

management

Number 58, Year XVI
March 2011.

Publisher
Faculty of Organizational Sciences - Belgrade

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Management is being regularly reviewed in DEST
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Journal is published quarterly

Printed by
Sigra Star, Belgrade

CIP Katalogizacija u publikaciji
Narodna biblioteka Srbije, Beograd
005
ISSN 1820-0222 = Management (Engl.
ed.)
COBISS.SR-ID 112265484

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Competitive Strategies in the Conditions of Digital Economy

UDC: 339.137.2:005.21 ; 004.738.5:339]::005

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The work deals with the complexity of creating and implementation of a competitive strategy in the conditions of digital economy. It analyses the characteristics of digital economy and the changes it brings about from the point of view of the strategic management. Special attention is paid to the analysis of the specific features of the business environment, network infrastructure and the nature of competition. The focus of our attention are te knowledge, information and ideas as resources. The study presents some current approaches to facors of competition, creation, and achievement of competitive advantages and also some concrete examples of a successful Internet business, with the prospects of its further development.

1. Introduction

The development of digital economy brings about the challenges related both to exploring and anticipating the opportunities in the external environment and to novel approaches to business doing. The implications of the changes in strategic thinking deal with the re-defining of the industrial structure, that is, the boundaries of certain activities, primarily from the input point of view. The exchange of information via the Internet, extranet and intranet can be viewed as a source of value creation.

The modern, largely Web-based environment characterised by a growth orientation of the firm, its customers, suppliers and competitors towards electronic business means changes in both the strategic and operational management, and especially in the method the firms compete. The Internet use has broken through the space and time barriers, making the importance of physical location negligible. The predominant resources in the digital economy are knowledge, information and ideas.

Important in this context is a novel approach of Webonomics which is concerned with the study of production, distribution and consumption of products, services, and ideas via the Web [1]. The interactive relationship between the firm and its external stakeholders is very important here. It means an increasingly intensive networking. The managers make business decisions in an environment characterised by a network infrastructure, both the hardware and the software used in the communication. Cellular communication means new opportunities offered by media convergence.

A growing portion of economic value in the digital economy is the result of electronic devices. New “rules of the game“ demand speed, flexibility and innovative-

ness. Traditional firms have to change their strategic orientation and business operations in order that they should remain competitive in the changed conditions and with new electronic infrastructure.

The origins and development of the digital economy are based on the expansion of the knowledge industries and the implementation of information and communication technologies (ICT). The information-based firms known as “soft“ companies increase their share in value creation in a large number of economies. This predominantly applies to the firms engaged in the production of software, telecommunications, financial services, advertising, and media.

2. Dynamic approach to competitive strategy creation and implementation

From the point of view of increasing competitiveness, the concept of strategy refers to the guidance of the firm in the conditions of competition in order that the firm should achieve competitive advantages, not only as regards the customers or users of services, but also as regards anything that can ensure advantages on the home or export markets. In case of the entrance on the electronic market, the firm’s prospects are better if managers develop a competitive strategy bearing in mind the complexity of change brought about by the digital economy.

The leading companies in the world today implement different strategies. Generally, however, the companies achieve competitive advantages via innovations in a broad sense, ones that can be manifested as a new product / service, new technology or a new marketing approach, where innovation is mostly derived gradually. In the international market conditions, the innovations that result into competitive advantages are often anticipated by the needs that arise both at home and abroad. Here the role of information in the innovation

and renewal processes is essential, especially the information that is not available to the competition or that competition does not seek. Besides, when the firm achieves a competitive advantage via innovation, it can remain competitive only through permanent improvement, since it is a well known fact that any innovation can be imitated. It is in this way that the firm remains competitive on the foreign market as well. Hence creating permanent advantage often means that the firm has to make all its existing advantages obsolete, otherwise, the competition will do it. Thus innovation and change are connected.

The issue that merits special attention here is that of the production factors whose available quantity in a defined time is less important than the rate and the efficiency with which these factors are created and improved in certain industries. This primarily includes highly significant factors today, such as scientific base or skilled human resources.

