

BUSINESS INTELLIGENCE: THE ROLE OF THE INTERNET IN MARKETING RESEARCH AND BUSINESS DECISION-MAKING

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The purpose of this paper is to point out the determinants of the business intelligence discipline, as applied in marketing practice. The paper examines the role of the Internet in marketing research and its implications on the business decision-making processes. Although companies conduct a variety of research methods in an offline environment, the paper aims to stress the importance of Web opportunities in conducting the Web segmentation and collecting customer data. Due to the existence of different perceptions concerning the role of the Internet, this paper tries to emphasize its effort of an interactive channel that serves the function of not only an informational nature, but as a powerful research tool as well. Several data collection and analysis methods/techniques are discussed that would help companies to take advantage of a Web as a significant corporate resource.

1. INTRODUCTION

“At the heart of business today lies the Internet, a global network of networks enabling heterogeneous computers to directly and transparently communicate and share services with customers. It can lead to a completely new economy. Internet business is the point where economic value creation and information technology come together.” (Lee et al., 2003, p. 163)

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For the past few decades, businesses are witnessing the intensity of rapid changes in usage of information technologies (IT), for the business decision-making purposes. Previous studies showed that, in the 1990s, businesses used to perceive the Internet mostly as a communication tool - referring to the e-mail and multimedia capabilities, sending or downloading documents, etc. (Poon, Swatman, 1997), or to fulfill some primary commercial functions, such as gathering information by exploring other Web sites; providing customer support and conducting on line transactions (Soh et al., 1997). Therefore, the major perception referred to services that are not provided in some other ways, such as by telephone or fax, which can create certain myopia, leaving the Internet potential uncovered. When analyzing the newer data regarding the usage of the market information, it seems that the Internet has still not been fully recognized as a vital source of marketing intelligence. Results of the research applied on the banking systems showed that there is an opportunity for exploiting the Internet as a marketing research tool, although unused due to inclination toward the on line transactions (Lymperopoulos, Chaniotakis, 2005).

On the other hand, some authors suggest that the usage and the perception of the Internet has changed in the past years offering the space for a more detailed analysis of the Web possibilities from the research aspect. The Internet is no longer the subject of research, but rather a relevant research tool. It has become the way of improving the overall surveys and social science instead of relying on the Web for mere communication needs (Michigan State University, 2009). Besides the role of research and communication, the Web plays a role of selling and advertising channel enhancing the overall interactivity of the businesses today. In order to cease that potential, it also is crucial for business to know the Web traffic, i.e. to know the customers (Murray, 2008). This paper reviews the importance of the Web as an research and Business Intelligence tool. It discusses the Web-based segmentation as a path toward developing the business strategy that enables the understanding of the Web users' behavior, i.e. target groups, and thus managing the relationships with customers in the best possible manner. A variety of methods and techniques based on the Web and customer relationship management play a vital role in marketing research.

2. BUSINESS INTELLIGENCE

Business Intelligence (BI) refers to various software solutions, including technologies and methodologies needed to acquire the right information necessary for the business decision-making with the major purpose of enhancing the overall business performance on a marketplace (Wang, Wang, 2008). Since businesses are faced vast quantities of information, the major

operational problem is to focus on the right information. BI helps to identify the causes and reasons of certain occurrences helping the business to make predictions, calculations and analyses; so that the needed knowledge is successfully extracted from the sometimes hidden data and that the proper decisions can be made. (Zekić – Sušac, 2008). According to Ranjan (2008, p. 461): “BI is the conscious, methodical transformation of data from any and all data sources into new forms to provide information that is business-driven and results-oriented. It will often encompass a mixture of tools, databases, and vendors in order to deliver an infrastructure that not only will deliver the initial solution, but also will incorporate the ability to change with the business and current marketplace.”

BI comprises of a variety of analytical software that provides the information needed by businesses. The emphasis is on the real-time information which supports reporting on every organizational level. The term is much broader in the sense of encompassing multiple tools and methodologies, which enable their users to connect all business processes. Efficient Business Intelligence connects business and IT (information technology) so that the available resources can be allocated with respect to their own capabilities, as well as provides intelligent problem solutions (Ranjan, 2008). As depicted by Figure 1, Business Intelligence integrates many of the business processes (enterprise resource planning, supply chain management, customer relationship management...) into a variety of applications that serve the primary source of data, which can be extracted and with the help of BI tools, such as reporting, OLAP, data mining, etc., turned into valuable information (analytics) that the companies base their decisions upon.

