

APPLIED RESEARCHES FOR DEVELOPMENT OF E-BUSINESS

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Abstract. *The fast development of equipment and technologies has an impact on company development. The authors in the article have analyzed applied research peculiarities, interaction among e-commerce, research and company development. Very special role in the article is devoted to survey about changes in the consumer behavior.*

During research the author concludes that E-commerce has changed many aspects of business and interaction among e-commerce, company development and research help in sustainable development of a company and entrepreneurship.

Key words: *research, E-commerce, development, research, information, management.*

Introduction

This paper analyses the current situation in the E-commerce development in Latvia and its impact on company development. The author presents an analysis of current situation in e-commerce, gives insight in a theory of interaction among e-commerce and company development. The author employs well-established quantitative and qualitative methods of research: grouping, analysis, synthesis, induction, statistic method, etc.

Main results of the analysis showed that there is interaction among e-commerce and company development in Latvia. The research results confirmed that it is possible to use e-commerce for research purposes.

1. Marketing Research and Applied Marketing Research

Marketing research is one of the most important and fascinating aspects of marketing. Marketing research provides a company with valuable information, which guides all of the marketing activities.

Marketing research is the systematic and objective identification, collection, analysis, dissemination, and use of information that is undertaken to improve decision making related to identifying and solving problems (also known as opportunities) in marketing¹.

The Board of Directors of the American Marketing Association has approved the following as the new definition of marketing research: Marketing research is the function that links the consumer, customer, and public to marketer through information – information used to identify and define marketing opportunities and problems; generate, refine, and evaluate marketing actions; monitor marketing performance and improve understanding of marketing as a process. Marketing research specifies the information required to address these issues, designs the methods for collecting information, manages and implements the data collection process, analyzes the results, and communicates the findings and their implications².

On authors' opinion there are only few steps between marketing research, specially applied marketing research, decision making and e-marketing activity implementation. Thanks of E-environment and Internet these steps are very close and are easy to implement. The difference between marketing research and applied marketing research, on author's opinion, is in its localness and concreteness; in other words applied marketing research is more targeted, which a company is able to immediately implement and use. Authors believe that applied marketing research is the problem-solving research, which can be divided into two big groups.

¹ Malhotra, N. Marketing research: an applied orientation. Upper Saddle River: Prentice Hall, 1996, p. 5.

² Malhotra, N. Marketing research: an applied orientation. Upper Saddle River: Prentice Hall, 1996, p. 9.

Table 1. Classification of marketing researches

Marketing Research	
Problem Identification Research	Applied Research for Problem Solving
• Market potential research	• Segmentation applied research
• Market share research	• Product applied research
• Image research	• Price applied research
• Market characteristics research	• Promotion applied research
• Sales analyses research	• Distribution applied research
• Forecasting research	• Information applied research
• Business trends research	• Communication applied research
• Etc.	• Customers' needs applied research
	• Competitive advantage applied research
	• Etc.

Findings of problem-solving applied research are used in making decisions that will solve specific marketing problems³.

There are many aims of applied marketing research depending on company's purposes.

Segmentation applied research can help to determine, describe and select segments of the market, to understand customer portrait, both existing and potential, etc.

Product applied research can help to create and test new product and service concepts, to understand customers' attitude to company's products and services, to test post sale service level, products' package convenience and design, to determine customers' attitude to the brand and to emphasize co-creation.

Price applied research can help to determine customer price sensitivity level while selecting products, services or brands, to research competitors' prices, to understand customers' attitude to price changes, to develop pricing strategies for different products or/and services or/and market shares or segments, etc.

Promotional applied research can help to choose optimal promotion types, to establish relationship with customer, to understand promotional rates and make promotional budget, to choose promotional activities, etc.

Distribution applied research can help to determine type of distribution, distribution channels and especially convenient ones, to determine distribution structure and members, to understand costs of distribution etc.

Information applied research can help to understand what kind of information the customer needs, to understand internal and external factors influencing the company's information flow, to determine information exchange speed, to optimize internal information processes, etc.

Communication applied research can help to determine both internal and external problems. For example, it can help to understand communication processes flowing within the company, and to optimize them. External communication is called to establish communication sites with customers, to establish strong relationship with them, to understand the best ways of communicating with them, to determine best communication channels for different company activities: product advertising, sales etc.

Customer needs applied research can help to understand and determine customer needs, to determine product and service features, which the customer can accept or not.