Importantly, the absence of advantage in the static competition model may become an advantage in the dynamic one. When, for example, the firm encounters some difficulties, such as high prices or lack of a certain resource, it often has to introduce innovation and to improve its operations in order that it should be competitive again.

Creativity also has an important role in achieving competitive advantage. Three components: expertise, creative thinking skills and motivation “overlap” to result into creativity that generates the key success factors of a certain business [2].

The dynamic approach assumes that formulating and implementation of a competitive strategy is a continually evolving process of prompt adjustment to a changing environment, since the condition in the external environment often change before a selected strategy has been fully implemented. Such a dynamic process involves three independent and simultaneous cycles related to the analysis of competitive environment, development, the analysis of alternative strategic options, and the analysis of the very translation of the strategy into practice. The solution is found in formulating new strategic approaches, continually, throughout the process of the firm’s adjustment to a dynamic competitive environment, as well as in changing the strategies in the course of their implementation. Most relevant in this process are an efficient strategic guidance, especially strategic vision, pragmatism and communication networks. These result into a new strategic challenge from the managerial aspect.

The change in the business processes themselves in the concrete conditions of a turbulent environment is complex. It is in this context that the concept of a *learning organization* must be taken into account.

It is important that the competitive environment should continually be studied in order that the signs of demand saturation, technology substitution, changes in the consumption structure and social discontinuities should be timely identified. If there are any signs that a market will cease to be profitable in a future period, the firm will seek an opportunity on another, broader, home or exports markets or in a market niche.

The insight into the dynamic nature of a competitive environment means focusing upon its essential aspects that are changing, as well as analysing whether these changes are strategically relevant. The following step is to survey individual impacts and a structural analysis to identify the key forces in the external competitive environment. Thus we can identify and analyse the competitive position of the firm as related to other organizations that compete for certain resources, or offer their products/services to the same customers. Here the competitive analysis of a strategic group is implemented in terms of similarities or differences between the competitors, as well as in terms of the market share analysis. The final step is the analysis of whether any opportunities or threats are identified from the aspect of the future business of the firm, namely, whether the strategy and structure are adjusted to the development in the external environment. It is in this way that we get an insight into the environmental impacts which is important in the strategy analysis, as strategic decisions in the digital economy are predominantly made in the conditions of uncertainty.

The aim of the change of strategy is to identify the *strategic gap* that defines the disparity between the current strategic position of the organization and the positions defined by each individual strategic options, as well as to set the timing of implementation of the selected form. Generally, the process of changing the competitive strategy is important because it shows a particular strategic option that may result into a most favourable position for the firm, as well as whether this strategy can be translated into practice within the given period of time. The advantage of a dynamic strategy formulation is in a constant review of varieties/types and identifying the strategic gap, thus eliminating potential threats in taking new opportunities.

All these require that, in case of the dynamic development of a strategy, the mental models reflect the com-

plexity of the real world which results into a continual adjustment process. Here the “soft“ data are as important as the “hard“ data, since they tell us about the firm’s values, principles, identity and challenges. It is important to note that managers also use heuristic methods, due to the type of uncertainty inherent to strategic problems.

In order to be successful, the organization has to create value for its customers/service users and other stakeholders in a distinctive manner, through competitive positioning and integrated service it offers. In this context, the competitive strategy can be defined as a value creation “skill“ that ultimately allows for the managers to identify the opportunities to create value for their customers and earn profits. Various factors work within the business networks frame and jointly create value in new forms, which implies an entirely new value logic in the digital economy conditions. Here the importance lies with the firm’s competencies, primarily the technology, the implementation of information and communication technology, specific expert knowledge and new business processes accumulated over time and incorporated into the offer “package“ of the firm. In the conditions of fierce competition, it is important that the customer is willing to buy the firm’s products, but also to pay for them, which includes the possibility of electronic payment. Hence an important advantage of any firm is its established customer database.

An increasing number of firms involve their customers into the product design process in order to view their needs from the real world. This often means an integration of marketing and research and development functions [3]. To measure the competitive strategy efficiency the indicator related to profitability per customer is also used.

