

Global Marketing Decision Support Systems

Article Info:

Management Information Systems,
Vol. 4 (2009), No. 1,
pp. 021-027

Received 12 Jun 2008
Accepted 24 April 2009

UDC 658.8 : 005.311.6 : 004.891

Summary

Abstract: Possessing appropriate information is becoming the main competitive advantage in doing business on the early 21st century global market. Market information is the key element of designing an efficient marketing strategy on the national, and especially global market, as well as being an inevitable part of business decision-making processes. Company management expects reliable information that enables the consideration of all the dimensions of the issue to be decided on. The required information may be based not only on the experience of and assessment by relevant experts and executives, but also on the functioning of the global marketing decision support system.

A global marketing decision support system can be understood as coordinated collection of data, systems, tools, skills and techniques with supporting software and hardware, by which a global corporation gathers and interprets relevant information about business operations and environment, and uses it further as the basis for overall global marketing actions. A global marketing decision support system also incorporates individual subsystems, whose coordinated action results in exchanges of opinions between the users and participants in the decision support system, as well as the global marketing environment.

Key words

global marketing, decision support system.

Introduction

Effective and efficient management of global marketing activities certainly requires the availability of a broad spectrum of information. As a contemporary way of managing a company's global business operations, marketing management relies on an information base covering all the relevant aspects of a selected market segment. The question posed is, which manners of gathering market information are available to a company?

Certain information may be gathered by possessing objective knowledge on an issue, which is, as a rule, acquired from others. In specialized marketing literature, such information is referred to as objective information (Jović, 2006, p. 119).

Apart from objective information, to create an appropriate marketing programme, company management also requires specific information which is mostly obtained through their own experience, and literature refers to these as experimental practical information (Jović, 2006, p. 119).

One of the essential reasons for business failure on the global market is certainly the lack of information about the target market. Actually, it is about inadequate understanding of global environment factors, caused by the corporate management's preoccupation with managing funds,

materials, production technologies and labour. Raising the corporate management's level of knowledge of all relevant global environment factors is an imperative in the company's modern global marketing activities. In relation to this, one may speak about a special type of management, the so-called information management, relying on the acquisition and selection of objective information.

Based on gathered information, the company may conduct total market, i.e. marketing intelligence at all management levels, through:

- strategic intelligence, i.e. viewing the overall issues of global business operations, such as those of international distribution, pricing, attaining adequate product quality etc.;
- tactical intelligence, required by middle management; and
- operational intelligence, required for the steady conduct of daily activities.

In the process of designing global marketing programmes, successful global companies rely on high-quality, total knowledge of the target segment of the global market, which is also an important source of competitive advantage. Doing business on the global markets, individual companies achieve certain results even without possessing adequate levels of information, but it is mostly the case in one-off or single global market entries. A

long-term positioning of the company and continuous conduct of global marketing activities certainly requires a broad spectrum of information about the significant aspects of the global market, as a basis for making valid business decisions. Bearing all these in mind, it can be concluded that information support in global marketing decision-making is oriented to creating a maximum possible comprehension of the global market, with the aim of completing the set of relevant information about this market.

Contemporary business operations on the global market are laden with numerous risks, and there are also significant changes in the functioning logic of global market mechanisms. Consequently, gone are the days when companies entered the global market based on inadvertently obtained information, without previously developed information support in marketing decision-making.

1. Development of Global Marketing Decision Support Systems

In their effort to gather detailed information on the consumers' needs, wants, preferences and expectations, marketers started developing information systems representing information support to global marketing management long ago. The first system developed to support marketing decision-making was the marketing information system.

Consulting Serbian and international (Anglo-Saxon) sources reveals that marketing theory includes several significant approaches to the essence of marketing information systems. This differentiation of approaches stems from various authors' understanding of the necessity of information support to marketing decision-making, in view of the fact that they work and write in different surroundings.

The approach to studying marketing information systems thus differs in Serbian sources in comparison with international (Anglo-Saxon) ones. In addition to different theoretical approaches, there are also noticeable differences in the practical application of the marketing concept, i.e. the concept of global marketing in the operation of Serbian internationally oriented companies and their international competitors in countries with developed markets. It is therefore justifiable to propose that the difference in the consistent application of the global marketing concept in the international operations of Serbian

companies is a significant reason for different views of marketing information systems in the Serbian marketing theories.