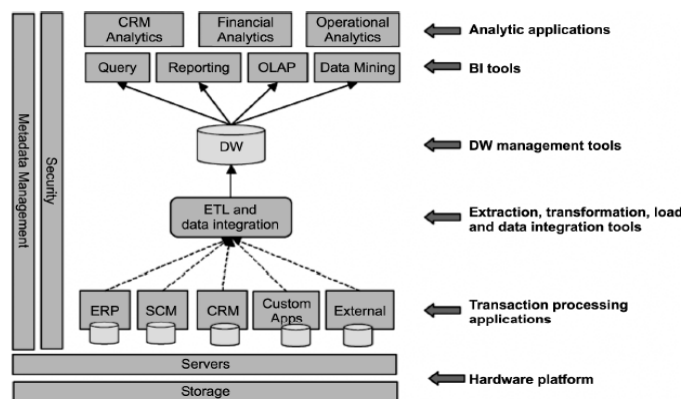


Figure 1. BI environment (Ranjan, 2008, p. 466)

3. THE INTERNET AS A RESEARCH TOOL

“Information technology (IT) contributed to the growth of world economy. In the network economy, business applications and management must embrace the Internet in order to survive in the e-Commerce age.”
(Chou et. al., 2004, p. 340)

From the perspective of developing an efficient marketing strategy, the Internet provides better insights into sometimes hidden and unavailable data regarding customers, their impacts on business, consumer behavior and buying decisions. It also offers an opportunity for businesses to create an image, offer information about products and services, develop relationships with profitable customers, better understand the consumer buying practices, ensure continuous product improvements with respect to customers' needs, etc. However, some studies showed few different perceptions. For example, Karayanni (2006) conducted a study, in order to determine the purpose of the business usage of the Internet and found that the important usage motivation is to distinguish oneself from the competition, which includes both marketing research and market expansion opportunities.

However, one should compare the Internet, as a research tool, to the more traditional means of conducting market research. This has been done by Furrer and Sudharshan, (2001) and Wilson and Laskey (2003), who have analyzed whether the Internet poses a serious threat to the traditional ways of conducting research. Their studies showed that, although there were numerous valuable insights which could be obtained via Web-based analyses, the Internet-based research is often used as a special type of study applied exclusively for the Web evaluation.

The Internet is a far cheaper and easier medium for conducting research and has a number of other benefits. They include an opportunity to survey a high number of respondents at once, ease of conducting a survey in a couple of clicks, inexpensive respondent reach (larger sample), pre-screened panels (prompt responses to online questionnaires), or rapid turnaround (research and results in a short period of time). Other studies note that the major advantages of the Web-based research as the possibilities for targeting a larger population, flexibility and control over formats, simple data entry, high participation, usage of a variety of media, simplicity of administration, etc. When analyzing data collection techniques, it is important to note that there is a growing trend of administering the Web-based data collection methodologies that have numerous advantages over other data collection approaches (Albrecht, Jones, 2009).

However, usage of the Internet opens issues related to sampling difficulties (for example, sample frames become obsolete since the users change their e-mail providers), as well as response rates and quality (the users are not often able or not willing to cooperate, i.e. fill the questionnaires, which makes it difficult to construct representative samples). Some other limitations that should be considered when dealing with online research are related to the potential for compromised objectivity (when there is no researcher as an intermediary) or partial interpretations. Therefore, the Internet research should be used along with other traditional methods in order to cover all customer segments. Namely, some target groups are easily targeted by the Internet (e.g. younger people), while others are not reachable in this way (Wilson, Laskey, 2003). This draws to the conclusion that the Internet, as a research tool, reaches its full potential in combination with traditional offline research methods (MRS, 2007).

Analyzing the role of the Web from the aspect of the research object, Furrer, Sudharshan (2001) showed that all Web sites, Web pages and Web users should be taken into account as three separate units of analysis appropriate for research. This means that a Web page can be analyzed with regards to how it communicates its content, the overall appearance and advertising space. This can be visible through the number of visits to the page and based on the amount of time spent on a particular page. A Web site can be analyzed to determine how the overall structure of the site influences the corporate communication and marketing strategy. The Web users can be analyzed, as well, so that the reasons of their particular behavior and usage of certain products/services can be discovered.

