IDENTIFICATION OF THE DISTRIBUTION FLOW OF INFORMATION ABOUT ORGANIC PRODUCTS AND INNOVATIONS TO THE FINAL CUSTOMER
Erika Loučanová; Martina Kalamárová

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Abstract: Nowadays innovation as an important part of business management concerns not only the product itself, but also increasing customer´s interest. In order to increase customer´s interest in products it is essential to identify the distribution flow of product information within the distribution logistics of products and innovations. Therefore, this paper deals with identifying the distribution flow of information on a specific group of products to final customer, namely organic products and their innovations, for the effective increase of customer´s interest in these products and innovation.

1   Literature review

The current market is characterized by customer orientation, rapid product innovation and broad range of offered products and services [1]. The only one who innovates, whether technology, products, services, processes, organization or other activities, can be successful under condition of strong competition in the market.

Distribution logistics and marketing in synergy with the innovation process of the company are certain tools with which such a competitive advantage can be achieved and kept for a longer period.

Distribution logistics as a part of the commercial logistics provides physical, organizational and information link between the source (business input stock) and consumers. The function of distribution logistics is to ensure the most appropriate way, selection and analysis of transportation that is most effective for the transfer of manufactured products to achieve no-failure operation of the market [2]. Commercial logistics is a part of marketing, that according to Kotler is a „social and management process in which individuals and groups obtain through creating and exchanging products and value what they need and want" [3].

Recently, the trend within the resource connection is to implement eco-innovations in the meaning of corporate social responsibility and apply the principles of sustainable development. The term "eco-innovation" refers to innovative products, processes or organizational innovations that reduce environmental costs increase the acceptance of society and contribute to sustainable development. The concept is often used in conjunction with "eco-efficiency" and "eco-design" and also covers related ideas to environmentally-friendly technological advances and socially acceptable innovative concepts towards sustainability [4].

Business innovation management implements sustainability strategy through innovation leading to sustainable use of resources and materials from the environment, including the growing importance of socio-economic approach as part of a commercial logistics. In addition to sustainable use of resources, companies engage to the solution of environmental problems in the pursuit of development and improvement of social conditions and the environment itself, which should be a manner to ensure environmental sustainability and socio-economic development [5].

Linking product innovation management and corporate social responsibility in the application of environmental protection in the course of commercial logistics constitutes an environmental management system based on three pillars - environmental product performance, quality of innovation and customer value added product.

All these innovative activities are a prerequisite for the commercial success of a business unit for the sustainable development of its business in the conditions of market, which are connected with commercial - distribution logistics and marketing. Innovations present an important dynamising factor of each business, while it constitutes an important connecting link between the present and the future of any company [6].

Product innovation management is then focused on more far-reaching commercialization of the product for the future direction of the company. It integrates the products into the overall "green" marketing strategy compatible with the policy of environmental protection. They are the drivers of environmentally oriented business strategy based on the principle of sustainable development in conjunction with commercial logistics. Green marketing strategy promotes product features with really positive impact on the environment. It provides information to create customers´ opinion on the innovative "green" products and explains the benefits of innovation [7].

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According to [6] and [8] understanding of innovation by the customer in the context of the innovation management issues in conjunction with the distribution logistics and marketing is based on the globalization trends representing modern philosophy of distribution. That is based on the following factors:

– stable supply and demand in the transport market – term structure,
– development of transport infrastructure, networking – spatial structure,
– creation of new impulse structures – boom of transport market,
– a formation of traffic waves unresponsive to each other – the emergence of clusters,
– creation of spirals and hyper cycles – creation of the transport chain, logistics from the perspective of progressive development,
– rise of deterministic chaos – system failure, management breakdown.

For orientation in these factors arising from globalization trends affecting the innovation in the market, it is necessary to know the information chaining within the distribution logistics of innovations and products. This refers to the time and factual aspect of commercial distribution, marketing and innovation contributing to the business competitive advantage. Therefore, the aim of this paper is to identify the distribution flow of information about organic products and innovations to the final customer.

2   The methodology

The paper methodology is based on questioning. It is a method by which we can get a wide range of information about purchasing consumer´s behavior necessary for marketing research. According to [9] questioning is a detection method by which we obtain information through questions, written or printed. We obtained information about the distribution flow of organic products by selected target groups of respondents, where the sample of 175 Slovak and Swiss respondents was queried.

The questionnaire in both language versions was in electronic form. It consists of two parts – the identification data obtaining and the main part identifying the distribution flow of information about organic products and their innovations to final customers. The obtained data were processed in a database and then evaluated by statistical indicators and cluster analysis in the program STATISTICA. Cluster analysis for the evaluation was used with respect to the stated objective of the survey to monitor the clusters of information distribution flow about organic products and their innovations to final customers. Since as stated [10] cluster analysis determines how the statistical units should be grouped to ensure the greatest possible similarity within the groups and the largest differences between groups.

