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Original article

Possibility of using electronic commerce in Iran's fertilizer and pesticides market

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ABSTRACT

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In this article, according to statistics published in 2014 Iran IDI's report, Iran's electronic commerce's situation and advance's procedure in the future are studied. Then fertilizer and pesticides market's available specifications and its distribution systems are mentioned and the possibility of using electronic commerce is assessed. In the end, according to the existing e-commerce infrastructure in Iran, as well as the current market situation fertilizers and pesticides in Iran, two general suggestions for how to implement effective e-commerce, in industry of fertilizers and pesticides are presented.

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1. Introduction

The e-commerce and online sales are new discussions on Iran and has experience in some industrial countries. Various industries are becoming more willing to use e-commerce businesses; the fertilizer industry is not exempt from this law.

In this paper, the introduction of e-commerce and the advantages and disadvantages that would have to be listed and then in the second part to check the status of e-commerce, according to the 2014 Report of IDI paid. The third section examines the current situation will be discussed Iran's fertilizer industry and common models for the distribution of fertilizers in Iran, using distribution models provided by Chopra plotted. The fourth part deals with the possibility of entering e-commerce in the fertilizer industry. Finally, at the end of the two models to launch an effective e-commerce will be provided in the fertilizer industry.

2. Part: E-commerce

E-commerce means the production, marketing, sale and delivery of goods and services using electronic devices. E-commerce distribution systems, noticeable impact on the quality and reduce the cost of distribution n of goods and services. The e-commerce could become more competitive market. (Aarabi and Sarmad, 2002).

With e-commerce, transparent and complete a database of goods and services to consumers in every corner of the world is created. The exchange between producers and consumers, without the limitations of space and time has led to many different monopolies in the market, rooted in traditional practices and lack of transparent information exchange has to be broken. Global supply and removal of existing monopolies lead to lower prices, increased production, increased consumer welfare and as a result of social welfare. In addition, e-commerce by reducing the cost of paperwork in traditional business, reduce the cost of intermediation, traffic and so on. has A significant impact in reducing transaction costs and social costs arising from it. (Dzhpasand and Salmani, 2005).

Electronic commerce could cause some problems, too. For example, by replacing e-commerce instead of traditional trade, customs and tax income countries will be reduced in some sectors. In some cases, it may not respect the privacy of individuals and the protection of people's property to be ignored. It should be not that the deployment of e-commerce requires proper context of economic, technical, telecommunications, legal, humanitarian and cultural .The most important of these platforms, electronic banking and electronic money.

3. Part2: E-commerce in Iran

The field of e-commerce in Iran, despite the many efforts that have been made in this area. Not far to the other countries in this field has made many fundamental measures are needed to reach the optimal level. Two major reasons for the lack of e-commerce in Iran can be mentioned below.

1) The low rate of economic powerment. So that GDP and exports is very small and has very small share of the income of the country.

2) Lack of appropriate technical facilities of the country: to assess the technical capabilities of the country and compare it with other countries require that a number of criteria and reliable statistics in this field should be used. The main criterion used in this paper for this purpose is listed in the table below.

In Table 1, statistics on access to information and communication technology, according to Iran IDI 2014 is shown. To see some of these figures, we lack basic infrastructure for e-commerce will be in Iran and we can see that in what areas should be carried out expansion and focus on what are the activities. .. Ultimately, it will be developed and implemented a comprehensive program to bring Iran to the desired level in the field of e-commerce. The following chart shows the development of ICT indicators in South Korea (Asian premiere), Denmark (world premiere), Bahrain (regional) and Iranian the years 2002 to 2013 (<http://mis.iran.ir/>).



Fig. 1. Comparison Chart of the ICT development Index countries get the best period 2002 to 2014.