An emphasis is put on the usage of the Internet as a form of an advanced research tool for the better segmentation of the potential customers, but it may be even more important to provide real-time data, which can be achieved by several technologies. They include, for instance, Web services, being usually defined as a means of tracking and monitoring the business activities in real time, using the events that occur as a result of those activities as entry values that activate the business rules for delivery of the filtered information toward other processes and target groups of customers, which represent the core business intelligence of the company (Panian, Klepac, 2003, p. 227). The role of the Web and the real time information is emphasized in many situations, especially in the field of Web analytics, where companies strive to find who their customers/visitors are, where they are coming from and which online events brought them to the site, as the easy and useful e-commerce represents a valuable experience both for the customers, as well as for the companies doing business and research online (Murray, 2008).

4. MARKETING INFORMATION SYSTEM

Perceiving marketing as a business philosophy and taking into consideration the importance of accurate, new and on-time data, companies should acknowledge the value of creating the marketing information systems and conducting online questionnaires, experiments and focus groups, as well as viewing the various online users' groups. There are many methods and techniques that will be discussed later to get in touch with the online sources of data.

4.1. Sources of data

If Internet is analyzed as an interactive marketing tool for market data collection and analysis, according to Sen et al. (1998), all data can be classified into three groups:

- data that are being automatically logged in Web sites,
- secondary data that are publicly available,
- data that the Web users provided.

The first group consists of automatic registering of all visits and clicks through the log entries. Registered data refer to the IP address that the user is coming from, some errors that potentially occur while using the site, the location that the user is coming from, as well as the location that the user is going to. These are only access data that are not sufficient for the marketing experts to create the strategy or customized offers, due to the fact that it is not obvious which users and how many of them accessed the Web site from the same computer/IP address.

Besides registration access, there is additional Web information related to the subscription and memberships of the Website users. Publicly available data refer to information available from the Websites in a form of corporate reports (monthly, annually, etc.) that are free of charge and are visible on the corporate site. Information from the Web visitors do not have to be immediately available because they require the visitors' consent based on their voluntary registration and the willingness to provide information. Therefore, the availability of such data depends solely on the visitor/customer.

4.2. Secondary data

Secondary data collection is based on different statistical and reporting information that is being generated from primary Web logs and other data.

Many companies are using the possibility to track the users through the different Websites, in order to enhance the effectiveness of their own site (Ružić, 2003, p. 68). This is enabled by top Web pages lists, statistical data about Web page visits, visitors in a certain period of time, Web addresses that the visitors come from, time when the visitors are online, the most visited pages, the most used Web page categories, clickpaths, etc. In this way, the company is able to check which parts of the site are the most visited, which the least and, therefore, adapt or change some content on the site. Also, one can identify the Web browsers used by customers, as well as keywords used for searching to get to the particular site.

Some other standard data collection sources can be cookies (temporary or permanent), which register the occurrence of a new visitor as well as all queries, which enable the recognition of the same user that appears on site again. Although a lot depends on the interpretation of data and neither method is perfect, it is important not to restrict data collection to a single method. Which method to use depends on the searched data and infrastructure of the company, i.e. needs and wants of a particular business.

4.3. Primary data

Primary data collection on the Web is conducted by experiments, focus groups, observation and in-depth interviews, as it is the case in 'offline' research (Ružić, 2003, p. 71). However, one of the most popular e-research methods is the administering of the online questionnaires. The answers can be formulated as multiple choice answers, open-ended or a scale that offers the degrees of agreeing or disagreeing. The advantage of an online questionnaire is the fact that data are collected in a real-time frame and such information is constantly available, while the Web site visitors can respond whenever they want. They are more spontaneous, since they are not obliged to reveal their identity. As an integral part of this method, some demographic and socio-economic information can be requested as well (age, gender, occupation...).

A major disadvantage is the uncertainty and potential inaccuracy of provided information. Also, the limitation factor is the population that is restrained only to Internet users. The increased rate of online panels that collect data through a longer period of time should also not be overlooked. Another mentioned method, the focus group, can be conducted without the moderator. However, the focus group can result in a greater number of answers than it would be the case with the classic method of focus groups (Ružić, 2003).

5. WEB SEGMENTATION

“Accurate marketing segmentation has been the basis for successful customization of products and services. ...a good market segmentation scheme always requires a careful identification of segmentation variables that are geographical, demographical, psychological, or behavioral”
(Wen, Peng, 2002, pp. 494, 493).