3   The results and discussion

To reach the objective – to identify the information distribution flows about organic products and innovations to customers – data from 84 Slovak and 91 Swiss respondents were processed. The respondents were queried on ways of obtaining information on organic products and innovations by the six selected communication channels informing and supporting these products sale (Table 1).

Table 1 Basic statistical indicators on the selected incentives within the distribution flows of information about organic products and innovations

	Slovakia		
	Absolute frequency	**Relative frequency**	**Variance**
Television and radio (Prom 1)	19	22,62	0,17503
Magazines and press (Prom 2)	15	17,86	0,14668
Internet (Prom 3)	24	28,57	0,20408
Leaflets and promotional materials (Prom 4)	9	10,71	0,09566
Friends and relatives (Prom 5)	13	15,48	0,13081
Other sources (Prom 6)	4	4,76	0,04535
	Switzerland		
	Absolute frequency	**Relative frequency**	**Variance**
Television and radio (Prom 1)	22	24,18	0,18135
Magazines and press (Prom 2)	11	12,09	0,10627
Internet (Prom 3)	34	37,36	0,14367
Leaflets and promotional materials (Prom 4)	4	4,40	0,04202
Friends and relatives (Prom 5)	20	21,98	0,17148
Other sources (Prom 6)	0	0,00	0,00000

Basic statistical indicators indicate that the distribution flow of information about organic products and their innovation to customers in the analyzed countries is very similar. The differences are more in terms of quantitative representation of individual incentives in the distribution of information on organic products and their innovation to customers. More significant differences can be seen according to the relative frequencies in obtaining information from other information sources, internet, family and relatives, magazines and press, leaflets and promotional materials. The minimum difference between the research subjects can be seen about television and radio. Validity of data is guaranteed due to the low statistical deviation from the average of analyzed data within the investigated objects by variance.

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We used cluster analysis with Ward´s method to identify the distribution flow of information about organic products and innovation to final customer that is presented in Figure 1.
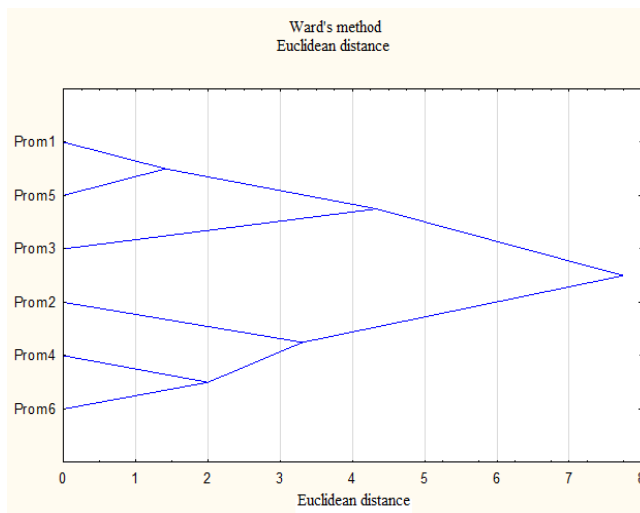

Figure 1 Distribution flows of information about organic products and their innovation to the final customer in Switzerland

We have identified two clusters based on a significant diversity of clusters that occurred at a level of 7, where the increase of values at the Euclidean distance between the monitored object has occurred.

Based on the above, we can conclude that the distribution flow of information about organic products and their innovation to the final consumer is connected within a cluster 1 - television, radio, internet, friends and relatives - and within a cluster 2 - magazines, press, leaflets and promotional materials and other information sources (none identified by the Swiss respondents).

The distribution flow of information about organic products and innovation to final customer in Slovakia is presented in Figure 2. More significant diversity of clusters occurred at the level of 3.5 of Euclidean distance and on what basis we have identified three clusters: cluster 1 - television, radio and internet, cluster 2 - magazines, press, friends and relatives and cluster 3 - leaflets, promotional materials and other sources of information about organic products and innovation (Slovak respondents identified as a doctors and personal sales).
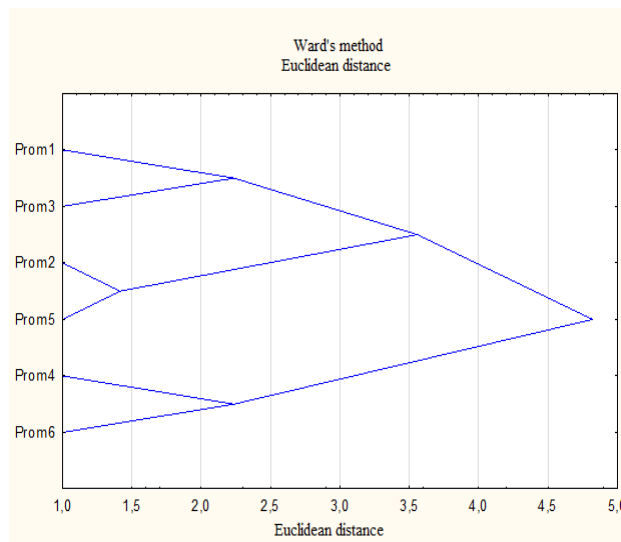

