PressAcademia

Research Journal of Business and Management

Year: 2017 Volume: 4 Issue: 2

THE ROLE OF DESIGN IN COMPETITIVE STRATEGIES OF TURKISH CERAMIC SANITARY WARE INDUSTRY

DOI: 10.17261/Pressacademia.2017.468
RJBM- V.4-ISS.2-2017(5)-p.138-144

Merve Yavuz[1], Serkan Gunes[2]
[1]Gazi University, Ankara, Turkey. merveyavuz@gazi.edu.tr
[2]Gazi University, Ankara, Turkey. serkangunes@gazi.edu.tr

To cite this document
Yavuz, M. and S. Gunes. (2017). The role of design in competitive strategies of Turkish ceramic sanitary ware industry. Research Journal of Business and Management (RJBM), V.4, Iss.2, p.138.144.
Permemant link to this document: http://doi.org/10.17261/Pressacademia.2017.468

ABSTRACT

Purpose- Ceramic industry has a critical importance for the Turkish economy, as it is one of the sectors with the least use of indigenous resources and the least import dependency as well as having a strong presence in the world market with its export potential. Today, the pressure of price-based competition from developing countries is seen in the ceramic sanitary ware industry. In developed countries, average product prices have been kept high due to design, brand and product quality. Although Turkey is the largest exporter in Europe in terms of capacity, it is third in terms of turnover. The European Union countries' ceramic sector focuses on competitive strategies based on strengths such as innovation, design, and branding abilities to move countries away from the market, such as Turkey, where they cannot compete through cost leadership. Turkey has a great investment in ceramic sanitary ware industry. In order to expand the market share and the use of idle capacities, companies need to produce high value added products through design and branding investments.
Methodology- In the study, literature review about design as a competition element is made and national and international sectoral reports are examined to understand drivers of competition and explain the value of design in the related industry.
Findings- As a result of the study, it is revealed that the product design is one of the most important added value elements in the industry.
Conclusion- The added value role of the discipline for Turkish ceramic sanitary ware industry and possible competition strategies based on design are introduced.

Keywords: Product design, competition strategies, ceramic sanitary ware ındustry.
JEL Codes: A12, L10

1. INTRODUCTION

Trade globalization has given companies the advantage of offering their goods to larger markets while it has made competition more intense for global industries. The ceramic sanitary ware industry is one of the industries with high added value and fierce competition in global terms and Turkey competes with many countries such as Italy, China, Mexico, Germany and Thailand. To increase competitiveness of this industry has a critical importance for the Turkish economy. Porter (2010) points out that the country's economy cannot be competitive unless the companies within it are competitive. According to Porter, in order for an enterprise to achieve competitive advantage, it must either have lower costs than its competitors in the value creation process, or introduce differences through innovations.

Today, a great deal of value is created through technological developments, customer service, branding and styling (Busbin et al, 2008). Customer value is the cornerstone of competitive advantage since consumers choose a product based on the value it offers relative to the cost. (Busbin et al, 2008). Design is a strategic competitive factor that creates value for companies through innovations. Marketing management ensures achieving organizational goals depends on identifying the needs and desires of target markets and delivering desired satisfaction more effectively and efficiently than competitors

(Kotler and Armstrong 2004). Accordingly, the commercial success of a firm depends on determining the user needs and desires of the market and providing new products that satisfy these needs and desires more effectively and efficiently than competitors. The profession of industrial design is also responsible for optimizing the firms' profit expectation and users' utility expectation from the same product by taking into account the mutual benefit of the producer and the consumer.

The added value of the ceramic sanitary ware sector is often related to design, branding, quality and cost. Considering the fact that the biggest disadvantage is the energy and distribution costs of these products which are too high compared to those of their competitors, the price competition policy cannot be maintained in the Turkish ceramic sanitary ware industry. Considering the differences in the industry's own value ranges, competition patterns and market conditions, it appears that competition based on new product development has become more and more important in ceramics sanitary ware industry. It is thought the strategy that the sector should carry out is product differentiation. For this purpose, the development of design based strategies is also important for the competitiveness of the country.

In this study, it is aimed to put forth the importance of industrial product design discipline within the competition strategies of Turkish ceramic sanitary ware industry which is one of the sectors that create the greatest added value in Turkish Industry. It is believed that the effective use of product design, which is a strategic factor in terms of competitiveness, in the firms will be effective in creating demand to turn the unused capacity of this potentially high sector into production.

In order to clarify the role of the product design in the competitiveness of the Turkish ceramic sanitary ware industry, firstly, the concept of competition is briefly explained and competitive role of design is discussed.

