

İsmet Kahraman ARSLAN

İstanbul Commerc University, karslan@ticaret.edu.tr, İstanbul, Turkey

PROCESS: DESIGN, R & D AND INNOVATION¹



ABSTRACT

Making innovation in their product, service, process and marketing methods is one of the means of companies' coping with strong competition today. Making innovation has become an obligation for companies rather than a preference. At this point, there is no likelihood of success unless they "personally" produce the new rapidly and constantly and regard it as a distinguishing element in their own production. This is why design, R&D (Research and Development) and innovation have been the most talked about topics recently. These factors have become a driving force for countries and companies looking for a way to remain in the domestic and foreign markets permanently, and a key for the welfare of the society.

In business administration, profit increasing suggestions in the short term have always been interesting besides production, sale, growth, income, expense, employment and similar issues in general. However, today it is seen that the basic dynamics defining long term future are design, R&D, innovation-creativity, brand, service quality, building up trust, forming right identity and personality. All of them require contributing more "knowledge" to production.

It is not just marketing mastery, sales skill, quality production that enable one to be coveted in national and international markets. Today's market conditions require innovativeness, making a difference in design and competing by branding. Therefore, "design, R&D and innovation management" which were once in production and technology are now in marketing and have become an indispensable part of it.

In this study, it is analyzed that it is not just cost and price that enable companies to provide competitive advantage, it depends on how quickly they respond to market needs, shortening product life curves, product and service quality, development of new products and services, and finally the capacity to commercialize innovativeness profitably, in other words, integrating wisdom into skill

Key Words: marketing, innovation, design, R&D (Research and Development)

JEL Classificiation: M31

1. INTRODUCTION

The new conditions arising from global economic crisis are indication of the rapid change to occur in the basic characteristics of global trade and this change will mean a challenge to individuals, companies and also countries as a whole. Basic tendencies to emerge within this scope will be market maturation, ecology and protectionism, global and local origins, locality and new traditions in parallel with this. In this new period, it is understood that market and marketing conditions, consumer thoughts and behaviors, media and brand world will get reshaped, it is observed that brands emphasizing American accent constantly are about to come to an end.

Today when there are so many kinds of products and service, countries and companies are striving to make a difference, make innovations and be one step ahead in this competition. Of all the marketing decisions in such an atmosphere, primary issues causing tension are the ones that are related to future. Various pursuits and marketing methods to get rid of the tension of making

¹ This paper was presented as a paper by the İstanbul University on November 9-11, 2017 in the congress of "International Conference on Global Competition and Innovation Management"

2018 June Volume : 3 Issue: 9 pp:102-109

decisions about a future that cannot be known precisely as to what it will bring and how it will be shaped are brought to agenda.

In business administration, ready formulas and profit increasing suggestions in the short term have always been interesting besides production, sale, growth, income and expense, employment and similar issues in general. However, today it is seen that the basic dynamics defining long term future are design, R&D, innovation, and in order to increase our competitive power, seeking ways for transition to higher added value products has started. In this study, which is created considering these points, the importance of design, R&D and innovation which are accepted as the basic factors for the production of high added value goods and services that are more functional, increasing attractiveness and charm, affordable and assuring has been emphasized and suggestions concerning the precautions to be taken in this respect have been included.

2. DESIGN, R-D AND INNOVATION AS A SOURCE OF CORE COMPETENCY SUPERIOTIY

Competition is providing benefit to economy by making the best use of sources. Competitive advantage basically results from development, making innovation and change. Technology and capital intensive sectors and high added value products have taken the place of low added value products and traditional sectors. The understanding of "I sell whatever I produce" is over today, and basic competencies or core competencies with the understanding of "I must produce whatever I can sell" stand out.

Core competencies are special work methods consisting of combinations of innovative information, special skill, special technologies and informatics; making customers value products and services and enabling them to buy these products and services (Greaver, 1999: 87). In other words, core competency refers to information and ability of a business organization that distinguishes the organization from others, plays an essential role in realizing the vision of the business organization, and cannot be imitated easily by the rivals of that business organization (Koçel, 2001:313). It is easy to imitate the physical sources, assets and technology of a business organization. However, it is rather difficult to imitate sociologically complex competencies like team work, culture, organizational structure and methods, confidence, publicity, friendship that do not have patentability characteristics and these qualities provide an inimitable advantage for the business organization (Bakırtaş and Bakırtaş, 2008).

Core competencies refer to accumulation of knowledge of an organization since the organization learns, implements learning in abilities and uses these abilities in product-market strategies (Carolis, 2003:28). A competitive advantage based on core competency helps an establishment maintain its current state and survive even in the hardest conditions and crisis atmospheres.

