THE STATE OF OUTSOURCING DESIGN EXPERTISE IN THE TURKISH MANUFACTURING INDUSTRY

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THE STATE OF OUTSOURCING DESIGN EXPERTISE IN THE TURKISH MANUFACTURING INDUSTRY

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Approval of the Graduate School of Natural and Applied Sciences

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ABSTRACT

THE STATE OF OUTSOURCING DESIGN EXPERTISE
IN THE TURKISH MANUFACTURING INDUSTRY

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This study aims to present the state of outsourcing design in the Turkish manufacturing industry, which, in the past, has been scrutinized in a limited sense. An investigation has been carried out in order to reveal the reasons for and procedures of hiring product design services from outside resources and to explore -if any- the benefits gained from this collaboration through a survey conducted with either design or production managers from a sample selection of firms manufacturing and/or marketing products in Turkey. Findings regarding the processes of outsourcing design have been recorded as well as an evaluation of the advantages and disadvantages of external design resources.

Keywords: Outsourcing Design, Design Consulting, Industrial Design in Turkey

ÖZ

TÜRK ENDÜSTRİSİNDE
TASARIM HİZMETİNİN DIŞARIDAN ALIMI ÜZERİNE
DURUM DEĞERLENDİRMESİ

Oran, Yasemin
Yüksek Lisans, Endüstri Ürünleri Tasarımı Bölümü
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Bu çalışma, Türk endüstrisinde tasarım hizmetinin dışarıdan alımı üzerine bir durum değerlendirmesi yapmayı amaçlamaktadır. Türkiye'de üretim ve pazarlama alanında faaliyet gösteren firmaların genel müdür ve tasarım yöneticilerine yönelik düzenlenen bir anket çalışması ile tasarım hizmetinin dışarıdan alınmasıyla sağlanan avantaj ve dezavantajlar incelenmektedir. Bu hizmetin neden ve ne süreçlerle dışarıdan alındığına ilişkin veriler elde edilmiştir.

Anahtar kelimeler: Tasarım Hizmetinin Dışarıdan Alımı, Tasarım Danışmalığı, Türkiye'de Endüstriyel Tasarım

To My Parents

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INTRODUCTION

1.1 MOTIVATION FOR THE STUDY

It has been commonly noted in the literature concerning innovation and industrial design that the trend for hiring experts to do an organization's design work has accelerated in recent years in industrialized countries. The long-term collaborations that large-scale and design-led organizations such as, IBM, Sony and Herman Miller have, constitute important examples in the investigations regarding outsourced design. The emergence of this trend has also been noted in a number of studies concerning newly industrialized countries. Turkey, being one of the latter, has shown promise in developing innovative products in recent years in internationally acclaimed design competitions and fairs. Notwithstanding the limited awareness of industrial design, some large-scale Turkish manufacturers have been catching up with times in terms of hiring the needed design service either internally or externally. Certain systems in order to achieve innovative ideas have been developed by leading companies from different industries coming from industrialized countries. One of the systems requires the hiring of design resources from external means. It has been noted that these external means or outsourced design capabilities – as it is used in this study - has advantages in generating new product ideas compared to in-house design

groups. Being a more recent practice, studies regarding the use of outsourced design in the Turkish manufacturing industry have been scrutinized in a limited sense, hence constituting the reason for this study to be conducted.

The study initially addresses the design resources that organizations make use of. Advantages regarding the presence of a design resource in an organization have become common knowledge. However how to integrate it is a matter of debate. Commonly three types of design integration has been discussed throughout this thesis which can be listed as:

- integrating design as an in-house resource
- integrating design as an external resource
- integrating design as both an in-house and external resources which will be referred as “a mixed approach” in this study

The advantages and disadvantages of in-house design resources are mentioned in the study, however, the main emphasis is on outsourcing design as a recent development seen in the Turkish manufacturing industry. The effects of outsourcing design in Turkish organizations in terms of learning new processes, technologies and markets are studied as well as the literature regarding this concept and its practice in Industrialized Countries.

