more electronic then e-commerce phenomenon will be more complete. Turban shows the framework of electronic commerce in the form Figure 1.

Turban is believed that e-commerce will be formed in the three segments of management, infrastructure and applications. In the management, he said that E-banking is e-commerce applications and including Electronic payment and Credit cards. Therefore theoretically relation between contexts of Credit cards and e-commerce can be defined as that exchange phenomenon via Credit cards is a part of E-banking phenomenon and also E-banking is one of e-commerce applications. In other hand Purchase and sell over the Internet is e-commerce.

The goal of use of e-commerce is not expanse of commerce old methods, but also is presented a new method of doing Commerce. Many people think e-commerce is only purchases and selling on the web, while this is just small part of e-commerce and this concept is now a wide range of business and economic aspects and simply can include any financial transaction / business between institutions and individuals in the areas of e-commerce [4, 11, 12, 13 and 15].

III. E-COMMERCE AND THE EVOLUTION OF BUSINESS

With the development of e-commerce, Industries are more discrete, many traditional companies realize that they have distance from their customers. To reach the market, they have to compete or cooperate with an increasing number of powerful mediators in the world of e-commerce. For salvation they have not any other choice except return to their prosperity and business definitive decision that could be to focus on, Such as customer relationship management, product innovation and infrastructure management [12, 16, 18, 22 and 23]. As you can see, the economy and culture of the organization and the competitive environment that run each of these businesses are different and determine the final structure. Despite the disruption of these three businesses in the world of the future of e-commerce, they will not necessarily divided into sections and small units. In fact, only the structure one of these businesses, such as product innovation, possibly are determined by a large number of small businesses that are competing in an environment with few barriers to entry. This need is sensed that creators and innovators should create a favorable environment for the efflorescence of creativity in small organizations, just as the need felt for speed and agility in the supply of products to the market.
Two other businesses likely with dominance the small number of big companies; big merger would take place too fast. Since savings resulting from the increased scope of practice is mandatory in business communication with customers, likely only a small number of large firms saved with no merger. In the business infrastructure similar this flows, saving result of strong pressure for merger and creating make a large company and intensive [2, 13, 19, 20 and 21].

When a company decides to direct its energy in a particular direction, Seems necessary to release him from other businesses and this is a major challenge. Few managers of big companies are going to have such a program. Separation of each business of company occurs in cases where the expected synergy of being together, do not take place. Even the tumultuous separation of AT & T from business telecommunications and computer industry, NCR and Lucent are included in this category. For most companies, the most similar to this type of separation, implement it of reduces incumbency and infrastructure management activities such as procurement, manufacturing, or processing information outside the organization has granted a contract to supply.

For this reason, the first separation program will start by companies that their market has been between technological changes such as computers, telecommunications, media and banking industries. Affiliated companies in other industries learn from their successes and mistakes. As a company was selected to compete in Customer Relationship Management and Infrastructure Management, where size and value are an important, separation will not be enough. We need to scale or framework created through a merger. Secret of success in industry, separation of three businesses is not simple but also creating a new company is necessary with capabilities and suitable size for success [11, 14, 26 and 27].

When senior managers to reorganize its business create significant changes, they will be forced to confront a painful decision. Probably with being hard elections, there will be plenty of time to do them. When the costs of their interaction start to decrease reconstruction of the
industry, as we see in the computer industry, occur rapidly. Strengths may become weaknesses during overnight and even the most successful companies can frequently be in a position that is untenable. Today Role of electronic commerce is desired as enabling in the organizations current business. In the future, this role will be change in base of business [15, 16, 24 and 25]. The figure below shows the evolution of the strategic framework for the transition to e-commerce.

![Figure2. Strategic framework for the evolution of the transition to e-commerce](image)

IV. FACTORS REQUIRED FOR THE DEPLOYMENT E-COMMERCE IN THE COUNTRY

We said that competing globally and exporting of country in future will be related mostly to deployment of new technology in doing business. Achieving the objectives of export socio-economic development of the country and export leap is in the future shall be subject to comprehensive of electronic commerce in the country. That do this requires a major effort by any private sector (different industries of countries), and especially the public sector (government) because the government's actions is more important we start this section with this [7, 8, 10, 28]:

1- The first and perhaps most important step that the Government should take in this area, is Confrontation strategic to issue. In this case first you must plan with goal and defined Confrontation with information technology (IT) (That e-commerce is a subset of its), means first determine which organization and organ legaly and defined in level of ministry accept all aspect of IT responsibility in country and in fact who will be responsible for IT. The first and the best action of this organization will be doing study for IT development in country, determining outlook, goals, guideline, disciplines and Action plans for expansion and success in

the IT. Duty of this organization is Investment and performing Planning Pilot Project and performing and performing IT development program in country with collaboration (not doing parallel and sometime antonym) with organizations such as Ministry of Industries, performing pilot project and Industrial Estates for implementation of IT park using legal low Ministry of Post, Telegraph and Telephone for providing Communication lines that need for parks, Ministry of Education, Research and Technology (Planning IT courses at universities in the country and sending students to study at a high level in the field of IT) Ministry of Labor and Social Affairs (vocational training in the field of IT) Management and Planning Organization (IT development plans for compliance with country development plans) Ministry of the Interior (Municipalities through the development culture of the Internet in public areas) In summary, Putting Planning and Coordination of IT development is the most action in the country under a single management and focused at this stage and can provide convergence between organizations that work in IT area without any role [3, 4, 5 and 8]. Note that nature of IT performs it on one ministry limit IT and have to avoid it.

2- Another important government action for deployment of e-commerce and huge Investment for creating and expanse technical and communication substructure in IT, it help to promoting internet in society. So that all people, especially the younger generation access Internet easily and low cost. For this action can triggering internet in public place such as libraries also teaching internet in Primary, secondary and high school with Precise planning as course and more advertisement in Broadcasting introduce internet to society, this action have to do in rural area. This works will be known as the first and second phase of the Internet penetration on society. This action Cause internet penetration in Training centers and academic and also between young's and with precise planning and huge investment for creating and expanse internal National network as one of IT substructure, internet have to be comprehensive in all level of country [2, 3, 11 and 13].

1. Establish the financial institutions in electronic money transfers that present tool pay such as credit card and Debit card, electronic check, this payment is Crucial government actions and Establish the financial institutions that approve authenticity of Customers cards, checks and others, totally creating and expanse E-banking and Also creating establishment of standards for establishing coordination between banks and other institutions defined that for act electronic funds transfer (EFT). The Central Bank shall be steps taken in this regard.

2. Create sufficient substrates for participation and competition internet Service Provider (ISP) of private sector and helping to establish centers ASP of higher level.

3. Set a comprehensive of laws and regulations regarding electronic commerce and to prevent abuse and crime tracking is a critical acting for public
confidence about the Internet and e-commerce and Guarantee protect the rights individuals and also protect privacy.  
4. Creation References that uphold Competency of businessmen, these References published Digital certificates to electronic Business for upholding Competency  
5. Creation advanced distributed system such as Courier Company that dispense consignment, this company should act as private and government Just prepare substrate for entry and investment.  
6. Planning, policy and investment needed is conducted to create e-government, especially in the category (G2B) for sustainable and inclusive development of electronic commerce. The creation of e-government involves preparing substructures that are necessary for e-commerce. E-government is the main element of Internet community and without it we cannot develop.  
The basic steps that need to be done in different industries is related to activity Size of company, in fact, amount of investment of company for deployment Ecommerce depend on activity Size and company's strategy for the future. For this, first company must do Studied Plan as Feasibility of deployment of the e-commerce Company and sufficient strategy check and select.  
In industry during e-commerce deployment will face to challenge of Electronics Buy and Sell that have to select suitable Solution for them. Researches undertaken in this regard show 10 strategic solutions that a producer can choose. These solutions are shown in Table 1.  

<table>
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<tr>
<th>Fourth group</th>
<th>Third group</th>
<th>Second group</th>
<th>First group</th>
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<tbody>
<tr>
<td>Electronic shopping</td>
<td>Strategy</td>
<td>Electronic information</td>
<td>Strategy</td>
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<tr>
<td>Another approach</td>
<td>Seventh</td>
<td>Pure information</td>
<td>fifth</td>
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<td>Separate trade</td>
<td>Eight</td>
<td>Formed club</td>
<td>Sixth</td>
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<td>Together</td>
<td>Ninth</td>
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<td>Action (direct)</td>
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As seen in this table these ten ways have been divided into four groups: The first group: strategies ((based on participation)), which includes the first and second solutions and assumes that future success can be ensured by focusing on physical retail customers. Second group :strategies ((based on attractiveness)) includes two solutions is the third and fourth, the two solutions have less attention to the distributed ways and greater emphasis is on producing products that are so attractive that be demanded And sold on the market by any method. Third group: Strategies ((based on electronic information)), these two solutions are the fifth and sixth. These two strategies are the first step of the pathway on electronic shopping. Four groups: strategies ((based on e purchasing)): The four final solutions will consist that are more oriented towards Electronic and comes into account a full transition to electronic shopping.  
Determine which one of these solutions is better, industry guarantee. Determinant may be use about of these tests. Test EC evaluates Characteristics of the goods and Ability to sell it in an electronic form and probability response of different groups of consumer to the new kind of electronic shopping and their Willingness to this kind of sell and Distribution.  
Producers test is used to determine the strength and flexibility of the industry in the market. Whenever market is greater, election will be more and there will be more probability that Select industry make to reduce dependence on existing partners.  