3. Relevance of knowledge as resource

Knowledge management is of utmost importance when it comes to achieving competitive advantage. Knowledge exchange and implementation have in the last years been identified as key sources of sustainable competitive advantage. Improvement and strategic choice mean learning something new, especially in the conditions of a fast changing business environment characterised by a modern, knowledge-based economy.

In this paper we especially focus on the *Balanced Scorecard (BSC)* as an important new method to measure the firm performance [4]. The implementation of the BSC is especially interesting from the point of view of an increasingly important role of knowledge as an intangible resource that often results into impor-

tant innovation and here the BSC allows for a comprehensive insight into the business results from the innovation and learning aspects [5].

In order to increase competitiveness in the conditions of permanent changes characterised by the development of digital economy the firms should open their boundaries wide in the learning process, stimulate the exchange of ideas via project teams and meetings with customers and suppliers, which all help the firm identify competitive opportunities better. In the conditions of such supportive, open environment, we find a positive practice of developing learning forums such as strategic study of a changeable competitive environment; the product/service portfolio; technological change and the firm’s market position; interfunctional processes and delivery systems analysis; the study of competitive strategies of the most successful companies for the purpose of better understanding of their distinctive competencies, changes in the marketing mix tools, the resulting increase in the market share and capturing of new markets.

From the point of view of creating competitive advantage it is important that the employees should be encouraged to be creative and innovative in mastering new and more successful methods of production or service delivery to customers. Innovation may result in lower costs, differentiation and faster response to opportunities and threats from the external environment, which stresses the core organizational competencies and capabilities. The realization of competitive advantage is facilitated by good internal and external communications without which the organization cannot learn the best practical solutions.

The organization learns about the need to change on the basis of observation and interpretation of the events in the environment where the external stakeholders are – the state with its economic policies, the financial institutions, suppliers, customers, competition. It is on this basis that managers make decisions on the activities they should undertake, followed by the execution of necessary changes. These changes in turn affect other organizations (competition, suppliers, customers) in a situation some authors call the environment of “competitive chaos“. They interact in a feedback and the firm learns again of the impact and output of its decisions. Hence it is clear that learning is essentially important in the competitive strategy formulation and implementation. From this point of view, it is necessary that the role of management consulting be awarded due importance [6].



Generally taken, what goes on outside the firm has a larger impact upon the firm's competitiveness than ever before. This external world full of challenge increasingly involves products and other substitutes, changes in economy and good market, the results of the operations indirectly related to the firm and new ways of people's behaviour, including new ways of communication via the Internet. Information and communication technologies evidently affect all the above

mentioned. In the conditions of digital economy the customers enjoy access to a larger number of information, there is a strong feedback, and they become more demanding. These changes surely can inspire opportunities for the achievement of future competitive advantage. As a specific managerial tool, the *competitive intelligence (CI)* is of special importance for in the manager's proactive operations as regards the competition [7]. It provides him with a timely insight into the

changes in the external reality. The competitive intelligence actually means the knowledge of the overall environment and provides activity-oriented answers to the managers who make strategic decisions concerning competitive positioning in the future, where it is necessary that they should be prepared for a variety of aspects of business doing different from what they are used to, and in strategic management this may mean new ways of thinking based on the “look at the outside“. This may result in activity, that is, in the firm’s business operations that competition either does not expect or does not recognize clearly enough.

4. Competitive advantages in the conditions of digital economy

A fast ICT development resulted in the change in the way the goods are produced and the services are delivered, the nature of products and services themselves as well as in the distribution channels. In the last decade, the digital economy has been an important driver of structural changes and economic development in industrial countries and in certain regions [8]. Numerous sectors of economy are being transformed through a fast development, adoption and implementation of innovation from the information and communication technology sphere. Especially striking are the changes in the field of the expanding service provision. From the point of view of the firm and the economy in general, the impact of ICT is primarily felt in reducing transaction costs. In case the ICT clusters are formed, the firm’s location is also becoming important.

In creating an appropriate competitive strategy in the conditions of the digital economy the managers should analyse the firm’s position as regards the competition in the sphere of electronic business. Also important is the decision on what should be an adequate role of electronic business in traditional companies. The firm’s competencies in the field of information and communication technologies, as well as the needs for financial resources have to be analysed thoroughly. The developments in the field of cellular telephony are expected to be spectacular in the future.