2. COMPETITIVENESS

Competition is the ability of convincing customers to prefer goods and services offered by firms to alternatives, on a sustainable basis (Turkish Industrialist's and Businessmen's Association, 1997).

Competition dynamics of companies and countries change. Competitiveness is approached in two ways. One of them is price competition, the other is non-price competition. In price competition, firms compete by reducing the cost of the product they produce with various methods such as profit and productivity. In the case of non-price competition or product competition, firms compete by differentiation of goods through elements like quality, reliability, ease of use etc.

In order to achieve the competitive advantage, the value in comparison with cost offered to the customer must be higher than the value offered by the competitors. (Busbin, 2008). In order for the firm to achieve competitive advantage, it must either have lower costs than its competitors in the value creation process, or introduce differences through innovations. Design is a critical competitive factor that contributes to value creation for both conditions.

3. DESIGN, VALUE AND COMPETITIVENESS

In terms of user-product relationship, design is one of the most effective means of creating value. Design contributes to both tangible and intangible assets in value creation (Cooper, 2000) Design decisions affect not only non-price-based factors such as authenticity, reliability, ease of use, quality, robustness, firm image, delivery time, after-sales services, but also cost-based factors such as production costs, product life-cycle costs. (Trueman and Jobber, 1995; Walsh et al, 1988; Roy and Riedel, 1997).

The effect of the tangible and intangible values created by the design in the competition factors of the company is shown in the following table.

Table 1: The Effects of the Tangible and Intangible Values Created by the Design in the Competition Factors

Factor in Competitiveness	**Influence of Design**	
Price	Sales price	Is product designed for economic manufacture?
	Life cycle costs	Is product designed taking into account costs of use and maintenance?
Non Price (Product related)	Product specification and quality	Design affects product performance, uniqueness, appearance, materials, finish, reliability, durability, safety, ease of use, etc.
Non Price (Company related)	Company image and sales promotion	Product presentation, packaging and display design affects image and promotion

	Delivery to time	Is the product designed for ease of development and to meet delivery schedules?
	After-sales service	Is product designed for ease of service and repair?

Source: Walsh et al, 1988. *Competitive by Design. Journal of Marketing Management.*

Since competition-based competition mostly loses validity, the value of design activity is increasing with each passing day in the creation of creative and unique products that responds to the rapidly changing desires and needs of customers as well as price competition to ensure sustainable competitive advantage in the 21st century information economy.

It has been put forward by countless studies (Design and innovation in a successful product competition, Competing through design, Winning by design: technology, product design and international competitiveness, How integrating industrial design in the product development process impacts on company performance, The Impact of Industrial Design Effectiveness on Corporate Financial Performance, Creativity, design and business performance etc.) and emphasized by academicians that the design is an important factor in increasing the competitiveness of firms, even countries. Design is an important tool in increasing the competitiveness of the company. (Kotler and Rath, 1984; Dumas and Whitfield, 1989; Gemser and Leenders, 2001). It is widely known that design is an important factor contributing to the success of firms due to the potential to increase competitiveness (Hertenstein et al, 2001; Roy and Riedel, 1997).

But before looking at the value of the design for the firm, it is necessary to look at the dynamics of the industry since each sector has its own specialized growth potential and norms (Mozota, 2006).

4. COMPETITIVENESS OF CERAMIC SANITARY WARE INDUSTRY AND TURKEY'S POSITION

According to the *Competitiveness of the Ceramics Sector Report 2014*, the challenges of globalization have been manifested by the rise in energy and raw material prices, tax barriers and intellectual property rights issues, with low-cost competitors entering the market. The European ceramic sector has come to the conclusion that it cannot continue to compete with its low cost leadership strategy and has begun to seek ways to compete on higher terms. Evaluating the strengths and opportunities of the ceramic sub-sectors, the European Union plans to achieve success with new technologies, strong brands, innovation and knowledge-intensive initiatives in order to become a market leader with high added value products.