The most important core competency a business organization can have is its innovation capacity. What provides organizations with competitive power is this competency (Gülden, 2007:14). Core competency denotes information, skill and abilities, not products and services produced, sale, financial power and etc. Large-sized companies make cost savings by making use of economies of scale, and gain cost advantage and competitive power. SMEs (Small and Medium Sized Enterprises) trying to rival these companies have to improve their basic skills; make innovations in their products, processes, marketing techniques and organizational structures in order to be able to meet the needs of customers.

In global world, acceleration of transition process from "economy of scale" to "economy of variety" makes design, R&D and innovation the focal point of competition (Tampoe, 1994:68). These three elements are the process of transforming new ideas into value creating outputs. Companies struggling to make profit in world markets that are gradually shrinking and getting hard can gain an advantage over their rivals that are holding especially low **cost leadership** position only by transforming innovative and creative ideas into products and services.

http://www.ssdjournal.org	Social Science Development Journal	ssdjournal.editor@gmail.com		
	103			

Social Science Development Journal 2018 June Volume :3 Issue:9 pp:102-109

Within this context, product differentiation and innovativeness have become the most important source of competitive advantage, comparative advantage based on capital and natural sources have been replaced with information and technology. As a continuation of these developments, it is understood that economic structure dominated by multinational companies will change and the imposition of "we determine the rules of the game, we make the rules, we make the standards" will come to an end. Basic tendencies emerging in the new future will be market maturation, ecology, protectionism and innovation based on this.

On the other hand, contractions emerging in world trade with global economic crisis show how essential it is to analyze cultural values, language and family structure, life styles and consumer behaviors of a country besides knowing structural characteristics of the relevant market while penetrating into a market. In this case, it has been seen that global marketing strategies are inadequate and the understanding of "glocal marketing" which means "think globally, act locally" has been started to be regarded as a significant choice (Arslan, 2016).

Glocal marketing is an attempt to accommodate products that are prepared by global brands for specific countries by using only the unique motifs and characteristics of these countries and thus marketed in relevant markets. The aim is to adapt products and services to the nature of regional markets, to make them more convenient for the expectations of consumers by keeping a close watch on local and regional consumption patterns. This requires integration with regional market and the development of a flexible administrative manner. Another pillar of this necessity is R&D and innovation.

3. DESIGN, R&D AND INNOVATION IN TERMS OF COMPETITIVE MARKETING APPROACH

The concepts of Design, R&D and Innovation can often be used instead of one another. Actually, all of these are integrated and they have unity. Approaches that are based on merely innovation push design into the background, and design is degraded to a supplementary element or subsidiary aesthetics of a finished product or commercial adornment. However, starting with planning design has a position prioritizing innovation, R&D and technology processes and integrated with them all (Campbell and Luchs, 2002). Planning particular qualities as a whole is the most significant of the fundamental conditions of economic, social, cultural life. This unity consists of the elements of planning, education, design, R&D, technology and innovation.

Technological developments, advances in information and communication sectors, instruments developed by industries within themselves force today's companies to be more competitive. One of the means of coping with this strong competition is that companies must make innovation in their products, services, processes and methods. Making innovation has become an obligation for companies rather than a preference. At this point, there is no likelihood of success unless they "personally" produce the new rapidly and constantly and regard it as a distinguishing element in their own production. This is why design, R-D and innovation have been the most talked about topics recently. These factors have become a driving force for countries and companies looking for ways to remain in the domestic and foreign markets permanently, and a key for the development of entrepreneurship skills and the welfare of the society (Atik, 2005).

The development of this phenomenon is a process. There are some countries which have internalized the sense of art and design since the Renaissance, adopted it as a life style, experienced it fully and managed to transform this culture into industrial culture today. There are some countries which have unavoidably started to design while using high technology as part of their lives and started to implement it in all areas by integrating design with inventions, thoughts, traditions and customs in daily life (Özlale and Ekrem, 2011:52).

There are some countries which are utmost alert and capable, willing to make out in a short time, adapting themselves to the subject by copying first, reaching accurate production by putting human,

http://www.ssdjournal.org	Social Science Development Journal	ssdjournal.editor@gmail.com		
	104			

2018 June Volume :3 Issue:9

pp:102-109

factory skills into practice later. Turkey is largely in this third group. We are trying to go up three or four steps at a time, not proceeding step by step. We are trying to apply the design which is a culture. With a few exceptions, we prefer copying the West or smell the past by bad applications.