These authors conducted a research in the field of Web segmentation as to perform the personality classification. The major premise was to test the click stream mechanism across three types of personalities based on the users' Web visits. The structured click stream analysis confirmed the possibility of conducting the Web segmentation and classified the Web users as compliant, aggressive and detached. In this way, the efficiency of online segmentation and the usefulness of the click stream analysis has been also pointed out (Wen, Peng, 2002). Additional empirical research (Gurau, 2005) on the pharmaceutical market (online pharmacies) has analyzed the usefulness of the marketing techniques and customer profiling (customer data collection) on the Internet, by testing the customer transactional model as a reference point of the Web possibilities for the market segmentation. The results revealed four main consumer categories analyzing the 'online' consumer decision-making process and the overall shopping behavior for each segment. The research also pointed out the Web segmentation as a successful way of understanding the customers' needs when doing business online.

It is impossible to develop and market products that always comply with mass consumer needs. As it is well known, products and services differ from company to company and usually require customization. The importance of segmentation lies in the ability of recognizing the specific homogenous segments that represent the target groups so that the company can develop and serve each segment appropriately, i.e. depending on the needs of those customers that represent each segment. The situation seems similar in both the offline and online environment. However, Louvieris and Driver (2001) pointed out the difference in Web segmentation criteria that distinguish the Web segmentation from the traditional one. While the traditional approach requires the segment to be measurable, available, attractive, big, different and stable enough, the Web segmentation lies on the principles of interdependence of criteria that also indicate scalability and adaptability. So, the authors imply the possibility of increasing and decreasing the population. This approach points out measurability, availability, scalability and adaptability as the major Web

segmentation parameters vital for the identification and tracking of the complex dynamic Web behavior of users.

The customers' behavior can also be visible from the most visited products or brands on site, time spent, downloaded/sent/accessed files e-mailing, selection of the pages, book marking, etc. Moreover, behavioral variables can be seen from the users' status (usage frequency). All previous transactions and purchases of a customer can also be detected, while the consumers' preferences can be analyzed based on the search criteria within the page/site (Sen et al., 1998). Therefore, the frequency of visits to a particular Web site can suggest to the company to put some special offers on certain pages, to ease the navigation toward the searched products, etc. When dealing with methods and techniques of data collection, the focus is on the major three methods: the observation, questionnaire and experiment (Furrer and Sudharshan, 2001). Direct observation of a Web site can be conducted with the help of a researcher or the user sample. This method is used for the collection of the quantitative data, such as the number of ads on one page or the number of links within a particular page. The same method can be also used for the qualitative data collection that, for example, reflects the degree of users' satisfaction with the existing service, or their reactions to the overall Web page experience (e.g. the look, content). In this context, Cox and Dale (2002) confirmed the vital factors that ensure the Web quality and positive Web site experience as the Web design, the Web resources (products and services offered via Web site), relationship aspect (how the Web communicates with customers and influences their stay on a Web), as well as the trustworthiness that the Web is offering to the customers.

Questionnaires can be divided into Web site questionnaires, e-mail questionnaires, textual questionnaires that are sent as an attachment or text form that can be downloaded from a particular Web site. Experiment, as a Web research method, refers to the creation of an experimental Web site and observation of the users' behavior against the manipulated changes on that site. Here, the researcher has the ability to change the content, visual identity or the navigation structure of the site. When creating such an experimental Web page, the researcher can invite a group of Internet users to participate in the experiment, i.e. to go to that site and evaluate the mentioned variables (Furrer and Sudharshan, 2001). Among many researchers, the usefulness of the experiment can be seen by Hay's et al. (2003), who analyzed the behavior of visitors using the sequence alignment method, which included a number of variables, such as content of the Web, products, promotions and Web page components. The experiment enabled the identification of segments/clusters, i.e. the segmentation of those Web visitors based on the Web behavior patterns. The

following figure demonstrates the connections among the mentioned components of the Internet-based research.