Competitive advantage element applied research. Competitive advantage applied research can divided into two big groups: market based, and process based. Market based approach stands for direct competitor comparison (can help to determine market share; customers' mind share, advertisement share, R&D share, etc.); process based approach compares the methods used by competing organizations in achieving its distinctive advantages (company's marketing skill audit, winner and loser comparison, etc.)⁴.

As it is discussed there are many kinds of applied marketing researches that company can use. It is possible to conduct abovementioned research using e-environment and Internet. Main advantage of e-environment usage is high speed of information exchange, instant results receipt, and possibility of using and implementing the results practically after its collection.

³ Malhotra, N. Marketing research: an applied orientation. Upper Saddle River: Prentice Hall, 1996, p. 11.

⁴ Aaker, D., Kumar, V., Day, G. Marketing research. 7th edition. New York: John Wiley & Sons, Inc., 2001, p. 748-749.

2. Situation in E-Commerce Development in Latvia

As we know E-commerce covers matters arising from all relationships of commercial nature, whether contractual or not and consists of two parts – Electronic Data Interchange (EDI) and open e-commerce. Electronic Data Interchange means the electronic transfer from computer to computer of information using and agreed standard to structure of information. EDI is often used for business-to-business. Open e-commerce can be structured in two parts: mail and communication (like e-mail, chat, telephony etc.) and business-to-consumer relationships⁵.

According to the Internet Worlds Stats data, 67.8% of households in Latvia had internet access at 2010⁶. The share of inhabitants that had ever used internet during the last 3 months was 71.1% in the beginning of 2010, while 62.5% of inhabitants used internet on a regular basis. In 2010, 69.8 % of households in Latvia had computers and 59.8% had access to internet at home (authors comment: starting with 2006, the number of households with access to the Internet as a whole exceeds the number of households with access to a computer. This is explained by the fact that many Latvian households access Internet via mobile phone.)⁷. According to the Eurostat data 15.9% of all enterprises in 2008 having 10 and more employees had made purchases over the internet, but 5.2% of enterprises had sold services and goods over the internet. The turnover of goods and services purchased over the internet in Latvia constituted 4% of the total purchases in 2008, but the turnover of goods sold over the internet amounted to 4.4% of the total net turnover. According to the Eurostat ecommerce amounted to 12% from the total turnover of EU enterprises in 2008 (in 2009 – 13%). In the 1st quarter of 2009, 26% of the population or 38% of internet users had made purchases or ordered goods or services over the internet for own needs at least once in a life. Purchases over the internet are mainly made by the population in the age group of 25-34 years (51% of internet users in this age group)⁸.

According to the statistic data analysis and current situation in the market of Latvia, the authors conclude that e-commerce develops very fast in Latvia, in some segments even explosively. The impact of e-commerce development has changed market and consumers.

3. Research about the Consumer Behaviour in Latvia

The aim of the survey was to analyze consumer behavior in Latvia and to find out regularities of purchasing. The period of survey was March-April, 2006. The total number of respondents was 137 in age from 17 to 63, both sexes. The questionnaire contained 11 questions – multiple choice or fill in the blank. The resume of the survey is described below.

It is well known (and the survey confirmed it) that both sexes have different consuming habits. Females like the process of shopping and they doing it almost three times often than males.

If there were a possibility to choose between e-shopping and shopping in shops (malls) the 78% preferred classic shopping. Priorities varied from the age, social status, occupation, previous experience etc.

In comparison, 49% of men preferred e-shopping (figure 1).

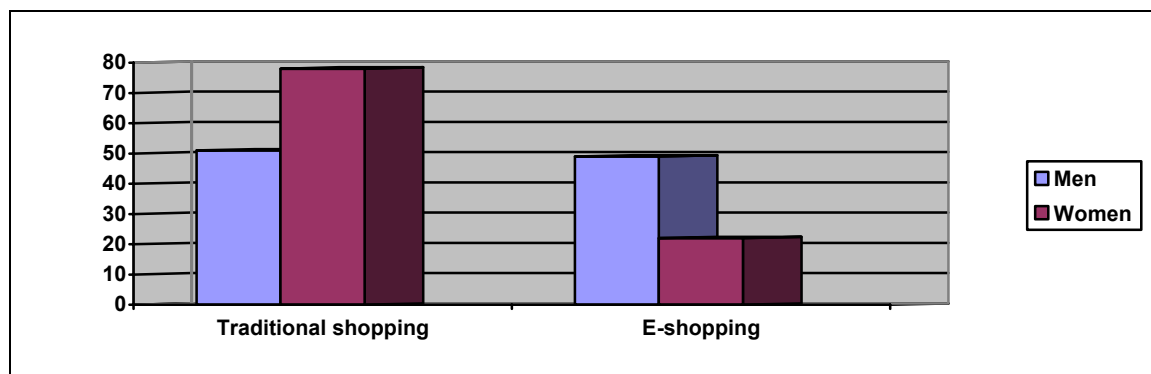


Fig.1. Preferences in shopping according to survey done in Latvia in 2010

Reasons why the e-shopping is better than traditional were:

⁵ Gaile-Sarkane, E. Electronic Commerce. Riga: Publishing House of Riga Technical University, 2003, p. 14.