From the competitive strategies perspectives, the classification of business in the new economy, based on the “physical/digital“ characteristics is also important [9]. The product may be physical or digital, the process, too, may be physical or digital, and so may be the case with the mediator. This results into nine different types of business, from those purely “physical“, to fully digital business types where the product itself, the process, the delivery and the payment are digital.

The use of the Internet in the digital economy has led to a change in the configuration of certain jobs, as well as to a balance between producers, mediators, and customers. Characteristically, the customer becomes the “king“ of new economy [10]. Thanks to the Internet, he is very well informed on the offers of a variety of manufacturers, or service providers, at relatively low costs of searching, which enables him to make fast comparisons and choose the most appropriate product of a quality, design, and price that he finds appropriate, even in global conditions.

Doing business on the Internet includes not only buying and selling, but also delivering services to customers and cooperation with business partners. It is differentiated in comparison with the traditional way of business doing also in that it eliminates the problem of time difference and geographical distance between the business partners in terms of goods ordering and payments; in case of certain products it applies to the delivery as well. It is in this way that the boundaries of business are expanded to electronic products. From the economic aspect, however, it is important that the return on investments in electronic commerce be higher. The customers should be offered higher quality products adjusted to their needs, at lower prices and with higher quality services. Here we need an appropriate software that helps maximise the effectiveness via a new method of business doing. Its advantages are in the improvement of quality, activity, the additional services, on one hand, and in the reduction of costs and sales prices, shortening the time cycle, or transaction, on the other, which is especially important in the conditions of the global economic crisis and recovery. Also important is the managerial decision making in the domain of pricing [11].

Characteristically, many companies have lately achieved a considerable business success implementing, alongside the traditional business, a new model of electronic commerce. A typical example is a well-known American retail company, *Wal-Mart Stores* [12].

The networking equipment market is characterised by a fierce competition globally. The example of *Alcatel-Lucent* is illustrative: among the sources of competitive advantages the company gives priority to technological improvements, product and service quality, a reliable and timely delivery, competitive production costs, flexible production capacities, local attendance and long-term relations with customers [13]. An important factor of differentiation as regards the competition in the conditions of recession may be a desire and competence to offer certain forms of financing.

Within its strategic orientation the *Samsung* company advocates a *Smarter Life Concept*, especially in Europe. The concept is based on *smart design* that improves the functionality of the products for the customers, on *smart experiences* and *smart connections* that will ensure that the Samsung products can interconnect automatically, share the contents and improve customer experience [14].

It is important to note that, contrary to the previous failures of a large number of *dot.com* firms following the initial “boom“, the pure *dot.com* strategy proved successful in many cases nowadays. This is also characteristic of many an *on-line* auction.

New business strategies on the Internet focus on the importance of information. Economic information is fundamentally different from the economic “thing“. When a physical product is sold, it is not owned any longer, whereas information retains ownership after the sale and can be sold again. A physical thing can be replicated, however, this costs as much as manufacturing the “original“. On the other hand, the costs of multiplying information are really low, even taking into account the initial costs of research, development, experimenting, and testing. While things wear off or are spent in time, information may become obsolete, however it may gain in value through use. It is evident that tangible products exist in time and space, and that they can be counted or kept in stocks, while information can be found “anywhere and at any time“ [15].

The synergy effects in the cooperation between firms were recognized at the first European B2B Internet market for commodity industries in 2000. It was initiated by the *Nestlé* and *Danone group* companies as leaders in the food industry, and was further established by *Henkel* and *SAP Markets* on mySAP.com e-business platform [16].

A growing portion of economic value in the digital economy is the product of electronic devices. In the new economy which is dynamic, global and networked, the most important competitiveness factors are innovations, product and service quality, time and low costs. From the economic aspect, it is important that marginal production and distribution costs for digital products are very low. This refers to software, music, electronic books and magazines, films.