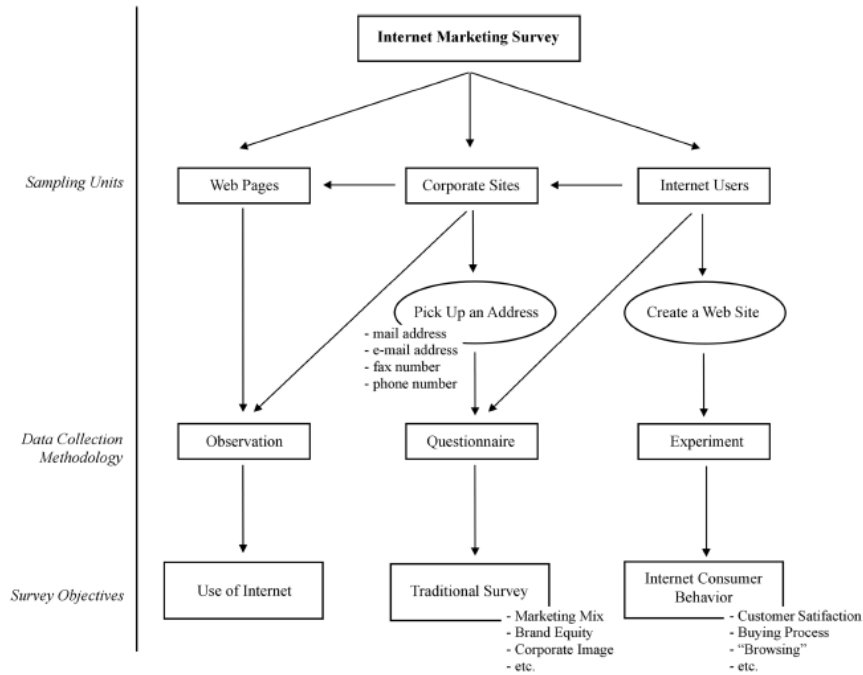


Figure 2. Typology of Internet marketing research (Furrer, Sudharshan, 2001, p. 125)

6. ADVANCED DATA COLLECTION METHODS AND TECHNIQUES

Data collection methods and techniques that can help businesses to assess the Internet potential from the aspect of their marketing strategy encompass numerous approaches. This section shortly reviews some advanced methods and techniques, such as Web analytics, collaborative filtering and data profiling, detailed segmentation analysis and OLAP.

6.1. Web analytics

Web analytics represents the advanced method of estimating and analyzing the marketing strategy through the Web users' behavior. By assessing the Internet traffic, one can find out a lot about consumer activities and preferences, which can help to understand a variety of aspects necessary for a company to

increase its sales and to best serve the customer's needs (Woodcock et al., 2003). According to Clifton (2008, p. 4), "*Web analytics provides the tools for gathering this information about what happens on your Website, and enables you to benchmark the effects.*"

The need for advanced Web reporting and Web analytics occurs due to the lack of accurate interpretation through the basic statistical insights that can generate the false assumptions (Phippen et al., 2004). The simple analytics do not seem to be enough for the proper business decision-making, since the Internet is no longer only the means of communication and advertising, but rather the interactive business channel that draws attention to the strategic performance of attracting and retaining the customers. The line between attracting and retaining the customer is not so obvious. In the physical world, the word of mouth is strong, since the unsatisfied customer can share the experience with several other people. However, on the Web, an unsatisfied customer can in one click share his or her negative reactions with thousands of other potential users. In that sense, the Web analytics have a primary focus on the customer, while the basic Web measurements deal with the organizational goals.

Web analytics offer the possibility for understanding the relation of customer/user and the Web site, as well as the opportunity to monitor and report the wanted relations and complex interactions of Web users' activities and Web offers. Analytics are being applied on large data sets to determine the value of information that is not possible through classic Web insights (Phippen et al. 2004). A major point with Web analytics is not in data collection, but in matching one set of data with another (for example, matching demographics and subscription data) to gain a better understanding of consumer behavior. A major goal is to extract the knowledge needed for the everyday business activities and decision-making. Therefore, the advanced analytics are more oriented on methodology than on mere measurement. They operate on the principles of derived formulas. For example, the customer life cycle (the connection between the customer and Web) can be analyzed in this way. Each cycle phase and all accompanying data are being tracked, such as the number of users in every phase and the cost per customer while moving through every phase. The formulas can automatically calculate the cost per visitor, taking into consideration the variables, such as money spent on the advertising campaign, the number of advertisements, rate of clicks or number of visits. The analysis of a Web user's life cycle predicts the potential churn of users, i.e. it determines the point when the users give up a particular Web activity. Web behavior analysis is a crucial subject of research, so that the churn of users can be

minimized, and thus the customer retention increased. Factors that influence the users' retention can be recognized as the overall content appropriateness (attention), overall look of the site and the organizational site structure (Phippen et al., 2004).