Most Serbian and international (Anglo-Saxon) authors support the approach to studying marketing information systems in keeping with Philip Kotler, the author who very consistently defined the essence of the marketing information system. Still, most authors display certain specific features of the approach to this study, which testifies sufficiently to the importance and prominence of marketing information systems in the expert and business community.

Many Serbian authors have dealt with these issues, and their work has resulted in really numerous interpretations of marketing information systems. From the point of view of this research paper, it is worth pointing to the definition by which a marketing information system is the systematic and continuous collection, analysis and presentation of data for making marketing decisions (Milisavljević, 2001, p. 67).

Eminent international authors point out that marketing information system comprises a continuous and interactive structure of people, equipment and procedures for the collection, classification, analysis and distribution of appropriate, timely and accurate information, used by marketing decision-makers to enhance their marketing planning, performance and control (Kotler *et al.*, 2006, p. 73). In a narrower context, a marketing information system may be understood as work on gathering, forwarding and storing data, as well as research results, aimed at delivering complete information necessary for marketing decision-making (Russ *et al.*, p. 77).

The international marketing information system is conceptually very close to the marketing information system, being its integral part. Consequently, the international marketing information system is aimed at a systematic and continuous collection, analysis and provision of all relevant data and information for making marketing decisions, as a part of the company's marketing information system (Jović, 2006, p. 132).

Anglo-Saxon literature shows differences in viewing a marketing information system and other information systems in companies. Some authors (Luck, *et al.*, 1987, p. 24) refer to a Management Information System, which is a wider concept, as it also includes the marketing information system and international marketing information system, and is used for providing the corporate management with all required information, meaning that, in addition

to marketing information, it also contains information on financial performance, production issues, technology etc.

Other authors (Zikmund, 1997, p. 27) highlight the need for the existence of global information systems in companies thinking and doing business globally. A global information system may be understood as an organized collection of computer hardware, software, data and personnel, designed to capture, store, update, manipulate, analyse and immediately display information about worldwide business activities. As an example of efficient functioning of a global information system, we can quote Texas Instruments, whose thus established information system enables the company to centralise the monitoring and control of geographically distant business operations, in addition to enabling the modernisation of work processes.

An international marketing information system should therefore be understood as a system primarily intended for marketing management decision-makers, and as such is a specialised segment of a company's broader information systems. It must be said that authors from countries with developed market economies, where business practices are dominated by the marketing concept, understand a modern marketing information system as a unity of four basic segments or sub-systems (Kotler, 2003, p. 124):

- Internal Record System
- Marketing Intelligence System
- Marketing Research System and
- Marketing Decision Support System

Viewed like this, the international marketing information system has taken over the role of corporate information systems, and also represents a continuous work in the process of in-house and external communication. The functioning of the international marketing information system provides a company with continuous information required for high-quality marketing decision-making. The international marketing information system can be graphically represented as follows:



Figure 1 The international marketing information system

The international marketing information system in companies from developed market economies comprises marketing research, internal reports, various marketing intelligences, analytical marketing and other subsystems completing the information support to marketing decision-making. Viewed like this, a marketing information system includes the company's necessary information, thus providing a continuous and timely information input, permanent internal information flow and valid information output. This makes the information of the marketing information system the basis for the company's strategy and tactics. (Salai *et al.*, 2009, p. 37). This is the functioning model of the international marketing system in companies from developed market economies.

The domicile environment in Serbia, where the concept of international, i.e. global marketing is slowly replacing the foreign trade orientation in business operations, results, in most cases, in identifying the international marketing system with international marketing research in business practices. An additional reason for such a simplified interpretation of the international information system stems from identical goals, i.e. providing marketing management decision-makers with required information.

Similar to this, economies undergoing the transformation of sales-oriented into marketing orientation (which also refers to the economy of our country), the primary task is borne by marketing research, and a marketing information system emerges and develops with the opportunities offered by automated data and information processing. Although a marketing information system is not necessary computer-supported, the need for a marketing information system in practice is considered after the opportunities of modern information technologies. In this environment, the marketing information

system is reduced to "monitoring the market", with a prospect of growing into a global (overall) corporate information system at a later stage of development and application (Salai, 1993, p, 31).