1.2 DEFINITION OF TERMS

The main concentration area of this study revolves around the concept of making use of external design experts by client organizations. Several terms used for this concept have come to attention, such as, Bruce and Jevnaker’s (1998) “design alliances” as taken from their book with the same title. “Design partnership”, is another example by Bruce and Jevnaker (1998). In addition,

“out-of-housing” is a term that can be seen from Bruce and Morris (1998). However, for this study the concept of hiring design capabilities from external means will be referred as “outsourcing design” that has been widely used in literature regarding this concept.

The term “outsourcing” is commonly seen as a management jargon that is usually used when manufacturing of products is taken care of by outside suppliers to cut production costs.

On the subject of “outsourcing design”, the essence of the concept can be derived from the literature reviewed, as the practice used by different companies to achieve specific goals like differentiation, awareness or a competitive edge for market success by transferring portions of work, in this case design services, to external design resources rather than performing it internally.

1.3 AIM AND SCOPE OF THE STUDY

The study aims to state the present condition of outsourcing design in the Turkish manufacturing industry. As mentioned in the beginning of the chapter, the referred state has been investigated in a limited sense, which fortifies the need to explore on such a subject. As a development with a history not more then ten years, outsourcing design has become interestingly present in a group of especially large-scale organizations. In order to investigate the state of outsourcing design in Turkey, a population of organizations has been selected from METU (Middle East Technical University) Department of Industrial Design database regarding their approach towards design resources. Although the aim directs the study to lean more towards the external design resources, to have a better understanding of the state of outsourcing design in Turkey, organizations that

have collaborated with external designers were addressed as well as organizations that did not. Therefore, the scope of the study consists of organizations, which utilize industrial design either by in-house or external means of resources. In doing so, information on how design is outsourced in Turkey is derived alongside the list of reasons for companies' hesitations towards outsourcing.

In light of the aim and scope of the study, the goal is to investigate the reasons for and procedures of hiring product design services from outside resources in the Turkish industry; and to explore -if any- the benefits gained from this collaboration through a survey conducted with either design or production managers of a sample selection of firms manufacturing and/or marketing products in Turkey.

1.4 RESEARCH QUESTIONS

Initial research questions regarding outsourced design have been appointed, in order to obtain data from the literature on this subject that would form a basis for further research to be conducted on the Turkish manufacturing industry.

- Why do organizations outsource design?
- How do firms choose their outside design resource?
- What can outsourcing design offer organizations?
- What are the advantages and disadvantages of outsourcing design compared to in-house design?

After reviewing the literature with the guidance of the listed questions above, a main research question has been addressed to understand the state of outsourcing design in the Turkish industry.

- How is outsourced design made use of in the Turkish Industry?

The following sub-research questions are formulated with the intention of revealing how design is outsourced in Turkey:

- Which of the outside design resources do Turkish companies tend to choose?
- What are the motives for seeking outsourced design in Turkish organizations?
- How do Turkish firms choose their outside design resource?
- What is the expectation from outside design resources?
- Have Turkish organizations met their expectations after working with outside design resources?
- Do Turkish manufacturers address any advantages or disadvantages concerning outsourcing design?
- Have Turkish manufacturers distinguished any differences between local and foreign design consultants?

1.5 METHODOLOGY

The research plan consists of two main sections. The initial investigation takes place in the form of a literature review, where academic research material and data on the issue of outsourcing design have been collected from acclaimed design journals, doctoral dissertations, internet databases and from the news. Second part of the investigation was carried out in the form of a survey that was designed to be participated from the internet.

Literature review:

The literature review consists of an important portion of the study forming a background to the concept of outsourcing design resources, since it aims to elucidate this process executed in industrialized country organizations. Industrialized countries have been outsourcing not only design, but also many portions of work for a long time. Studies have been published documenting these experiences. From these documented data, the processes and effects of outsourcing design have been gathered to form an understanding of this concept in order to prepare for the investigation that was conducted in the Turkish manufacturing industry.

Field survey:

In light of the findings from the literature review and a former study conducted by the author, an investigation of the state of outsourcing design in Turkish manufacturing industry has been conducted by means of an internet-based questionnaire. Seventy-five organizations were selected through a database, where requests to participate in the study were distributed via e-mail. The questionnaire designed for the internet was formed of open-ended questions in order to reveal experiences of outsourcing as well as expectations and concerns regarding the issue.