The attention of a user can, for example, be calculated as a ratio of time spent browsing all pages and the total number of unique visitors. The relevance of the site is analytically defined as a ratio of the number of content units and number of available (expected) content units. Therefore, according to the previously mentioned authors, there is a variety of analytical calculations available through Web analytics, while the range and complexity depend on the needs of the company and the subject of measurement and research. Besides regular basic metrics (location that the visitors are coming from, location that they are going to, number of visitors, top visited Web pages...), all analytical calculations derive detailed views and knowledge from data, such as the scale of exit pages, scale of click-paths or used browsers. They can be formed in reports available in any period of time (on a daily basis, weekly, monthly, and annually) (Phippen et al., 2004).

6.2. Collaborative filtering and data profiling

Web identification technologies enable the content personalization in real time. One of such approaches is the collaborative filtering, which represents the important data collection technique that advances the overall Web experience and the preferences of the existing and/or potential users. Based on the Web navigation, this technique predicts the needs of users/clients, as well as the searching decisions and the product or service selection. Information that is used is actually the real time data regarding the users' Web activities and consumer profiles. According to Iyer et al. (2002), data are merged and compared to other relevant information in the main customer data base, which is done by certain scoring algorithms, similar calculations, correlation coefficients and other statistical methods.

Any segmentation criterion is available according to data that refer to Web tracking of the customer Web path. For example, the user searching for a particular book can get data regarding the purchases of the same book by some other customers. The user can see other people's commentaries on the book, the prices, recommendations or reviews. Based on these premises, collaborative filtering tries to determine the connection between the given data and impact on future purchases. Although the collaborative filtering technique is not perfect from the aspect of recognizing the consumer psychology, it is very helpful for

the mentioned purpose while not demanding for implementation and maintenance (Iyer et al., 2002).

Another technique of personalization useful for segmentation is data profiling. It enables monitoring of the consumer behavior. The main purpose for its usage can be identified in tailoring various promotional efforts and discounts. It can be 'seen in action' at the airline companies' Websites, where different information is processed, including demographic data, data regarding the users' preferences of the products and services or data collected through the users' registration of flights. Based on such information, company can establish certain discounts for particular users/customers when he/she visits the Web site next time. Another aspect of the usefulness of the data profiling technique is the opportunity of determining the substitute product or service for some users. In this way, if one customer used a certain company's services in the past, some new or the same preferences are being established and the user can be offered a new customized solution (products or services). Using the same data, the users can be, for example, profiled according to the costs, which serve as a reference point when establishing different prices for different groups of users. Also, the company is able to identify the profitable customers, products or services (Iyer et al., 2002).

6.3. Detailed segmentation analysis

All collected data can be the subject of a more detailed segmentation analysis. According to Iyer et al. (2002), data for such an analysis can be obtained from three levels. At one hand, there are identification and navigation data available across different click-stream paths and registration information needed to access the Web content. At the other hand, there are data regarding the buying habits. Here, also, data collected through e-mail contacts can be taken into account. The third level, according to these authors, is information that occurs as a result of personalization through different discount methods and promotional effects, as well as data (results) of the collaborative filtering. In order to create an efficient database, it is necessary to combine other sources, too, so that the segmentation is more detailed and effective. Additional sources refer to data regarding the customers, which are collected from other sources or other methods saved in the database as it was discussed in the previous sections of the paper. These are, for example, click-through analyses, and users' paths from page to page, online advertisements, etc. Additional data are also data that are collected through some other sources, such as the company's representatives, salespeople, partner companies or other outsourced agencies.

For the purpose of Web segmentation, some researchers stress the usefulness of the clipping method (Louvieris, Driver, 2001). According to their results, it successfully processes demographic data and consumer behavior data that are the most vital information for the segmentation, and in that way, the company's later positioning and marketing mix formulation. Clipping represents a technique of database manipulation, in order to identify and group the segments, according to the demographic and behavioral variables. The segments, i.e. identified groups are then 'clipped' into the needed sizes. The maximum size of the segment depends on the company's possibilities to process such information. The needed infrastructure is the marketing information system and the scalable data mining that would extract the knowledge from the hidden data. The capabilities of the system define the measurable characteristics of the segment.

6.4. OLAP (On-Line Analytical Processing)

Online processing tools play a significant role in the detailed processing of different user queries. OLAP (On-Line Analytical Processing) can help with the analysis of all users' activities in combination with promotional and selling efforts that are directed to those users/customers. The purpose is to get answers on questions related to the increase or decrease of sales, price elasticity, sales oscillations and all other determinants of the business operations.