In business administration, ready formulas and profit increasing suggestions in the short term have always been interesting besides production, sale, growth, income and expense, employment and similar issues in general. However, today exploring and understanding the basic dynamics defining long term future have become more of an issue. In Turkey, everyone has recently expressed the necessity of transition to higher added value products to increase our competitive power and has been searching for ways to get over this transition period with the least possible loss. Nevertheless, the solution is clear: design, R&D, innovation (İnan, 2011:79).

3.1. Design as the Milestone of Competition

Today's market conditions require innovativeness, making a difference in design and competing by branding. Prerequisite for creating a brand is having design power. A good design is the basis of creating a good brand. Therefore, design which was once in production and technology is now in marketing and has become an indispensable part of it (Gülçubuk, 2014:22).

The current wealth of countries is measured by brainpower and it is based on being more creative than ever, producing new results, new solutions. To be able to achieve, aesthetical aspects, the magic and charm of design must be included into work. For this reason, one of the most critical decisions that every manager willing to improve himself/herself, his/her company and brand faces is "design management".

Design is a milestone of change when a new dominant product, independently emerged in previous products, representing a synthesis of technological innovations apart from each other occurs. Dominant design pushes the standards, gives economies the opportunity to produce; opens an environment of competition based on cost and product performance. (Elçi, 2006).

In order for our SMEs (Small and Medium Sized Enterprises) to be able to develop new products, find new markets and outcompete, they must learn how to use and evaluate concepts like R&D, innovation and brand especially design as a means of marketing because commercial choices formed by classical competition factors such as price, quality, quick delivery etc. that seemed like an advantage in the past constantly change courses; now everything is offered everywhere in cheap, quality and large quantity. Economy's system built on the "scarcity of sources" was replaced with a market where abundance of sources and large amount of production as well as a wide range of product types are offered by a great number of players.

In such an environment of change, for our SMEs to have variety of products to obtain share in different markets can be ensured by being included in the processes of design management, design production and management. Three most significant for our SMEs willing to expand market share in such a way or open to new markets to be successful and permanent in the market which is narrowing and hardening day by day (Eren, et al. 2005):

- ✓ Develop new product (design, R&D and innovation)
- ✓ Service opportunities

✓ Marketing skills or strategies

As seen, all these three factors are "non-price" competition elements.

Our SMEs have covered significant distance in the fields of market, country and product development, which are needed for export increase. However, there is still along distance ahead of us and the works get harder day by day; world faces severe market shrinkage. The way to get rid of such traps depends on guiding manufacture power to products with higher added value. The basic element that makes a product value added is "design". Design is a medium that goes to memory; it

	http://www.ssdjournal.org	Social Science Development Journal	ssdjournal.editor@gmail.com	
_		105		

2018 June Volume :3 Issue:9 pp:102-109

is the "eye of mind". It is to make ideas and opinions make tangible. It is the mirror of product quality. It is the messenger of goodwill and a good design means "we care about you" (Gurteen, 1998).

Design distinguishes a company from the rivals and it is the artery of the success of a company. Design provides a significant identity for the customers of a company. Hence market research of design is a management process that includes marketing strategy, branding, engineering, development of new product, product planning, distribution and institutional communication policies. When the development level of developed countries is analyzed, it is seen that they achieved their position with "scientist-designer-manufacturer" triangle (Günbegi and Sezgin, 2010:27). Design plays social and collective role shaping the desires of people; it reflects and strengthens social values and may contribute to the changes of prejudices in human relationships. Hence, design in international market may be a offensive weapon and it is accepted that "design is a cultural barometer of modern times".

3.2. R & D as a Milestone of Competition

R & D operations are the activities that are about scientific and technological uncertainty. R & D is to produce an available product in more efficiently and in a cheaper price or to allocate resource for a product, which has not been produced yet and is planned to be produced in order to be a pioneer in the market. R & D is an activity that can be conducted in public and private sectors as well as universities. R & D is first a research; then discovering what has not been discovered yet and it includes developing or renewing a product or information (Erkek, 2011:21). R & D works existing in every phase of our life are directly related to human life. However, in some R & D activities, aim is to develop a new product or prepare scientific infrastructure to develop it.

R & D laboratories of companies play a significant role among most important resources of technological innovations. R & D works used to be only technology oriented; however, today it is requires strategy aiming at competition and market. Economic progress and development in free market economy can only be probable by producing product and service with the quality to be sold in international markets. Therefore, it is inevitable for companies to attach significance to R & D.