Figure 2 Distribution flows of information about organic products and their innovation to the final customer in Slovakia

In conclusion, we can summarize that the main identified distribution flows of information about organic products and their innovations to final customers differs in Slovakia and Switzerland, see Table 2.

Table 2 Clusters of distribution flows of information about organic products and their innovation in Slovakia and Switzerland

	Switzerland	**Slovakia**
Cluster 1	Television and radio, internet, family and relatives	Television and radio, internet
Cluster 2	Magazines and press, leaflets and promotional materials, other sources	Magazines and press, family and relatives
Cluster 3		Leaflets and promotional materials, other sources

Identified distribution flows of information about organic products and innovations to the final customers create a combination of external impulses and responses in both clusters. In contrary, the Slovak identified information distribution flow is differentiated into three clusters, which for organic products and innovation in Slovakia is disadvantageous condition in terms of the flow of information about them. Because as stated [3] differentiated perception, which was also identified in the information flow for organic products and their innovations in Slovakia, distorts the information, the interpretation of the subject and represents a distortion of certain information on the perceptions of individuals.

In order to generate such an offer of organic products and their innovations that meets the needs of consumers, marketing incentives in the information distribution flows of organic products and innovations should be associated

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with its needs, not demand. Because as stated [11] the demand is that part of the needs that motivates the subject to obtain a specific products or services, and which is also recognized as necessary for the company at a given developmental stage and a certain time period. Demand is therefore the form of needs expression, but the needs are not the same as demand, but they form its content.

4   Conclusions

Innovations are an important part of the market and nowadays eco-innovations and products are at the centre of interest. To increase customer interest in this kind of innovation and products, they need to be associated with marketing tools that provide necessary information on knowledge to the customers. Therefore, the paper deals with the identification of the distribution flow of information about this particular group of products - organic products and to innovate to ultimate customers in Slovakia and Switzerland. Based on the obtained data comparison, we concluded that in Slovakia the information distribution flow is more differentiated than in Switzerland and we recommend streamlining it to avoid the distortion of information about organic products and their innovation.

Acknowledgement

References

[1] CHUDADA, M., TARABOVÁ, Z.: Distribution logistics – part of Supply Chain Management, *Logistic Monitor*, 2012. (Original in Slovak)

[2] STRAKA, M.: *Distribution Logistics, How effectively to put product into the market*, EPOS Bratislava, 2013. (Original in Slovak)

[3] KITA, J. et al: *Marketing*, Bratislava: IURA EDITION, 2000. (Original in Slovak)

[4] LOUČANOVÁ, E., TREBUŇA, P.: Eco-innovaiton as a tool of competitiveness, *Innovation Transfer*, No. 29, pp. 76-80, 2014. (Original in Slovak)

[5] KOLLÁR, V.; BROKEŠ, P.: *Environmental management*, Bratislava: SPRINT, 2005. (Original in Slovak)

[6] LOUČANOVÁ, E.: *Innovation analysis and strategies*, Zvolen: Technical University in Zvolen, 2016. (Original in Slovak)

[7] BORGUĽA, M.: *Ecological marketing: The opportunity for an innovation*, [Online], Available: http://of.euba.sk/zbornik2011/ZBORNIK%20VEDE CKYCH%20STATI%202011-PDF/KMR/BORGU%C4%BDA_M._KMR.pdf. [24 Aug 2012], 2012. (Original in Slovak)

[8] ŠULGAN, M., GANP, J., MAJERČÁK, J.: *The transport role in logistics*, Žilina: 2008. (Original in Slovak)

[9] KOCH, J. et al. *Marktforschung. Grundlagen und praktische Anwendungen,* Munich: Oldenbourg Wissenschaftsverlag GmbH, 2012. (Original in German)

[10] RIMARČÍK, M.: Statistics for practice, 2007. (Original in Slovak)

[11] KULČÁKOVÁ, M.: *Consumer Demand*, Bratislava: ALFA, 1988. (Original in Slovak)

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