When studying the business practices of Serbian companies, one can notice that in most cases they feature an international marketing information system concept understood as a narrower notion in relation to international marketing research. Both the international marketing information system and the international marketing research comprise a part of the information base of marketing decision-making in our companies, but only the international marketing systems provides a continuous flow of marketing information required for decision-making in the international. i.e. global business operations of Serbian companies. Data and information comprising the output of the international marketing information system in Serbian companies are mostly oriented to the present, and partly to the past, while the users of the international marketing information system, almost as a rule, include the top managers of domestic companies.

In addition to this, the analysis of the manners of gathering relevant marketing information reveals that Serbian internationally oriented companies also show a tendency to apply the international marketing information system concept in business operations on the domestic markets. The survival of the international marketing information system is a significant necessity for those companies that are oriented towards international markets and global market expansion (Vežjak, 1991, p. 88).

2. Functioning of Global Marketing Decision Support Systems

An international marketing information system thus provides its users (corporate management) with a broad range of information required for efficient and effective decision-making. From the aspect of the scope of information, it must be said that the international marketing information system features three important components: macroeconomic data, data on product markets and in-house data on sales and performance (Vežjak, 1991, p. 88). A developed and well-organized international marketing information system features a large volume of input information, and it is therefore justified to use modern computer facilities in processing, manipulating, updating and forwarding information.

All of the above is related to the original understanding and interpretation of the place and

role of the international marketing information system in a company's international business operations. Changes in the international environment, international business practices, changing consumer demands and developing supply and demand in general have led to justified demands for an evolution in the approach to the international marketing information system. At the attained development level, the need was noticed for a transformation of the international marketing information system into a more advanced form – the so-called decision support system (DSS). As a more advanced stage of the international marketing information system, a decision support system can be understood as coordinated collection of data, systems, tools, skills and techniques with supporting software and hardware, by which a global company gathers and interprets relevant information about business operations and environment, and uses it further as the basis for overall global marketing actions (Churchill, 1996, p. 34). A global marketing decision support system also incorporates individual subsystems, whose coordinated action results in exchanges of opinions between the users and participants in the decision support system, as well as the environment, as illustratively represented in Fig. 2 (Churchill, 1996, p. 35).

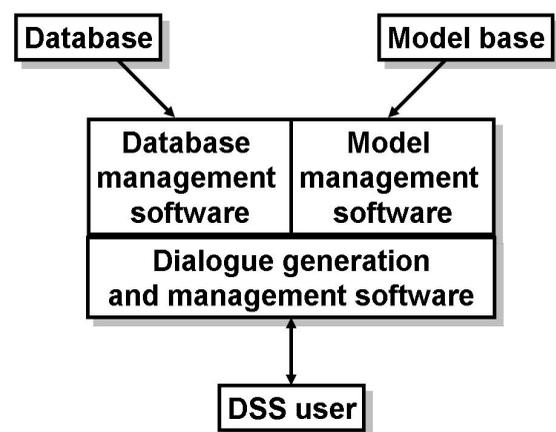


Figure 2 Organisation of a decision support system (DSS)

It is clear that decision support systems are formed by companies with established international business reputation, which hereby modulate the unification of information on consumers, general economic and demographic indicators, existing and potential competitors, trends in the industry, market trends etc. As an example of a successfully organised decision support system, the advanced stage of an international marketing information system, we can

quote Digital Equipment, a company which set up a Competitive Information System (CIS) as early as 1984. The CIS serves over 10,000 registered in-house users, providing them with more than 100,000 items of information worldwide. However, most internationally oriented companies are, for the time being, unable to find a solution for forming a decision support system within the organisation, but a large number of such companies use the information from their own international marketing information system.

The expansion in the application of decision support systems in business practices results from beneficial effects achieved through the use of their services in the following four decisive situations in business operations on the contemporary international, i.e. global market (Douglas *et al.*, 1983, p. 289).