⁶ Eurostat Data in Focus, 2009.

⁷ Central Statistical Bureau of Latvia, 2010.

⁸ Economic development of Latvia: report, 2010.

- It is possible to compare prices and find the beneficial offer;
- It saves time and works all around the clock;
- The goods will be delivered;
- It is not necessary to communicate with shop assistant;
- It is convenient, etc.

Versions of answers on question “Why you go for shopping?” are shown in figure 2. All answers can be divided in two parts: the necessity to shop and the consumer behavior.

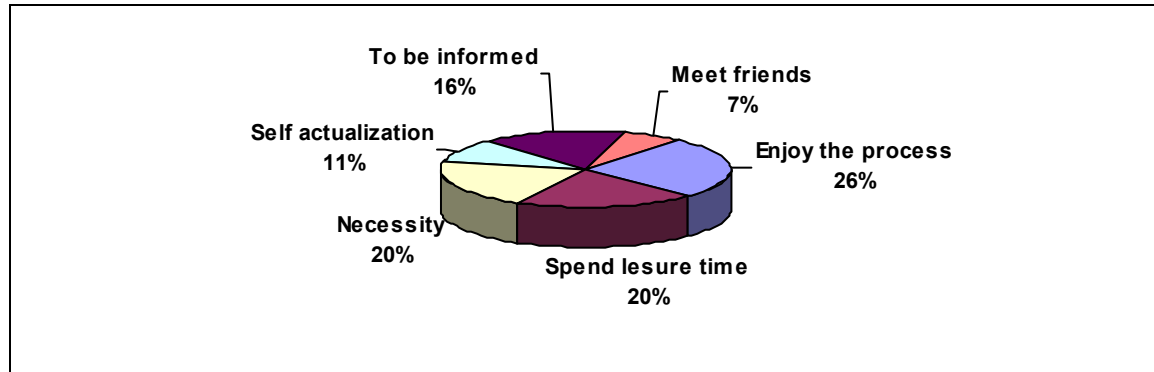


Fig. 2. Description of the consumer behavior in the traditional shops according to survey done in Latvia

In case to understand the consumer behavior, it is important to analyze it. As a basis for analyzing of the situation author have taken description major factors influencing the buying behavior.

A consumer buying behavior is influenced by cultural, social, personal, and psychological factors. Cultural factors exert the broadest and deepest influence. Cultural factors are culture, subculture, and social class. Culture is most fundamental determinant of a person’s wants and behavior. The growing child acquires a set of values, perceptions, preferences, and behaviors through his or her family and other key institutions⁹.

There is a huge influence on consumers by shopping centers in the Baltic States. The Shopping industry is going to develop new shopping traditions and inveigle the customer in the shopping mall. At the same time the increasing activity of e-commerce is trying to involve the same customer in e-shop. The child growing up in average Latvian family is exposed to values created by family and mass media what is calling to consume and to buy more and more.

Each culture consists of smaller subcultures that provide more specific identification and socialization for their members. Subcultures include nationalities, religions, racial groups, and geographic regions [4]. There are only two basic nationalities and religions in Latvia. And there are no visible large differences between these subcultures. Nevertheless, there is influence of historical factor for this geographical region. Latvia and all Baltic States became independent in the beginning of 1990’s and there were very specific shopping traditions. At the moment the shopping traditions are developing and become European. And there is influence of social factors to the consumer behavior like reference groups, family, social roles and statuses.

It is interesting to note that the survey acknowledge the influence of social factors to the consumer behavior. 16% of respondents were going to the shops with an aim to be informed about the assortment and for 11% it was self-actualization.

Of course that most important are personal factors – age, stage in the life cycle, economic circumstances, lifestyle, occupation, personality etc. In the survey people with high incomes and busy (dynamic) lifestyle said that they were choosing to use e-shopping versus traditional. The stage of family life cycle for this group varies from newly married couples (young, no children) to full nest (youngest child six or over) and the age from 24 to 38. The personality and self-concept is also important, because it includes psychological characteristics that lead to relatively consistent and enduring responses to environment.