According to Panian and Klepac (2003), OLAP represents a form of a multidimensional data analysis, which can take into account multiple aspects of a business problem. Multidimensional answers can be taken while, for example, studying the index of coverage. This refers to the coverage of geographical areas with certain industries. Moreover, with OLAP, one can research the relatedness of planned and achieved results in a particular period of time. A special feature of OLAP is the speed of acquiring very complex data that cover a number of variables.

In addition, dimensions, according to which the fast calculations can be generated, are indefinite. Online analytical tools enable numerous options ranging from the simple search functions to complex calculations and data modeling. OLAP covers many business areas upon which decisions are made. It is the process that begins with data, continues with information, and ends with business intelligence (Panian and Klepac, 2003, p. 237).

7. CONCLUSIONS AND MANAGERIAL IMPLICATIONS

The Internet represents an efficient medium for communication with users. It serves the important role of attracting and retaining the users/customers and, in that way, managing the long-term customer relationships. It is a new marketing tool offering companies access to technological advancements and direct communication with users, as well as enabling marketing managers to quickly and continuously update the database of their customers.

The paper discussed the role of the Web in marketing research and everyday business decision-making. It stressed the existence of various data types, different data sources as well as a number of methods and techniques of data collection that can be useful when conducting the Web research. Special emphasis is put on the importance of Web segmentation that enables the identification of homogeneous segments and delivery of needed information to certain target groups. From this perspective, there are several practical applications of different Business Intelligence tools and technologies in the marketing context:

- Managers, especially the marketing and sales managers need to assess their corporate Web pages and determine the role of the Web site in everyday business operations, since it does not have only an informational role, but also serves as a communication and sales channel. Web analytics are indispensable for such a purpose.
- With respect to traditional methods of market segmentation, managers should use the Web segmentation opportunities, in order to define and understand the Web users, their motivation and buying habits.
- It is not enough to use regular data or simple reports to fully understand the online customers and adapt the marketing strategy (marketing mix) effectively.
- Marketers/managers should pay attention to the corporate Web content, structure and navigation if they want to present the company in the best possible manner.
- It is important to conduct marketing research on the Web and to implement Web analytics or other methods frequently, as to collect the real time data.

Finally, it is important to encourage companies to use the Web as an interactive medium for establishing a connection with their customers. With the growth of the Internet and technology innovations, it is necessary to be up-to-

date with such advances, in order to take advantage of the full potential that the Web offers.

REFERENCES:

1. Albrecht, A. C., Jones, D. G. (2009): Web based research and techniques , In G. R. Walz, J. C. Bleuer, Yep, R. K. (Eds): *Compelling counseling interventions: VISTAS 2009*, Alexandria, VA: American Counseling Association, pp. 337-347.
2. Chou, D. C., Tan, X., Yen, D. C. (2004): Web technology and supply chain management, *Information Management & Computer Security*, Vol. 12 No. 4, pp. 338-349.
3. Clifton, B. (2008): *Advanced Web metrics with Google Analytics*, Wiley Publishing, Inc., Indiana
4. Cox, J., Dale, B. G. (2002): Key quality factors in Web site design and use: an examination, *International Journal of Quality & Reliability Management*, Vol. 19, No. 7, pp. 862-888.
5. Furrer, O., Sudharshan, D. (2001): Internet marketing research: opportunities and problems, *Qualitative Market Research: An International Journal*, Vol. 4, No. 3, pp. 123-129.
6. Gurau, C. (2005): Pharmaceutical marketing on the Internet: marketing techniques and customer profile, *Journal of Consumer Marketing*, Vol. 22, No. 7, pp. 421-428.
7. Hay, B., Wets, G., Vanhoof, K. (2003): Segmentation of visiting patterns on Web sites using a sequence alignment method, *Journal of Retailing and Consumer Services*, Vol. 10, pp. 145-153.
8. Iyer, G. R., Miyazaki, A. D., Grewal, D., Giordano M. (2002): Linking Web-based segmentation to pricing tactics, *Journal of Product & Brand Management*, Vol.11, No. 5, pp. 288-302.
9. Karayanni, D., A., Avlonitis, G. J., (2006): *The use of the Internet in Business-to-Business Marketing: Demographic Characteristics and Intercorrelations among Internet Marketing Variables from American and European companies*, retrieved from <http://www.arraydev.com/commerce/JIBC/2006-02/greece.htm> (accessed 10 October, 2009)
10. Lee, C., Choi, B., Lee, H. (2003.): A development environment for customer-oriented Internet business: eBizBench, *The Journal of Systems and Software*, Vol. 72, pp. 163-178.
11. Louvieris, P., Driver, J. (2001): New frontiers in cybersegmentation: marketing success in cyberspace depends on IP address, *Qualitative Market Research: An International Journal*, Vol. 4, No. 3, pp. 169-181.

