Promoting and Marketing Ecologic Products by Web Sites in Romania

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Abstract: It was observed in this paper an alternative solution for marketing Romanian ecologic products in the virtual space. In this context, we will describe a prototype for the business development using the Internet tools, in order to reach potential customers from a larger area, including other countries. The paper includes a statistical study by which it was intended to measure the success rate of selling ecologic product versus non ecologic ones.

Keywords: ecologic products, web site, e-commerce, agricultural farm.

INTRODUCTION

In the specialty literature, one of the most appropriate definition of an agricultural farm is the one elaborated by Grall, J. (1994) «The agricultural farms are agricultural enterprises where families are living and where the working population includes full time of part time workers, employees, active people or retirees. The notion of agricultural farm is very large because it refers to an economic unit having at least 1 hectare of useful agricultural area or 0.2 ha of special crops or 0.1 ha of vineyard or more than one cow.»

In Romania there are many agricultural farms organized around families living in the rural areas, and oriented to an exclusive ecological agriculture. Crops and food obtained by these farms are presenting all the characteristics of the ecologic products, like taste, smell, freshness, and lack of chemical residues and contamination. Then, small local companies are processing these ecological raw materials according to the procedures that ensure that the resulting products can be marked as «Bio» or «ECO».

After 1998 as a result of the development of the supermarket chains, the consumption of ecologic products coming from the traditional farms is decreasing and being replaced by mostly non ecologic products coming from intensive farming. However, in the last years the customer’s awareness on the ecologic versus non ecologic food issue, has grown significantly and as a consequence, the consumption of ecologic product is also growing. Taking into account that most of the urban population (see the top 10 from site2) is using the Internet, marketing ecologic products on web sites can be used by traditional farms or farm associations as a way to get more market share. For this reason, it was elaborated a prototype for B2B website marketing ecologic food products.

MATERIALS AND METHODS

It was developed the idea of electronic business based on the statements of Kalakota, R. and A.B. Whinston (1996): «electronic businesses are responding to the requirements of the companies, markets and customers by reducing costs, improving products and services
quality, and reducing the delivery time» and Kalakota, R. and M. Robinson (2001) «E-business is not just about e-business transactions or about buying and selling over the internet; it’s the overall strategy of redefining old business models, with the aid of technology to maximize customer value and profits».

The development of an electronic business requires a HIPO (which stands for Hierarchy Input Process Output) method based design and the implementation of a client-server web application. For instance, one can use the MySQL product for the database management and the PHP language for the development of the website.

An e-commerce web site has 2 main parts:
1. The first one is dedicated to the customers and basically consists in the web pages that are loading into the customer’s browser when he enters the website
2. The second part is represented by the application running on the server managing the customer’s input and the system administration utilities.

In a recent survey, a random sample of 100 people aged between 20 and 65 years were asked about their interested in buying ecologic products online. The answers to the questionnaires were collected 2 times, the first time before using the virtual shop and the second time after 3 month of using it.

RESULTS AND DISCUSSION

The server application will be developed as presented in Figures 1 and 2. The client application will be structured as presented in Figures 3 and 4.

Fig. 1. Contents diagram for the Server application (adapted from site1)

Implementing a website (Stanca, 2005) (Stanca, 2007) (Stanca and Pop, 2007) with the structure presented above can help the farms to trade ecologic products to retail companies or directly to the consumers. The website can also be helpful to trade the ecologic products outside Romania and to increase the market awareness that Romania can be a significant provider of ecologic food products.
Fig. 2. HIPO diagram for the Server application (adapted from site2)

Fig. 3. Contents diagram for the Client application (adapted from site1)

Fig. 4. HIPO diagram for the Server application (adapted from site1)
It was applied the chi-square independence test that checks the link between the two answer sets. The two characters have two states (Drugan et al., 2005).

The null hypothesis suggests that there are no significant differences between the two answer sets. The alternative hypothesis suggests that there exists significant differences between these answer sets.

The following table was built using the answers of a sample of N greater than 30 people to the same questionnaire before and after using the online shop. The possible answers were yes and no (Tab. 1.). Then it was elaborated the expected contingency table (Tab. 2.), based on the previous table.

<table>
<thead>
<tr>
<th>Table of observed contingency</th>
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<tbody>
<tr>
<td>First questionnaire</td>
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<tr>
<td>Second questionnaire Yes</td>
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<tr>
<td>Yes</td>
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<tr>
<td>No</td>
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<tr>
<td>TOTAL</td>
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The obtained results for $\alpha$ equal 0.05 and 1 degree of freedom are Chi-square critical value is 3.7, p-value is 0.01, Chi-square observed is 6.27, Sensitivity is 0.68 and Specificity is 0.41. Note that p-value is less than 0.05 so the test is statistically significant (fact that results also from the returned values of the sensitivity and specificity).

Since Chi-square critical less or equal than Chi-square observed, the null hypothesis is excluded and the alternative hypothesis is accepted, so there is an significant difference between the answers given before and after using the online shop. This means that the specialized e-commerce web sites can be useful for the development of the ecologic products trade.

<table>
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CONCLUSIONS

This paper provides a theoretical prototype that can be implemented and adapted by companies or farms considering expanding their ecologic products trade.

The experience of the dot.com crisis of the early 2000’s, shows that pure online businesses are less stable than the traditional businesses evolving or developing toward the online environment. So grouping together the existing producers for creating regional brands and entering the online environment with a common and coordinated offer could be the appropriate choice.

The development of the ecologic agriculture can be an interesting solution for the reduction of the unemployment rate in many rural areas because in most cases the lack of jobs is related to reduced or inexistent industrial activity in that areas which means also few or non
significant air and soil pollution and contamination sources. As the state has already invested in the internet infrastructure for rural areas, the next step could be the state financial support for improving the link between the agricultural activities developed in these areas and the rest of the economy.

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REFERENCES