Table 1

Statistics access to information and communication technology in Iran.

pointer	value	2011	2012	2013
Fixed telephone subscribers per hundred inhabitants	20	37.1	37.6	38.3
Mobile cellular subscribers per hundred inhabitants	20	74.9	76.1	84.2
International Internet bandwidth per Internet user	20	35.4	35.28	46.32
Percentage of households with internet access	20	38.5	32.3	35.8
Percentage of households with access to computer	20	25.2	37.0	44.6
The percentage of people who use the Internet	33	21	27.5	31.4
Fixed Internet subscribers per hundred population	33	2.4	4.1	5.6
Wireless broadband internet subscribers per hundred population	33	0.5	1.3	2.5

According to the above diagram of the development of ICT indicators is far from countries considered in this regard. However, a high expansion rate. This is in the middle of the 93 with the third and fourth the generation mobile Internets fast. This rapid expansion has caused the trend toward e-commerce in the day and in all industries increase. Therefore, the development of e-commerce market in the current environment is a potential competitive advantage. (Brahima, 2014).

According to surveys and observations made by these parts associated with it can be concluded that the main cause of the growth of e-commerce and delay Iran's distrust of senior management to e-commerce is the lack of sufficient knowledge. In other words, it is true that e-commerce infrastructure in Iran is not good, but the main obstacle to the development of e-commerce industry is not a fundamental obstacle management decisions and the tendency of managers to the field. In this space that has little popular e-commerce and still has not found its rightful place, a number of industries and online sales sites in Iran, they use e-commerce to sell their products. Internet sales in Iran often done in three ways. 1) Sales through the postal network 2) independent sales 3) Consumer Services (Dzhpasand and Salmani, 2005). According to the discussion in this paper, fertilizer industry and limited store online sales of fertilizers in Iran, usually the first or second method is used. The first method is usually used for sending samples, and the second for Wholesale products. It should be noted that the online sales of fertilizer in Iran, is minimal.

4. Part3: Iran's fertilizer and pesticide industry

Fertilizer and pesticide industry thriving industry in the country. Fertilizers and pesticides produced inside, in different ways, to reach target customers and farmers. The paper uses data on the industry leading companies in the field of fertilizers and pesticides that have been collected. These data are taken from the experiences of the current atmosphere prevailing in its domestic market. According to Mr. Sunil Chopra and articles on a variety of supply chain, two major supply chains for the sale of agricultural products in Iran plotted.

4-1. Distributor storage with last mile delivery

In this way, the manufacturer of the product, to better sell products, contract with a reputable distributor in sales. Distributor Company usually signs contracts with several different producers. And according to which the products are purchased and stored in its warehouses. Enterprises distributor, directly to wholesale and retail buyers, communicates. And requested their products, using their own transport system delivers. The supply chain

is shown in the following figure (Sunil, 2003), This method is useful when uncertainty is low and demand is high volume.

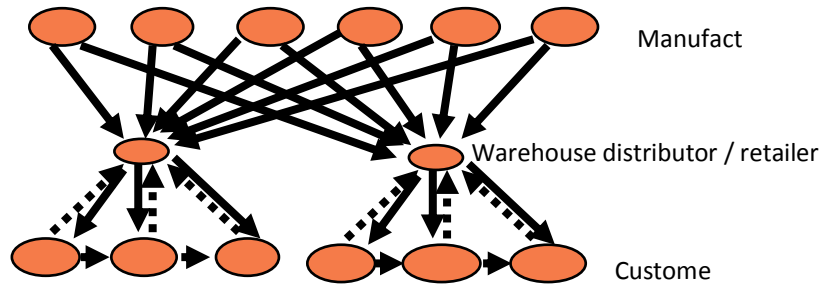


Fig. 2. Distributor storage with last mile delivery on paper Sunil Chopra.

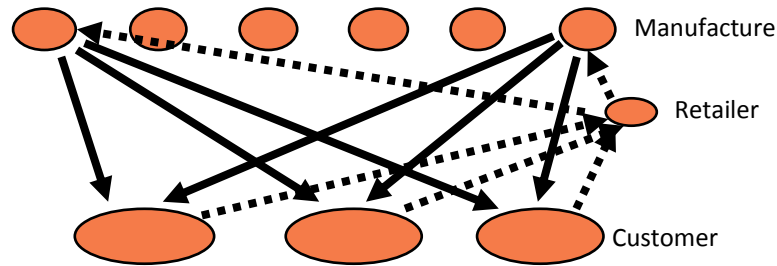


Fig. 3. storage manufacturer with direct loading on paper Sunil Chopra.