According to the report, the competitiveness of the ceramic sector and the ceramic sub-sectors is based on the following conditions as a whole;

● Environmental regulations (energy use (CO_2 emissions), pollution prevention, waste);

● Energy cost and availability;

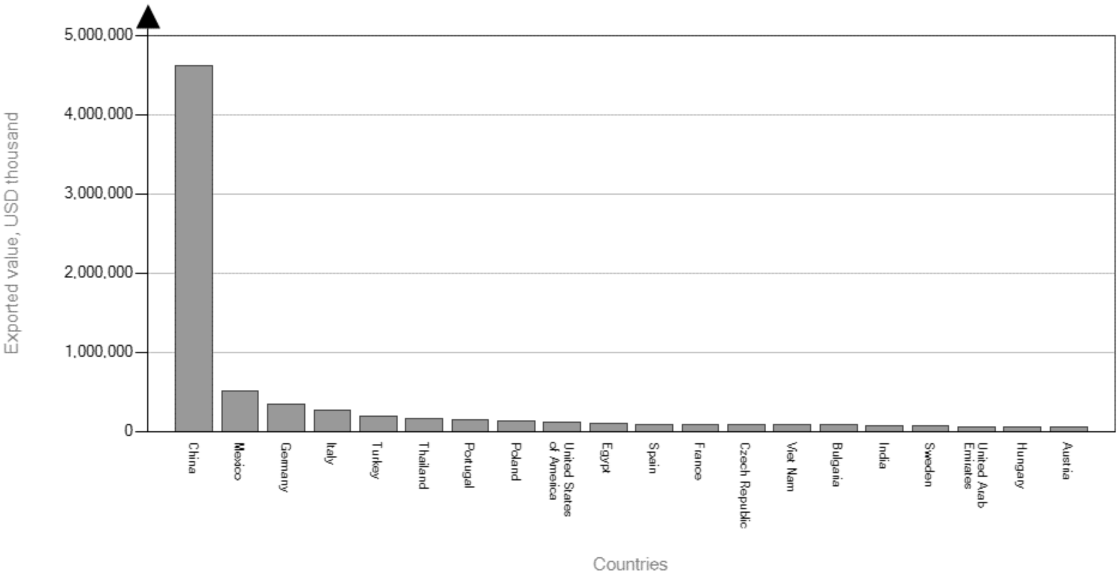
● Issues related to intellectual property rights;

● Information and innovation;

● Globalization (low-priced imports) and trade barriers (access to third countries).

When it comes to the ceramic sanitary ware sub-sector, according to the Turkey's Tenth Development Plan, Ceramic Working Group Report (2014), world ceramic sanitary ware production is approximately 200 million pieces per year. Europe (with the exception of Eastern European countries) is the largest producer in the world after China with production of about 50 million pieces. The most important producers of Europe are Italy, Spain, Turkey, France, England and Germany. The top 10 producers have a production capacity of about 150 million units. According to this report, since the 1990s there has been a continuous rise in the production of ceramic sanitary ware and the increase in the use of products with population growth has been the main reasons for this development. Growth slowed in the 2000s despite the rapid increase in the 1990s. China is the largest manufacturer in the world. Brazil, Mexico and Turkey follow this country, which has become the production center of the world.