1.6 STRUCTURE OF THE THESIS

This chapter addresses the starting point and significance of pursuing such a study. An introduction to the aim of the study, which is the position of outsourcing design in the Turkish manufacturing industry, has been presented with a guide of the route taken in terms of research methodology.

Second chapter constitutes a research of the literature regarding outsourced design, enabling to from an understanding on how external design use has affected foreign manufacturing companies, which will later be used as a foundation for the internet survey revealed in Chapter 3. From academic papers and news from design related journals, an initial perspective on design resources are laid out with an emphasis on outsourcing design capabilities. In the following sections of this chapter, reasons for and the process of outsourcing design is scrutinized, by illuminating issues like how design services are contacted and acquired. Client organizations expectations and what design consultants have to offer is another field that is investigated alongside an evaluation of the advantages and disadvantages of design resources. In addition, the management of the entire process is elucidated with examples of success stories noted on the client-consultant relationship. The final part of this chapter is reserved to the data obtained about the recent development of outsourcing design in the Turkish manufacturing industry with reference to company-based examples.

Design of the fieldwork and analysis of the data are discussed in Chapter 3. This chapter mentions the former work of the author on the same subject where data has been made use of in the preparation of the questionnaire for the investigation on the Turkish manufacturing industry. Special emphasis has been made to the design of the Internet questionnaire alongside a literature review on Internet research methods. Pilot study regarding the Internet survey is presented in the later sections alongside an analysis of the data collected. Final section of this chapter is a step by step description of the survey conducted.

Outcomes of the survey are dealt with in Chapter 4 in three major sections. Initially a general look at the outcomes where aspects affecting the use of outsourced design are presented. Second section is formed of case studies where outsourcing experiences are laid out on company basis. Final section

is an evaluation of the in-house versus outsourced design resources according to their advantages and disadvantages.

Final chapter is formed of three sections regarding the commencement of the study. First section is a discussion about the general outcome of the literature review. Second section contains findings regarding the research questions appointed for the investigation on outsourcing design in the Turkish industry. Finally, a list is composed in order to be a reference for future studies on outsourcing design in Turkey.

CHAPTER 2

OUTSOURCED DESIGN

2.1 INTRODUCTION

What design can bring to an organization is manifold. While searching through literature related to product development, design and innovation, it is widely noted how design has a strategic role in achieving a competitive advantage for an organization. This goal can be realized not only by designing a product that is mind blowing or the best solution ever made, but by designing the right product for the exact need.

It is also not uncommon to find literature on how design can change the culture of an organization via setting an example with ingenious methods that help create innovative ideas. These methods not only can be made use of in product development but also can be implemented in other parts of organizations helping to design creative systems for various problems.

Taking the strategic impact into account, it is now up to an organization how to acquire design. Commonly three types of design resources are considered in this decision making process. Primarily when there are less budget and resource concerns organizations tend to build an in-house design department for innovative product development. Secondly, to outsource design expertise has become a popular choice with unsteady economic conditions and today's leaner organizations. Finally, a mixed approach of design resources, in which

organizations acquire both in-house design capabilities and also consult outside design resources either from time to time or on a regular basis.

When a decision to outsource design is made, for a successful collaboration, effort on both sides must be present. For instance, while external designers need to understand more about how the client organization is managed, the client must be more flexible in accepting new ideas and processes. Design awareness on the client's side can be beneficial to ease the process of product development with external design experts.

This chapter identifies the many roles that design and designers play in an organization, where the main emphasis is on the benefits and "disbenefits" of external design resources. The main research question regarding the literature review is "how do organizations outsource design". Consequently, answers to "why firms hire external design resources" and "how does outsourcing design affect organizations" are searched through-out the gathered literature.

2.2 DESIGN RESOURCES

Margaret Bruce notes in the "Management of Design Alliances" that investing in design is a good idea for new product and system development that in the end returns with a positive impact to the growth of that business. This claim can be commonly seen through out design related literature. However, it is also mentioned by Bruce that forming a design based competence for a long-term business success is a hard and lengthy process (Bruce, 1998).