V. ADVANTAGES OF E-COMMERCE FOR BUSINESSES  
In competitive business environment and constantly changing, businesses can no longer rely on the stable markets for its products. They must compete in fields quality, price and after-sales service with increasing Competitors. For success in market, they have to reduce price, do major change in production method, Commercial relations and their organizational culture.  
Electronic Market in internet makes to increase productivity and competition between enterprises ranging from manufacturing and consumer. Internet makes accessibility to Market online and boarding with millions of consumers and thousands of product or service. The following are mentioned the advantages of using e-commerce for commercial institutions [16, 18 and 23]:  
1. Reduce the purchase price of raw materials: purchase of raw materials or service can be complex process. First purchasers have to find producers and specify that amount of needed goods, delivery time, quality and price is sufficient or not. When a producer is selected, maps and Full detailed information will be sent to the producer up to the product is fully conforming to the specifications of the customer.

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2. Before big company using Workforce of EDI reduce cost of Print and Post in Supply of materials needed. Automated work flow for product supply means that clerks have time for Focus on negotiation In order to obtain better price and creation relationships with producers. Companies that use EDI usually save cost about 5 to 10 % in purchase Section. Internet has more potential for reducing cost. As well as in internet, new producer can have relation and Commercial transactions with small producer that before they had relation by fax or phone.

3. Reducing the production cycle time: production cycle is the total time that takes to a product to be made. During production cycle, there are constant costs that not change with amount of production and depend on time. These constant costs include Equipment depreciation, welfare services and construction costs and the costs of management and supervision. Ecommerce reduce production cycle and allow producing more Products with equal or less cost. Creation Electronic communication with suppliers and customers help company to do transmit and receive purchase orders, invoices and receipts in much less time than before.

4. Increase the efficiency and effectiveness of customer service: companies use internet for customer service. Having product descriptions, technical support and other online information make to save via have not work for clerk of customer part and customers are more satisfied.

In addition to increasing customer satisfaction, companies that use the Internet to provide customer service claim that through carry out orders and online technical support done saving. Other advantage of e-commerce include reduce warehousing costs, reduce marketing costs, reduce sales costs, eliminating intermediaries, Create new channels for selling products and increase the demand and ...

VI. THE ADVANTAGES OF E-COMMERCE FOR CONSUMERS

Commercial institutions invest in e-commerce to increase productivity, reduce costs and enhance customer service quality. Customers Attract shopping on the Internet because they recognize that the power of choice increases surprisingly, more and better information gain for shopping and doing buying comfortable. Busy people can also save the time. Better information, more choice and lower operating costs for businesses, consumers promote at the same time to e-commerce. The following are mentioned the advantages of using e-commerce to consumers [12, 13, 18 and 19]:

1. Increasing the possibility of choosing: The numbers of stores that are visible on the Internet are much higher than the shops that are in densely populated neighborhoods. Online customer can shop or at a store in another city or country or shop that does not exist in the traditional form.

2. More comfort: Many buyers said more comfort in their purchases via the Internet is their reason. Purchasing via the Internet save time. Customer dose not having to leave home and set their own schedule with shop trading hours. It no needs to wait long for a employees of customer service. For the convenience of customers, many sites are delivered orders on the same day or next day to customers.

3. Customize: Internet will increase the capability of customizing. Some Internet businesses, particularly in mass media, nowadays make products completely customizable, so its completely separated from other products. Readers can choose the news that they want to read. This means the item is delivered to a web page or e-mail.

4. Lower prices: consumers that purchase goods via the Internet, consumers usually will be paid 8 to 30 dollars per transaction an amount in the traditional trades is on average, around 80 dollars per transaction. Some online retailers offer discounts. For example, some online sellers of books are offered some books with a 40 percent discount compared to regular store prices. (Site, www.amazon.com).

VII. CONCLUSION

One of the most important steps in the strategic planning process ecommerce is strategic setting goals. Organization, takes step confused and uncertain of purpose to the final. There is no body or organization that is successful without good goals. Appearance Electronic tools to the business, the organization have to determine expected result from Electrical activity in the framework of the landscape. Mission and Goals up to guarantee success Survival Organization. Ecommerce because of speed, efficiency, reduce costs and exploit opportunities make competition in new areas and without it organization cannot continue their work. Consistent with the changes in the world, our country are taken steps in order to exploit opportunities of the information age and its key products, e-commerce.

REFERENCES