4-2. Manufacturer storage with direct shipping

In this way, the retailer is based on orders from customers, orders to the manufacturer. Manufacturer, according to the list of retailer demand, send fertilizer application directly from the warehouse to the retailer or customer. The biggest advantage of this method is the possibility of concentrating the product by the manufacturer. The advantages of this method for goods of high value, low and predictable demand is very high. For example, if a company has a high-priced fertilizers or order limited. Usually, this distribution method is used (Sunil, 2003). Below, listed in the supply chain, is drawn.

5. Part 4: The feasibility of e-commerce in fertilizer and pesticide industry

According to the information mentioned in the previous sections, e-commerce in growing and developing fast, this growth can be a competitive advantage for organizations turn to other organizations. Therefore, different industries looking to take advantage of e-commerce sales, which fertilizer industry is not exempt from this law and various organizations seeking to take advantage of it. An example of Internet sales of fertilizer and pesticide, is China. The country's farmers tend to buy fertilizer, pesticide and gardening products online has been found. For example, the site Ali baba (taobao.com) sales of products related to agriculture, from 2010 onwards, every year, a growth rate of 112.2 percent. In Iran, there are websites that provide information on the prices of agricultural products but sell them online through the website does not take place (taobao.com).

In this section, we will cover the benefits that the use of the Internet sales of fertilizer and pesticide industry is achieved. If you use e-commerce capabilities in the industry distribution chain listed in Part III, will change. These changes are shown in the following figure.

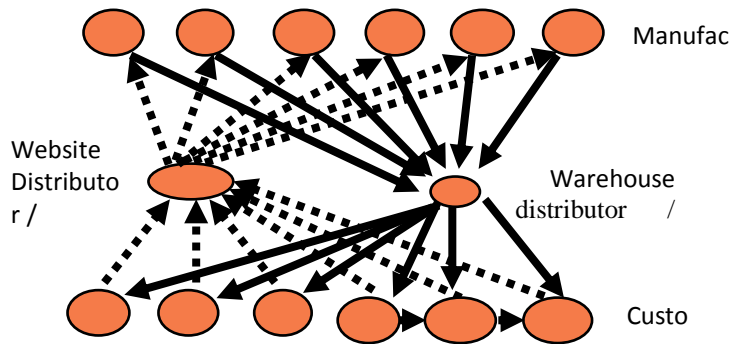


Fig. 4. fertilizer and pesticide distribution chain with the use of e-commerce.

In figure 4: The relationship between the customer and the manufacturer is directly connected. Web site of the manufacturer or distributor of that product is stored. The processing speed applications, is very high. Marketing is done virtually all products, with online catalogs provided. Retailers may be deleted and replaced by the manufacturer warehouse storage product to be created. The use of both systems, delivery and directly products. The advantages of e-commerce and supply chain listed in the industry's fertilizer and pesticides, are as follows:

Direct link producers and consumers and thus create customer satisfaction the creation of the unit price for consumers avoid middlemen and speculators dominate the market and in some cases, remove them from this cycle. Prevent fraud and counterfeiting of products, and ultimately build trust with customers. Ability to sell other related products. Customers buy easy and conveniently pay. The uncertainty is reduced and the range of sales based on past data and forecasts, usually provides the correct figure. Ability to sell both wholesale and retail method, is provided. Retail is done using the postal system and wholesale done using the transport system manufacturer. due to the use of virtual catalogs and Internet advertising, advertising costs low and their influence increases.

According to the above can be made to this general question, whether its e-commerce could be useful for fertilizer and pesticide industry? Responded. If the administrator have sufficient knowledge in these areas and to take the necessary measures. Will boost both your company and the satisfaction and retention of customers. Therefore, the use of e-commerce can be a lot of benefits for Iran to provide fertilizer and pesticide industry. Several methods have been proposed for use. That managers should pay attention to the situation of their organization and expert opinions related to this field, choose the optimum way.

6. Part 5: The implementation of e-commerce in the fertilizer and pesticide industry

In this section, with respect to all matters listed in the previous section, effective methods for online sales of fertilizer and pesticide, or general agriculture industry is presented. These two methods, according to global sales records that exist in this industry and according to Iran's banking system and its facilities have been proposed.

6.1. The first method: cash sale online at the dedicated website of the company or the website of the auction, along with other products.