- when considering the opportunities for expanding international, i.e. global marketing;
- in situations when the possibilities of target market entry are considered;
- when considering the characteristics of the international, i.e. global environment and forecasting future changes; and
- when combining marketing strategies for different markets, so as to enhance the efficiency of international, i.e. global business operations.

The manner in which a global marketing decision support system will be organized within a company depends most on the nature of the problems with which the marketing management decision-makers are faced, which, indirectly, means that such systems are likely to be better developed in companies that have opted for an active application of the marketing concept in international, i.e. global business operations.

Setting up a global marketing decision support system should be followed by the company's forceful entry into the international, i.e. global market, as the efficiency of marketing management is conditioned by the communication system, i.e. organisation of information flows. Information flow in a global decision support system is continuous, and this is its basic characteristic, which also gives rise to the importance of this system for raising the decision-making quality levels in global marketing.

When building a global marketing decision support system, one must bear in mind the basic function to be achieved, which is providing the users (corporate management in most cases) with

timely, accurate information required for decision-making, at a price lower in comparison to the effects stemming from their application. As the information required for high-quality decision-making is not always fully predictable, a global marketing decision support system should always be flexible enough to function smoothly in various situations, but also adaptable to changing conditions (Russ *et al.*, 1982, p. 77).

Successful business operations on the contemporary international, i.e. global market require the company to make an additional effort to adapt the business practices to the dominant impact of established international companies. Building a global marketing decision support system is the best response to the ever-present requests for raising the marketing decision quality levels. It is enough to remember that successful global corporations were the first to initiate work on setting up the global marketing decision support system, which greatly enabled them to achieve acceptable business results on the highly discriminating international market. The requests for setting up a global marketing decision support system arose from the business practice at a certain stage of economic development, in countries with developed market economies, accompanied by high economic growth rates and corresponding levels of living standards among the consumers. In the circumstances when, on the seller's market, solvent buyers (i.e. consumers) encounter the plethora of domestic and international, i.e. global supply of high-quality products, earning trust and building consumer loyalty faces the participants in market competition with new requirements in the ways they conduct business. The results of their business practices support the assumption that building a global marketing decision support system is the first step towards better understanding and communication between a company and the changing international environment factors.

The implementation of marketing concept in transition economies requires an appropriate understanding of the relationship between the international marketing research and the global marketing decision support system, as both comprise the information basis of marketing management in business practice. The proper understanding of the place and role of international marketing research and the global marketing decision support system in a company's business operations clearly reveals the characteristics of their mutual relationship:

1. international marketing research is problem-oriented, while the global marketing decision support system is a continuous process of gathering, processing, analysing, interpreting and delivering required information;
2. as a rule, international marketing research is focussed on gathering internal information, whereas the global marketing decision support system deals with both external and internal information;
3. similar to the marketing research into the international, i.e. the global market, a marketing decision support system contributes to resolving identified problems of international, i.e. global marketing, but in addition this, it should also act preventively, i.e. minimize the possible emergence of new problems;
4. by definition, international marketing research is related to the execution of project tasks, which are not necessarily interconnected;
5. unlike international marketing research, the global marketing decision support system in business practices relies more on the support of information technologies, especially in the case of organisationally complex multinational and global companies;
6. regardless of the size of a company and the stage it has reached in its international business orientation, international marketing research and the global marketing decision support system may co-exist side by side;
7. the global marketing decision support system provides a constant insight into a wide range of certain information in one place, unlike international marketing research;
8. a systemic approach to the activities of international, i.e. global marketing has resulted in the appearance and development of the global marketing decision support system; and
9. at an evolutionally advanced stage of viewing the information-conditioned character of decision-making in international, i.e. global marketing, international marketing research should become one of the input variables, i.e. a subsystem of the global marketing decision support system.

Studying the relationship between international marketing research and the global marketing

decision support system was actualized in the post-World War II period, at the time of economic boom that resulted in a dramatic rise in the solvent demand, enabling the consumers to freely express their wishes and needs. In such circumstances, the subjects of international, i.e. global marketing activities undertook additional effort to identify the real market wants and needs, so as to attract the rising purchasing power of wide consumer groups. Such activities resulted in the explosive growth of marketing research, a growth that relied on the advantages of automated data processing and process technologies. In addition to this, marketing research was separated as a very significant subsystem of the total corporate global marketing decision support system (Russ *et al.*, 1982, p. 83). This has created preconditions for the study of the relationship between international marketing research and the global marketing decision support system, both from the practical and the theoretical aspect.