The importance of connectivity enabling innovation and technologies increases, since communications are the basis of *on-line* business. Certain authors use the term *click-here economy*, linking it to a broader choice

of customers due to the Internet use. The same logic can be applied to the business related to the transactions between two organizations – B2B (business-to-business), where electronic catalogues and direct electronic connections change the supply practices of the firm. All the above analysed show that understanding that the Internet customer is an entirely new entity for whom *on-line* behaviour is typical makes the crucial first step in creating a competitive strategy.

In the case of “new“ customers the subject of their purchase (tangible and electronic products), the reason and the manner in which they make their purchases change. In an interactive communication with the company on the Internet they express different expectations. Here the expression “Market is conversation“ gets its full meaning. The customers expect a product or a service especially adapted to them in the customization process. Besides, they can buy comfortably seated in their rooms or offices, 24 hours a day, 7 days in a week, which is in the “digital world“ known as “24x7“.

In case of alternative competitive electronic business strategies, practice has shown that managers often create strategies that, starting from the model of generic competitive strategies proposed by M. Porter, simultaneously follow the orientation towards low costs, differentiation, and focusing [17].

In their relevant and quite unique approach, A. Hax and D. Wilde propose a new framework for generic strategies in the conditions of modern, knowledge-based, global economy – the Delta model in the form of triangle whose three tenets represent three types of new strategies: the best product, solutions for customers, and connections [18]. The strategic option of developing the best product is related to the traditional sources of competitive advantages on the basis of lower costs in comparison to competition and differentiation. The second strategic alternative is developed in case of a broader concept of offer of a product or a service that meets the majority of or even all customers’ needs. The focus here is upon the customer, rather than a product. This is largely viable due to the possibility of direct communication with customers via the internet. From the aspect of a successful design and implementation of this strategy the relationship marketing is very important. The firm tends to provide a related group of products and services aiming to increase the customers’ ability to create their own economic value. The innovation process is oriented towards a joint approach (with customers) in the development of distinctive products and building and maintenance of a long-term relationship with them. The

broadest range is the one belonging to the third strategic option which starts from the systems approach to business, taking into account all those who contribute to the economic value creation.

The resource-based strategic concept primarily deals with the problem of how the firm can provide the factors necessary in creating core competencies that make the basis for establishing sustainable competitive advantages in the complex process of strategy implementation. Strategy is also understood as a function of quality and quantity of the firm's competencies without which it is basically "powerless". The newly established relationship between firms of various sizes, their cooperation and networking resulted into the generation of a new mental space as well as into the implementation of genuine business models on a global basis. The development of business connections leads to innovation outsourcing practice too. Besides, innovative processes require flexible and customized responses and answers, a continual experimenting and testing. In the conditions of digitalization the products are increasingly made to order, and information is highly personalized [19]. One of the key words of the new strategic approach is the strategic framework whose typical features are non-linearity, changeable boundaries of the firm, holistic understanding of the business, involvement into industrial clusters, open-ended innovation and a continual review of business models. The analogy with biology via understanding the business ecosystem, as well as the analogy with physics via energy related categories are inspiring.

Also relevant is a recent *poised strategy* approach and the adequate method of performance measuring [20]. The poised strategy is connected to the firm's dynamic competence the basis of which is a specific way of thinking, the managerial skills of balancing, as well as the organizational competence to energize, revitalize and change itself. Such an organization is characterised by a creative energy and dynamics through "movement" in different or newly created conditions. In practice, the poised strategy means a larger number of business models in order to realize the innovation of values for the product buyers or service users that the firm offers. The incremental and penetrating innovation competencies in business networks understood as eco-systems are also important.

The capacity space, as a specific type of mental space, includes the attitude towards resources, competences and dynamics of innovation, and is especially important when a manager focuses upon improving competitiveness. The intangible intellectual assets have be-

come crucially important as a competitiveness factor at the beginning of the 21st century. The commitment to study, to knowledge acquisition and sharing is immanent to innovative firms. The networking of knowledge is a process running both inside and outside the company, with open-ended innovation processes. The poised strategy focuses upon a specific rejuvenation of the firm, via a challenging dynamic re-energizing based on manifold business models in varied business eco-systems connected to a large number of business competencies, suitable for multidisciplinary and multi-dimensional knowledge, with adopting appropriate impacts, which basically is a vitalistic approach to business and its organic connections.