In this way, the agricultural industry, as well as other products for sale on the website are placed. Their payment should be paid for entirely in cash and online. And then the order will be sent to the customer product. Often this method, for retail products online, is used. Buyer along with other purchases that do, tend to buy agriculture-related component products, especially,

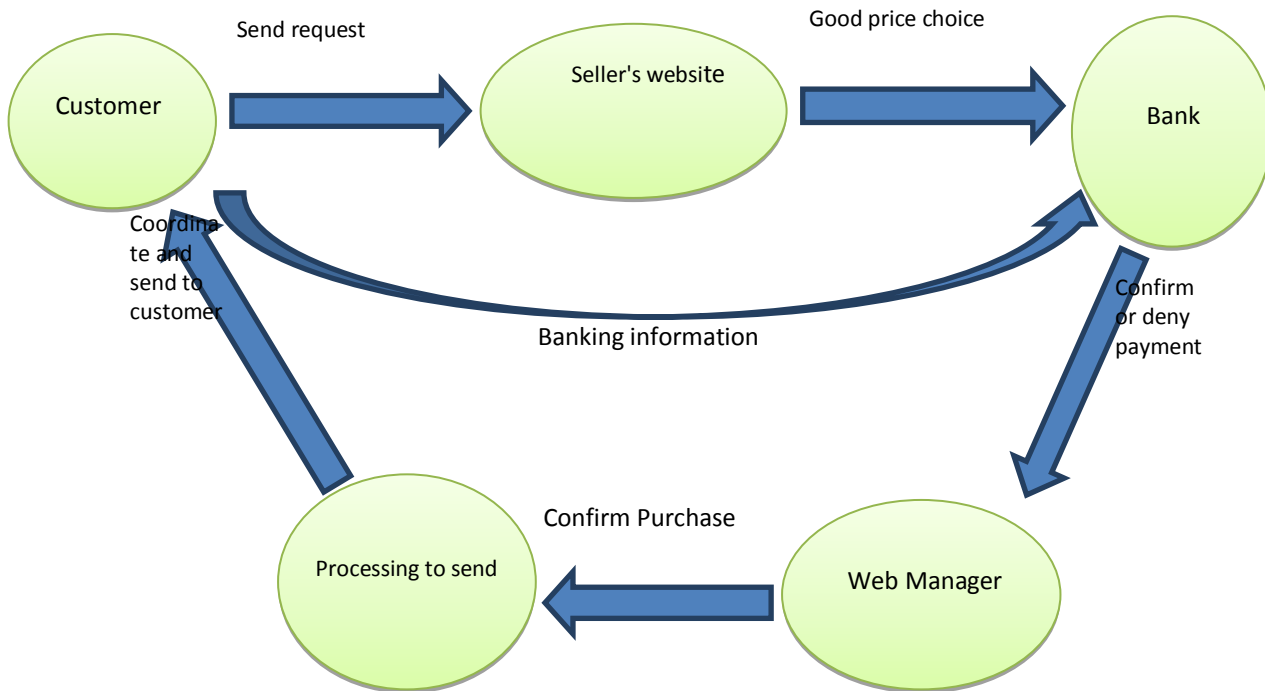


Fig. 5. Proposed cash sales of fertilizer and pesticide in Iran.

fertilizers and pesticides as well. Pose problems for this method are as follows:

- Lack of consumer confidence to buy from the site (E-commerce infrastructure and offenders). This problem recently with the prestigious symbol of e-commerce websites is recovering.
- Lack of time was possible to buy products. In today's market environment, client's fertilizer industry, rarely carry cash. And more inclined to buy a given pay period.