Information obtained by the functioning of the global marketing decision support system comprise a unified basis for making timely, appropriate, considered and efficient decisions in international, i.e. global marketing. The functioning of a global marketing decision support system thus enables the designers of a global marketing programme to clearly consider the current status, identify the problems of global marketing and anticipate the future conditions and relationships on the target market. High-quality information, as the output of such conducted activities in the preparation of international, i.e. global business operations, enables a successful and profitable operationalization of total global marketing activities.

Conclusion

A holistic approach to global marketing highlights the dynamic character of the modern marketing environment, abounding in new opportunities and threats, leading to a rising need for the carriers of global marketing activities to learn about and adapt to the changing environment. In effect, when designing and implementing global marketing programmes, marketers are bound to make a large number of decisions. Possession of information of macro- and microeconomic character enables the consideration of the entirety of marketing environment, resulting in an enhanced quality of decision-making in global marketing.

Efficient and effective global marketing management is achieved based on a constant information flow. Appreciating their own needs, companies initiate the development of the global marketing decision support system, which is the best response between what marketing really need in terms of information, i.e. what is economically acceptable for companies, in terms of information support to global marketing management.

In contemporary marketing practice, an increasing number of companies have developed global marketing decision support systems, whose functioning enables the gathered and interpreted information from the marketing environment to become a basis for future global marketing activities. A valid example of a global marketing decision support system is CALLPLAN, whose implementation enables a significant improvement of global marketing effects based on a more regulated determination of the number of contacts with potential and existing clients.

In the complex and dynamic global marketing activities, the question posed is no longer whether to, but how to develop a global marketing decision support system. One must bear in mind that, in addition to providing the user with relevant marketing information, a global marketing decision support system should also enable the elimination of irrelevant marketing information, thereby meeting one of the basic requirements of the appropriateness of information in the contemporary global marketing. In other words, the global marketing decision support system

should reduce the discrepancy between the actually available and required information for global marketing decision-making, resulting in enhanced efficiency and effectiveness of global marketing management.

References

- Churchill, G.A. (1996), *Basic Marketing Research*, third edition, Sea Harbor Drive, Orlando, The Dryden Press
- Douglas, P.S. and Craig, C.S. (1983), *International Marketing Research*, Englewood Cliffs, New Jersey, Prentice - Hall Inc.
- Jović, M. (2006), *Međunarodni marketing [International Marketing]*, Belgrade, IntermaNet
- Kotler, Ph. (2003), *Marketing Management*, eleventh edition, Upper Saddle River, New Jersey, Pearson Education
- Kotler, Ph. and Keller, K.L. (2006), *Marketing menadžment [Serbian translation of Marketing Management]*, twelfth edition, Belgrade, Data Status
- Luck, D.J. and Rubin, R.S. (1987), *Marketing Research*, Englewood Cliffs, Prentice Hall
- Milislavljević, M. (2001), *Marketing*, Belgrade, Savremena administracija
- Russ, F.A. and Kirkpatrick, Ch.A. (1982), *Marketing*, Little, Boston, Brown and Company
- Salai, S. (1993), *Marketing informacioni sistem [Marketing information system]*. In: *Zbornik radova, Prvi naučno – stručni skup marketing - menadžerstvo - informatika i menadžment u proizvodnji [Collection of papers from the First scientific conference on marketing, management, information science and management in production]*, Novi Sad
- Salai, S. and Božidarević, D. (2009), *Marketing istraživanje [Marketing Research]*, Subotica, Ekonomski fakultet Subotica
- Vežjak, D. (1991), *Međunarodni marketing [International Marketing]*, Belgrade, Savremena administracija
- Zikmund, W.G. (1987), *Exploring Marketing Research*, sixth edition, Sea Harbor Drive, Orlando, The Dryden Press

Aleksandar Grubor Ph.D.

University of Novi Sad
Faculty of Economics Subotica
Segedinski put 9-11
24000 Subotica
Serbia

Email: agrubor@ef.uns.ac.rs