3.3. Innovation as a Milestone of Competition

Innovation is the application of a new or significantly modified product or process in a new marketing method or business applications, or the application of a new organizational method in workplace organizations or external relations. Researchers define innovation as "a new idea, method or tool" or "the process of presenting something new" (Güleş and Bülbül, 2004). It is stated as a newly produced industrial product developed by a company and introduced to the market or something consisting of scientific/technological knowledge or new information. In other words, innovation is defined as "a process involving the use of information related to the creation of a new product or the one different from the previous one and its introduction to the market and often involves the stages of research, development and production (Clark and Guy, 1998).

Innovation is a process guiding businesses through the creation of a competitive strategy in the field of marketing, coping with emerging challenges and giving precise reactions to possible threats. When considering it as "the application of a new idea generating value," innovation points to the need for enterprises that want to survive to change their products, services, pricing models and methods of conducting business continuously and in a way that will respond to the pace of development. It indicates that the comparative advantage shifted towards more information and innovation-based economic activities (Durna, 2002).

Increasing competition in national and international markets requires companies and countries to change and improve their products, services and methods of production constantly in order to keep up with this trend and to increase their competitiveness. This process of change and renewal, applied by the companies and the countries, is called "innovation." The development of a new or

	http:
--	-------

Social Science Development Journal

2018 June Volume :3 Issue:9 pp:102-109

improved product, service and method of production and the process of obtaining a commercial income consequently all constitute innovation.

4. CONCLUSION

Changes in the globalization process have driven businesses into a competitive structure in two main areas: competition for the world and competition for the future. The race has begun for the world with the entry of businesses to new markets and the discovery of new opportunities. The competition for the future has forced the finding of new market opportunities, creation of new solutions for customers and provision of new answers for unmet needs. Technical and political advances have thrown many businesses into both of the races. The only way to prevail the current problems in this race is to overcome the expectations of increasingly demanding customers and to shape and direct trends rather than just to follow them.

The new paradigm of competition is "knowledge and innovation." The information that turns into a useful product can bring very high revenue to the business and innovative products can keep the global demand alive. It is already seen that business that do not pursue innovation and do not give importance to it will be victim of economic crises. When assessed in this sense, the main deficiencies of our economy can be listed as follows:

- \checkmark The capacity of our economy to adapt to changing conditions is quite insufficient because of the limited capital and technological facilities. Therefore, it is not possible to change the composition of the product in a short time.
- \checkmark The price elasticity of demand is high in durable and non-durable consumer goods that constitute a significant part of our exports. Hence, demand for such goods has decreased and dramatic declines have begun to take place in exports.
- \checkmark Our imports largely consist of strategic products required for the growth of the economy and the continuation of economic activities. Decrease in the import of strategic products (such as energy and investment goods) will turn the growth rate of the economy towards negative.

When the political structure, bureaucratic capacity, education level and widespread value judgments of our country are added to the aforementioned reasons, it is understood that Turkey will be shaken "passively" in accordance with developments in the world economy. For this reason, it is time to change the structure of production and the nature of production in Turkey. Our will be able to achieve a truly competitive, rich, innovative and much stronger structure provided that it transfers from low-tech products to a product range that uses advanced technology. If Turkey plans to become a global actor in the top 10 in the world, it has to increase the production of high-tech products in total production to 20%. The way to achieve this passes through R & D and innovation.

We have to produce products with high added value in order to get rid of freemasonry which is defined as the colonialism of the age, to reduce the risks and to get out of the price competition. For this, we have to attach equal importance to design, R & D and innovation as much as investments made in the sector. To this end, new strategies will need to be developed in the following areas:

- a) We must accept that fact that we can compete in the global market with product diversification from now on not with price.
- b) For this, it becomes an important duty to carry the original design concept that will resist international competition on the agenda, to embrace it and to develop the design culture.
- c) It is necessary to inform our SMEs that are stuck in the price-quality-service triangle about product design and its importance at every opportunity as an indispensable element in reaching the world markets.

http://www.ssdjournal

.org

Social Science Development Journal 107

2018 June Volume :3 Issue:9

pp:102-109

d) Economic level, achieved today as a result of standardization and specialization, has not left much difference among competitors in terms of technical performance (quality). The external features that do not affect the technical function of the product, but which can be perceived by the human senses, i.e. the aesthetic performance (quality), have come to the forefront due its significance in marketing.

The basic needs for design, R & D and innovation in our SMEs are seen as money and technology. However, innovation does not only take place in products and services and it does not only indicate technology. It is the ability to have the culture of adapting to changing conditions easily. All of these require more "knowledge" in production. The main factors that drive these developments in order to secure long-term future consist of design, brand, innovation, customer service quality, confidence-building, correct identity and personality.