Table 2: Export Values of Ceramic Sanitary Ware Industry in 2016

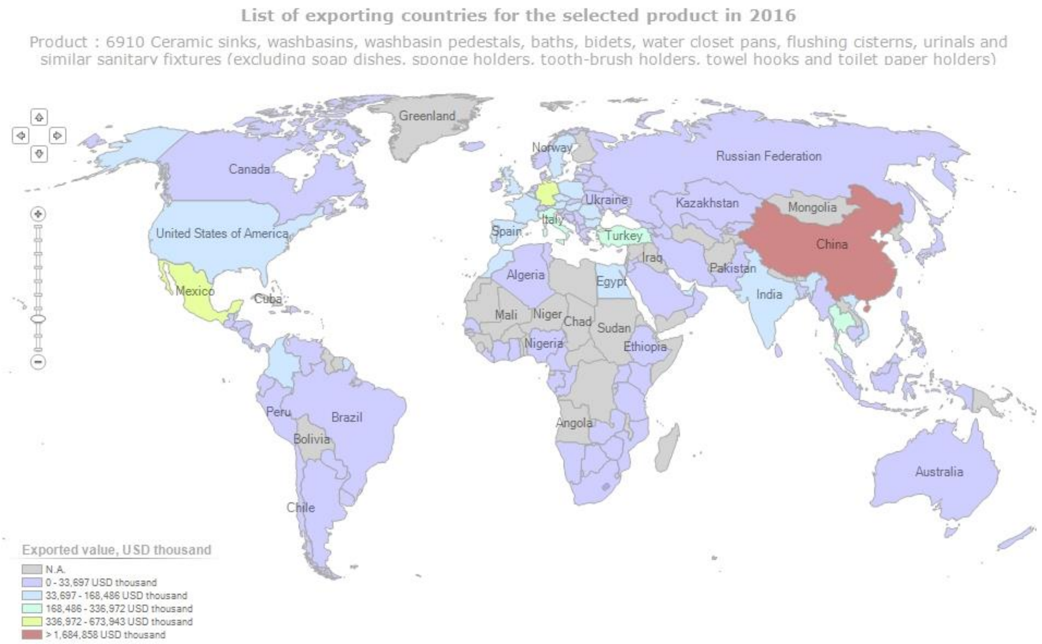


Source: http://www.trademap.org/Index.aspx March, 20, 2017

In reference to the *Competitiveness of the Ceramics Sector Report 2014*, the difficulty of transporting ceramic sanitary ware products from a logistical point of view, the standardization documents required at the entrance to the market, the strong presence of local producers in distribution channels makes Turkey, the largest producer in Europe, advantageous in this region.

According to the report, Germany is the most important producers in the European Union with 23%, Italy 15%, England 10%, Spain 9% and France 8% production rates. The total market share of these countries in the European Union is 74%. Most of the import share belongs to China and Turkey. Despite the high distribution costs, China has been ahead of Turkey in the European market.

Figure 1: List of Exporting Countries for the Ceramic Sanitary Ware Industry in 2016



Source http://www.trademap.org/Index.aspx March, 20, 2017

According to the report, the important competitive factors in the ceramic sanitary ware sector are;

● Distribution restrictions due to high weights

● Challenging competition against low cost sanitary ware products

● Construction and renovation driven demand dependence

● Increased competition in substitute goods

● High energy intensity in the sector

In the production of ceramic sanitary ware, the pressure of price-based competition from developing countries is seen. In developed countries, average product prices have been kept high by design, brand and product quality.

In the study, a SWOT analysis on the competitiveness of the European Union ceramics industry was made, and the following trends can be followed for the firms are stated;

- Technology-focused companies. Technology companies guarantee their customers that they will be technology leaders using their own products.
- Customer focused companies. These companies achieve their leadership by identifying customer needs and desires and designing customized products that will respond to them.
- Companies with a focus on price performance. Price performance leaders focus on delivering high volume, high standard, efficient and attractive pricing products.

The European Union countries' ceramic sector focuses on competitive strategies based on their strengths to remove countries from the market, such as Turkey, where they cannot compete through cost leadership. Turkey needs to focus on these strengths in order not to lose its competitive advantage and even to expand its market share, which is stated in the report of the Tenth Development Plan Ceramics Working Group. In this report, it is said that the main concept that needs to be focused on the transition to high value added products is innovation. According to this report, average product prices in developed countries could be kept high with the importance given to design and brand. These factors have been identified as strengths in the SWOT analysis of the competitiveness of the European Union ceramics industry.

Although Turkey is the largest exporter in Europe in terms of capacity, it is third in Europe on turnover basis.

Table 3: Trade Indicators of Exporters in 2016

Exporters	**Trade Indicators**				
	Value exported in 2015 (USD thousand)	**Trade balance in 2015 (USD thousand)**	**Quantity exported in 2015**	**Quantity Unit**	**Unit value (USD/unit)**
World	6696075	1365081	0	No quantity	
China	3369718	3327042	1283630	Tons	2625
Mexico	464580	413533	322169	Tons	1442
Germany	405276	48103	79130	Tons	5122
Italy	247128	117090	49616	Tons	4981
Turkey	211985	204794	128603	Tons	1648
Thailand	172692	146536	81016	Tons	2132
Portugal	167490	149559	93891	Tons	1784
Poland	134438	64796	80324	Tons	1674
United States of America	101287	-1012008	44898	Tons	2256
India	100800	22921	135776	Tons	742

Source http://www.trademap.org/Index.aspx March, 20, 2017

According to the Ceramic Federation of Turkey, there are 39 producers in total, 5 of which have a capacity of more than one million per year. The share of exports in the world market is 2.5%. The sector has a critical value for the Turkish economy because of the high added value it creates and the low dependency on imports. The majority of these exports are made to England, Germany, France, America and Italy.