6.2. The second method: creating the possibility of buying long-term

To create a long-term buy, there are two main solutions. The first solution is to create a club for corporate customers. Which is approved for each major customer and obtaining necessary guarantees, the purchase of long-term will be determined. And with that in mind, you can do your shopping through the website. The second solution is using the image transmission system Czech (Chakavak). The system, from 1392 the banks under the Central Bank of Iran, have been used. The system has many features that it's a lack of transmission Czech corpus and sending the image to inquiries. With this feature Chakavak system and other features and applications that the system is capable, we can give way to shop for term products of websites, in particular websites selling fertilizers and pesticides. This method is quite Bank, and has a high safety. According to this method, the customer after the product is intended, Czech through its agent bank, provides online (through its agent bank, and Czech image is sent) and seller can also easily check through your agent bank, the Czech properly. (Bank of the Czech seller of Bank of buyer inquiries) in the following steps listed this type of purchase (<http://www.isc.co.ir/>). As can be seen in Figure 6, first, the seller's website and customer chooses his product, the amount of the order with his Czech profile entered by the customer is transferred to the seller's bank. Bank seller using the system performs the Czech Chakavak from the Bank of buyer inquiries, if approved purchase request will be accepted and sent the information to send to the physical. In this way, it can be safely deferred to sell their products online petition.

7. Conclusions

Although Iran has shortcomings in terms of infrastructure, e-commerce, but with the existing infrastructure as possible to set up an Internet sales of fertilizer and pesticide industry's right in there. A company that goes toward that goal will be a competitive advantage over other competitors can keep their existing customers happy and attract more customers. Cash and long-term approach to these sales was presented in this paper. One of the most

important of these methods, online sales is deferred. That using the Chakavak system is implemented, and if properly implemented for the sale of fertilizers and pesticides that the current market is often done very widely used term will lead to high profitability for retailers and the convenience of customers.

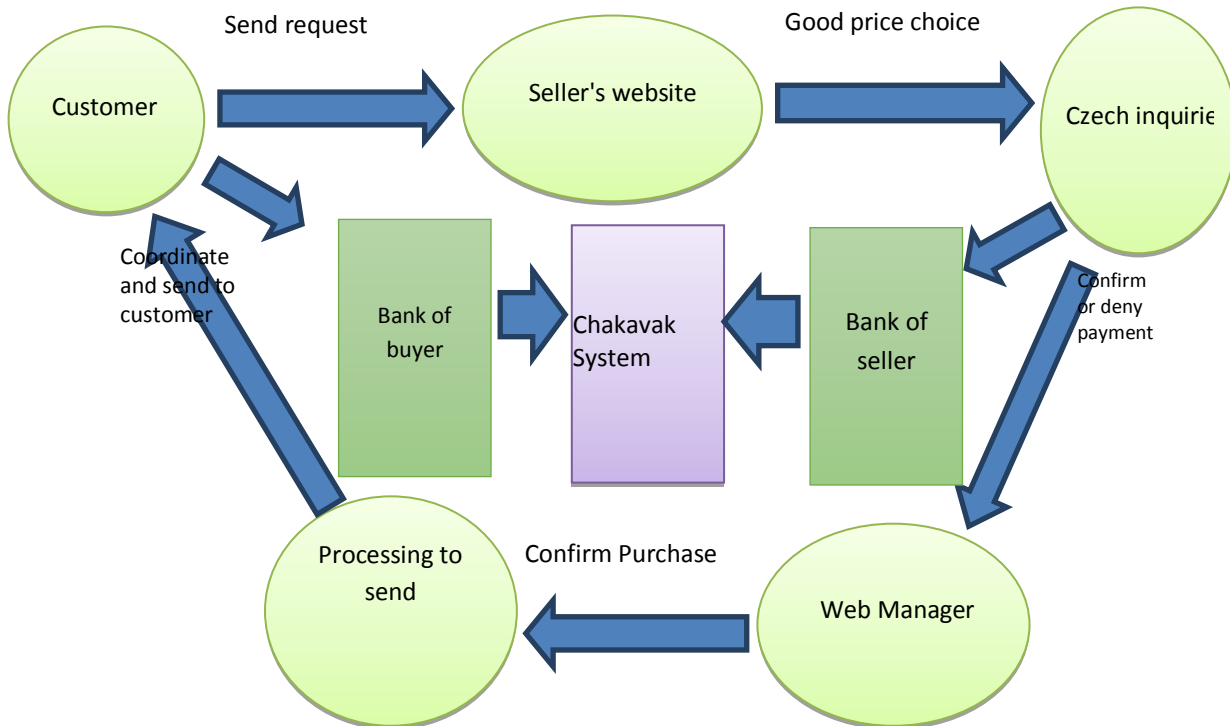


Fig. 6. The term of the long-term sale of fertilizer and pesticide in Iran.

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