Especially challenging for the companies oriented towards innovation-based competitive advantages creation are issues related to human resources – recruiting and development of innovators who will create an important invention as a turnpoint in the developmental sense, since talent is a rare resource. The estimates are that only 5-10% managers with high potentials in modern corporations command the skills and capabilities to become innovators in any given period of time [21]. In a large number of manufacturing and service industries, the creation of a powerful base of talents in the company and the building of intellectual capital are considered to be crucial for a satisfactory implementation of a competitive strategy and achieving planned goals. Many successful companies conduct intensive processes of talent management. These initiatives may result into the creation of a specific innovation node from whose perspective the innovators will have a better insight into how the existing products, services, ideas, human resources or the entire business may be recombined in new, value adding ways.

The analysis of the Bloomberg Businessweek list of the most innovative companies in the world in 2010 has shown that the "top 12" were the following: *Apple, Google, Microsoft, IBM, Toyota Motor, Amazon.com, LG Electronics, BYD, General Electric, Sony, Samsung Electronics, Intel* [22]. Importantly enough, the list contains a large number of Asian companies, innovative in global aspects. The majority of the companies listed rank among the most competitive companies in terms of their offer on the global market and as concerns the demands of digital economy. It is important to stress that the sixth best *dot.com* company is the *Amazon.com* company which has successfully implemented both the diversification strategy and the competitiveness improvement strategy on the basis of certain categories of cost reduction. The highest income growth rates among the "top 12" in the 2006 –

2009 period were achieved by *BYD* (42%), *Google* (31%), *Apple* (30%), and *Amazon.com* (29%).

The strategic orientation of the Apple company includes its commitment to the best consumer experience of their customers through innovative hardware, software, computer peripherals, services and the internet offer. The focus is upon the company's competence to design and develop its own operating systems, hardware, application software and services in order to deliver new products and solutions with a superior user-friendliness, compatibility of the new software versions and an innovative industrial design [23]. It is in this way that from the competitive point of view new concepts are implemented, ones that have been presented in this paper and are relevant in the conditions of the digital economy. Especially important is the fact that the Apple company is successfully positioned in comparison with the competition, that it offers superior and well integrated solutions related to what in the recent period is understood as a digital lifestyle, and, which is especially important, to efficiency improvement. Building competitiveness largely depends on the ability to ensure a continual process of introducing innovative products and technologies on the market. The Apple company is known for its design and development of almost complete solutions for their products, including hardware, operating system, numerous software applications and integrated services. Such a strategic orientation implies substantial investments into research and development, amounting to \$ 1.1 billion in 2008; \$ 1.3 billion in 2009; reaching \$1.8 billion in 2010 [23]. Besides, the company is oriented towards achieving competitive advantages in the area of cellular communication and media devices, including iPhone and iPad. This is a highly competitive industry where a number of large, experienced and recognized companies work and the competition is expected to grow fiercer still. Achieving competitiveness largely depends on the ability to place new products with high profit margins and in a longer term.

5. Conclusion

The digital economy with developed knowledge networks bears manifold implications on managerial strategic thinking that results into new approaches and manners of formulating a competitive strategy, as well as into the strategy implementation processes. Especially important is that this should provide results in the firm's business practice, as well as help respond to the challenges and take opportunities of further development using the advantages of new electronic infrastructure.

Markets are in many cases characterised by a frequent introduction of new products and services, as well as by fast technology improvements. Low costs and sales prices, especially in the conditions of the economic crisis and recovery remain important competitive factors, however, the product characteristics such as quality and reliability, innovations related to design, marketing competencies, service and post-sales support, the brand name and the company reputation are important too.

Fierce competition is characteristic of a large number of business domains in the conditions of digital economy. Highly competitive markets are marked by a fast technology improvement, changing approaches to designing, new solutions in the industrial design area, short life cycles of both physical and electronic products, but also by the individual and business customers and service users' sensitivity to the price levels.

More fierce competition is anticipated in the development of cloud computing which is important from the point of view of an evolving digital economy. Innovation will remain one of strategic priorities of many companies, especially in the IT sector, in the future period.

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