12. Lymperopoulos, C., Chaniotakis, I. E. (2005): Factors affecting acceptance of the internet as a marketing-intelligence tool among employees of Greek bank branches, *International Journal of Bank Marketing*, Vol. 23, No. 6, pp. 484-505.
13. Michigan State University (2009): *Internet emerges as social research tool*, retrieved from www.physorg.com/news153834869.html (accessed March, 2010)
14. MRS (2007): *Online market research: A growing tool for businesses*, retrieved from <http://www.mrs.org.uk/media/downloads/online.pdf> (accessed March, 2010)
15. Murray, K. (2008): *Microsoft Office Live Small Business: Take Your Business Online*, Microsoft Press, Microsoft Corporation
16. Panian, Ž., Klepac, G. (2003): *Poslovnna inteligencija*, Masmedia, Zagreb
17. Phippen, A., Sheppard, L., Furnell, S. (2004): A practical evaluation of Web analytics, *Internet Research*, Vol. 14, No. 4, pp. 284-293.
18. Poon, S., Swatman, P. M. C., (1997): Small business use of the Internet. Findings from Australian case studies, *International Marketing Review*, Vol. 14, No. 5, pp. 385-402.
19. Ranjan, J. (2008): Business justification with business intelligence, *The Journal of Information and Knowledge Management Systems*, Vol. 38, No. 4, pp. 461-475.
20. Ružić, D. (2003): *E-Marketing*, Ekonomski fakultet u Osijeku, Osijek
21. Sen, S., Padmanabhan, B., Tuzhili, A., White, N. H., Stein, R. (1998): The identification and satisfaction of consumer analysis-driven information needs of marketers on the WWW, *European Journal of Marketing*, Vol. 32, No. 7/8, pp. 688-702.
22. Soh, C., Mah, Q. Y., Gan, F. J., Chew, D., Reid, E. (1997): The use of the Internet for business: the experience of early adopters in Singapore, *Internet Research: Electronic Networking Applications and Policy*, Vol. 7, No. 3, pp. 217-228.
23. Wang, H., Wang, S. (2008): A knowledge management approach to data mining process for business intelligence, *Industrial Management & Data Systems*, Vol.108, No. 5, pp. 622-634.
24. Wen, K., Peng, K. (2002): Market segmentation via structured click stream analysis, *Industrial Management & Data Systems*, Vol. 102, No. 9, pp. 493-502.
25. Wilson, A., Laskey, N. (2003): Internet based marketing research: a serious alternative to traditional research methods?, *Marketing Intelligence & Planning*, Vol. 21, No. 2, pp. 79-84.
26. Woodcock, N., Stone, M., Foss, B. (2003): *The Customer Management Scorecard: Managing CRM for Profit*, Kogan Press

27. Zekić-Sušac, M. (2008): *Sustavi poslovne inteligencije*, Ekonomski fakultet u Osijeku, retrieved from http://oliver.efos.hr/nastavnici/mzekic/nast_materijali/poslovna_inteligencija.pdf (accessed 1 October, 2009)

POSLOVNA INTELIGENCIJA: ULOGA INTERNETA U MARKETINŠKOM ISTRAŽIVANJU I POSLOVNOM ODLUČIVANJU

Sažetak

Ovim se radom želi ukazati na odrednice poslovne inteligencije kao discipline, kako se primjenjuje u marketinškoj praksi. U radu se analizira uloga Interneta u marketinškim istraživanjima, kao i prateće implikacije na proces donošenja poslovnih odluka. Iako tvrtke provode različita istraživanja izvan elektroničkog okruženja, radom se pokušava ukazati na važnu ulogu Web mogućnosti s aspekta izvedbe Web segmentacije i prikupljanja podataka o korisnicima/potrošačima na Webu. S obzirom da postoje različita viđenja uloge Interneta u poslovanju, nastoji se naglasiti značaj Interneta kao interaktivnog medija koji ne služi samo kao informacijski kanal, već i kao važan istraživački alat. Razmatra se nekoliko istraživačkih metoda i tehnika prikupljanja i analiziranja podataka, uz čiju se pomoć Web može iskoristiti kao važan poslovni resurs.