According to research results the author concludes that the consumer behavior is one of the factors what influences development of e-commerce in Latvia as well as in the Baltic States.

⁹ Kotler, Ph. Marketing management. Millenium edition. Upper Saddle River: Prentice Hall International, Inc., 2000, 718 pp.

4. Interaction between E-Commerce and Applied Research

Evans Ph., Wurster T.S in the book “Blown to Bits: How the New Economic of Information Transforms Strategy”¹⁰ mentioned - “We realized that the „objects” of strategy – such as business units, industries, supply chains, customer relationships, organizational structure, and so forth – are held together by a „glue”, and that glue is essentially information”. Questions on possibilities to use information resources in entrepreneurship will become particularly important for every company who is going to compete in the EU and world-wide Information and Knowledge society.

In the knowledge economy, the value of knowledge as input and output is growing. Knowledge is a key ingredient of what is bought and sold (both explicitly and implicitly), knowledge resources rising importance relative to traditionally recognize resources, and new technologies and techniques for managing knowledge resources.

E-commerce is based on free mutual exchange and consists of the technological base (infrastructure, software), range of information services. E-commerce and information exchange develops knowledge-based economy what is strategic priority of Latvia and the Baltic States.

Information resource contains many components: market information, statistic information, knowledge, experience, know-how, etc. According to the authors point of view in product development process mainly depends on three basic components of information resource:

- Market information,
- Knowledge of labor involved in the development process and
- Know-how.

To the authors standpoint the market information is important information for product development about the market, including customer needs, segmentation, analysis of rivals, sales forecasts, etc. Possibilities of company development depend on ability to collect right information and to employ it.

E-commerce can be used for both – qualitative and quantitative applied research.

Historically, analysts have distinguished between experimental (laboratories) and field (natural) research settings, hence the argument that qualitative research is naturalistic. Activity theory erases this distinction.

Qualitative research has separate and distinguished histories in education, social work, communications, psychology, history, organizational studies, medical science, anthropology, and sociology¹¹.

The word qualitative implies an emphasis on the qualities of entities and processes and meanings that are not experimentally examined or measured (if measured at all) in terms of quantity, amount, intensity, or frequency. Qualitative researches stress the socially constructed nature of reality, the intimate relationship between researcher and what is studied, and the situational constraints that shape inquiry. Such researchers emphasize the value-laden nature of inquiry. They seek answers to questions that stress how social experience is related and given meaning. In contrast, quantitative studies emphasize the measurement and analysis of causal relationships between variables, not processes. Proponents of such studies claim that their work is done form within a value-free framework¹².

Usually for collection of marketing information the companies used so called marketing information systems. By using appropriate methods of research and e-commerce tools, company can collect, analyze and use information about market for company development and develop marketing information system.

Many tools are created up to know for qualitative and quantitative applied research in e-commerce, for example, Customer Relationship Management (CRM). These tools can help to analyze two main parts for successful business of a company – customers and market. Researches help in the development of the company: in deployment and development of services and products, in creation of customer values, in development of new distribution channels, in segmentation etc.

Conclusions

Over the past decade the business environment has become increasingly dynamic, reflecting the global trend of economic liberalization. New political geography, gradual removal of international trade barriers,

¹⁰ Evans, Ph., Wurster, T.S. *Blown to Bits: How the New Economic of Information Transforms Strategy*. Harvard: Harvard Business School Press, 2000, 259 pp.

¹¹ Norman, K.D., Yvonna, S.L. (editors), *Handbook of Qualitative Research*. Second Edition. London: Sage Publications, Inc., 2002, 1065 pp.

¹² Smith, P.R., Chaffey, D. *E-Marketing Excellence. The Heart of e-Business*. Oxford: Elsevier Butterworth Heinemann, 2002, 340 p.

rapid technological advancements are just a few of the factors that have had major effect on the business management practices.

E-commerce has changed many aspects of business – there are new business models, there are changes in the consumer behavior, there are changes in the segmentation of the market etc. According to the author point of view interaction among e-commerce, company development and research help in sustainable development of a company and entrepreneurship.

The research by applying the method of synthesis of theoretical developments and practical experience has allowed the author to analyze and evaluate the current situation in E-commerce in Latvia. The research contributes to better understanding of the specifics in interaction among e-commerce, company development and research..

However, the field of research is very wide and this study presents just an insight into the large scope of different questions, which have to be tackled in the development of entrepreneurship in Latvia.

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