It is seen that the difficulties in transitioning to the phase of "adding intelligence to talents" have been experienced when we look at enterprises in our country with such a perspective. The skill of ideally applying "basic rules" known in the production of goods and services is called "talent". We define innovation as "adding intelligence to talents." The way to be sought after in national and international markets is only a matter to be achieved through marketing mastery, sales skills and quality production. Therefore, design, R&D and innovation need to be considered with all of their factors.

Let's not forget that "those who do not have skills different than the skills everyone has and who know nothing more than everybody knows can only carry out what everybody else does."

REFERENCES

Arslan, Kahraman (2016), The future of glocal marketing conception within the frame of global glocal marketing dilemma, Akdeniz Üniversitesi, İ.İ.B.F. Dergisi (33), 63-78, Antalya.

Atik, Hayriye (2005), Yenilik ve Ulusal Rekabet Gücü, Detay Yayıncılık, Ankara.

Bakırtaş, İbrahim ve Hülya Bakırtaş (2008), Firmaların Sürdürülebilir Rekabet Üstünlüğünün Bir Kaynağı Olarak Temel Yetenek: Genel Bir Değerlendirme, Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, Sayı 19.

Campbell, Andrew ve K. Sommers Luchs, (2002), Temel Yetenek Tabanlı Strateji, (Çev:Ezgi Sungur), Epsilon Yayınları, İstanbul.

Carolis, Donna Marie (2003), Imitability In The Pharmateceutical Industry: An Analysis of Their Relationship With Firm Performance, Journal of Management, Vol 29, No 1.

Clark, John ve Ken Guy (1998), Innovation and Competitiveness: Review, Technology Analysis & Strategic Management, Vol.10, No. 3Sep 1998.

Durna, Ufuk (2002), Yenilik Yönetimi, Nobel Yayınları, Ankara.

Elçi, Şirin (2006), İnovasyon Kalkınma ve Rekabetin Anahtarı.

Eren, Erol, Lütfihak Alpkan ve Yücel Erol (2005), Basic functional competencies of the firm and their effects on innovation and financial performance, , İstanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi Yıl:4 Sayı:Bahar 2005/1.

Erkek, Dilşad (2011), AR-GE, İnovasyon ve Türkiye, Neredeyiz? GEKA Güney Ege Kalkınma Ajansı yayını.

Greaver, Maurice, F. (1999), Strategic Outsourcing: A Structured Apporoach To Outsourcing Decisions and Initiatives, American Management Association, New York.

Güleş, Hasan K. ve Hasan Bülbül (2004), Yenilikçilik, İşletmeler İçin Stratejik Rekabet Aracı, Nobel Yayınları, Ankara.

http://www.ssdjournal.org	Social Science Development Journal	ssdjournal.editor@gmail.com		
	108			

Social Science Development Journal 2018 June Volume :3 Issue:9 pp:102-109

Gülçubuk, Ali (2014), "A study on the increasing importance of new product devolopment, innovation and strategic alliances in globalisation process and its applicability," AİBÜ Sosyal Bilimler Enstitüsü Dergisi, Cilt 14, Yıl 14, Sayı 2, s. 19-35.

Gülden, Duygu Başak (2007), İşletmelerde Temel Yetenekler ve Telekomünikasyon Sektöründe Bir Uygulama, Gazi Üniversitesi Sosyal Bilimler Enstitüsü Yüksek Lisans Tezi, Ankara.

Günbegi, Zeynep Gül ve Sezgin, Selime (2010), Yeni Ürün Geliştirme Sürecinde Pazar Yöneliminin Arge ve Pazarlama İşbirliğindeki Rolü, 15. Ulusal Pazarlama Kongresi, 26-29 Ekim, İzmir. s.515-518.

Gurteen, David (1998), Knowledge, Creativity and Innovation, Journal of Knowledge Management, Vol. 2, 1998.

Hamel, Gary ve C.K. Prahalad (1996), Geleceği Kazanmak (Çeviri: Dicleli Zülfü), İnkilap Kitabevi, İstanbul.

İnan, Cemil (2011), Ar-Ge ve Yenilikçilik, Dış Ticarette Durum Dergisi, Mayıs 2011, s 78.

Koçel, Tamer (2001), İşletme Yöneticiliği, Beta Yayınları, İstanbul.

Özlale, Ümit ve Cünedioğlu, H. Ekrem (2011), Türkiye'nin İhracat Performansı: Çeşitlilik, Rekabetçilik ve Adaptasyon, Dış Ticarette Durum Dergisi, Mayıs 2011, s.50-58.

Tampoe, Mahen (1994), Exploiting The Core Competences of Your Organizations, Long Range Planning, Vol 27, No 4.

nal.org Social Scie

Social Science Development Journal