Table 4: Trade Indicators of Importers in 2016

Importers	Trade Indicators					
	Value exported in 2015 (USD thousand)	Trade balance 2015 (USD thousand)	Share in Turkey's exports (%)	Quantity exported in 2015	Quantity unit	Unit value (USD/unit)
World	198,112	189,013	100	121,964	Tons	1,624
Germany	29,344	26,968	14.8	14,938	Tons	1,964
United Kingdom	24,132	24,064	12.2	13,494	Tons	1,788
France	16,464	16,377	8.3	13,563	Tons	1,214
Italy	16,392	15,037	8.3	13,317	Tons	1,231
United States of America	10,299	10,059	5.2	5,202	Tons	1,980

Source: http://www.trademap.org/Index.aspx March, 20, 2017

The ceramics industry is an energy-intensive industry. Energy costs contains about 30% of total cost. Energy prices in Turkey are much higher than the countries we compete with in the world. Ceramics are a heavy products. The shipping cost is high.15 million tons of ceramic raw materials and finished product circulate on highways in the country annually. Transportation in our country takes place mainly highways. Railway transportation is not available since there is no factory-port connected railway transportation in our industry. Shipping stocks of existing stations and shipping capacities is low. Ports are inadequate. Product innovation is the main concept that needs to be focused on for high value added products.

The ceramics industry needs to use the unused installed capacities. The added value to be created in the sector is over 800 million dollars if the unused capacity, which is seen as 65.000 tons in sanitary ware industry, is transformed into production. The unused capacities are above $1 billion. The great investment in this value is idle in our country. In the case of unused capacities turn into production, exports will increase, production costs will decrease, and competitive power will increase. A market needs to be created to increase these capacities. One of the main elements used in the market creation process in the sector is design.

5. CONCLUSION

In the study, the international competitiveness of the ceramic sanitary ware industry and the current situation of the Turkish ceramic sanitary ware industry within this competition have been put forward by examining the national and international institutions' and organizations' reports related to the sector.

The added value of the ceramic sanitary ware sector is often associated with cost, design, branding, quality and technology. The biggest disadvantage of the Turkish ceramic sanitary ware industry is that energy and distribution costs are very high compared to their competitors. Therefore, cost leadership competition is not sustainable in this industry.

Turkey is similar or superior in terms of quality and technology in this industry. Considering the value chain and the competition patterns of the focused industry, competition based on new product development and branding has become increasingly important.

Achieving a sustainable competitive advantage against European countries is only possible with knowledge-intensive initiatives. In this context, it is considered that the product design is the most effective element in influencing customer preferences and in expanding the market share.

REFERENCES

Busbin, J. W., Johnson, J. T., & DeConinck, J. (2008). *The evolution of sustainable competitive advantage: from value chain to modular outsource networking.* In Competition forum 6(1), 103. American Society for Competitiveness.

Cooper, R. (2000). *Design management and the ceramic industry.* In I. Jackson (Ed.), Ceramic ambitions and strategic directions: perspectives on the UK ceramics industry arising from a series of executive seminars organised by Staffordshire University Business School. (pp. 40-46). Staffordshire University.

Dti Economics Paper No.15 (2005). *Creativity, Design and Business Performance.*

Dumas, A., & Whitfield, A. (1989). Why design is difficult to manage: a survey of attitudes and practices in British industry. *European Management Journal*, *7*(1), 50-56.

Ecorys Researh and Consulting, 2014*. FWC Sector Competitiveness Studies - Competitiveness of the Ceramics Sector.*

Gemser, G., & Leenders, M. A. (2001). How integrating industrial design in the product development process impacts on company performance. *Journal of Product Innovation Management*, *18*(1), 28-38.

Hertenstein, J. H., Platt, M. B., & Brown, D. R. (2001). Valuing design: Enhancing corporate performance through design effectiveness. Design Management Review, 12(3), 10-19.

Hertenstein, J. H., Platt, M. B., & Veryzer, R. W. (2005). *The impact of industrial design effectiveness on corporate financial performance. Journal of Product Innovation Management, 22(1), 3-21.*

Kotler, P., & Alexander Rath, G. (1984). Design: A powerful but neglected strategic tool. *Journal of business strategy*, *5*(2), 16-21.

Kotler, P., & Armstrong, G. (2010). *Principles of marketing*. *Pearson education.*

Mozota, B. B. (2006). *The four powers of design: A value model in design management.* Design Management Review, 17(2), 44-53.

Porter, M. (2010). Rekabet üzerine. *Harvard Business Review Kitabı, İstanbul, Optimist Yayınları*.

Roy, R., & Riedel, J. C. (1997). *Design and innovation in successful product competition. Technovation*, *17*(10), 537593-548594.

T.C. Kalkınma Bakanlığı. Onuncu Kalkınma Planı Seramik Çalışma Grubu Raporu. 2014-2018.

Trueman, M., & Jobber, D. (1998*). Competing through design*. Long range planning, 31(4), 594-605.

Walsh, V., Roy, R., Bruce, M., & Potter, S. (1992). *Winning by design: technology, product design and international competitiveness.*