For some organizations, design sophistication has always been a part of their culture as stated by Buchner, West and Zaccai (2000) executives from a global design firm Design Continuum. Especially large organizations from

automobile and computer industries have had the need and means to integrate design into their body to produce successful products. However today, consumers' expectation of design has gone beyond high budget products to even the most mundane ones. Design has the magic-touch that transfers the mundane to special. Design directly improves the quality of the product and also indirectly communicates qualities that are hidden. If this process is topped with consumer understanding and emerging technology new product opportunities can be created (Buchner, West and Zaccai, 2000). Thus, the design of industrial products is an increasingly challenging task since consumers/users are more sophisticated than ever before and typically have a number of alternative choices (Jevnaker, 1998).

The treatment of design in an organization as stated by Von Stamm (2004), which will be scrutinized in depth in the following sections, is usually influenced by several company specific factors. For instance, the importance of designs for a company's competitive position and the attitude of management towards design will matter in the decision process. In addition, the frequency a company engages in new product development will set the approach towards design resources. (Von Stamm, 2004)

Three principal methods for acquiring design resources are acknowledged among the literature. The following is the list of these resources as explained by Bruce and Morris (1998) from, the "Management of Design Alliances".

1. In-house design resources

Design capabilities are located within an organization. Company specific parameters affects the location of the design department. However, design departments or designers are commonly located in areas like R&D, production or marketing. Full-time design staff may vary in number and in knowledge according to the scale of the organization. Large design driven entities, for example, tend to hold a multi-disciplinary design staff.

2. Outsourced design resources

Design capabilities are located outside the firm. Design driven or not, organizations that can not finance in-house design capabilities or do not have the need to innovate repeatedly tend to hire design professionals. Smooth relations between client and consultant bodies become an important issue for this process to work. Therefore a design manager ("or those with the responsibility for design") is commissioned to sort out communications as well as commission, liaise and evaluate design skills.

3. "Mixed Approach"

The design capability is formed of a mixture of in-house and outsourced design skills.

Organizations may bring external designers to interject additional resources, to meet anticipated deadlines, to input fresh ideas or to provide the needed specific expertise.

Bruce and Jevnaker (1998) state that, the location of design resources seems to differ according to traditions, supply and demand factors, and corporate strategies.

Many authors like Bruce, Morris, Von Stamm and Wynn agree upon the fact that "rules of best practice" require an in-house approach to the placement of design in an organization. However, it is also stated by the authors that there is an increasing use of external designers.

Certain advantages and disadvantages of both in-house and outsourcing approaches to design are scrutinized in section 2.3.4. Again, a mutual understanding from the literature is that a blend of in-house and outsourced design expertise appears to overcome the disadvantages leaving positive aspects of each situation to be extracted. However, it is underlined that for this collaborative system to work, the presence of a design manager is crucial.

2.3 OUTSOURCING DESIGN EXPERTISE

2.3.1 What is Outsourcing of Design?

As an outcome of the readings regarding the subject, outsourcing of design expertise is the practice used by different companies to provide specific goals like differentiation, awareness or a competitive edge for market success by transferring design services, to external design resources (freelance designers and design consultancies) rather than performing it internally. Although cost is an important factor for outsourcing capabilities, the three goals mentioned regarding market success come high on the list.

Some authors tend to trace the roots of outsourced design down to the industrial revolution. For instance, Jeremy Myerson (1992) mentions the 18th century architect-interior designer Robert Adam as one of the pioneers in the design consultancy business. Robert Adam employed 2000 people, producing interiors with custom made furniture and appliances. However, in terms of contemporary industrial design consultancy work, history notes that the journey begins in much recent times, like the 1920's. Yet various movements in art have had their influences in design becoming a business, Myerson notes, Christopher Dresser's name as the *first modern independent industrial designer*, especially remembered with his floral prints. "According to critic Catherine McDremott (quoted in Myerson, 1992): 'Dresser was a significant figure because he is an early example of a designer who was commissioned to create new designs specifically to boost sales for a company.' Contributions of European designers especially descendants of the Bauhaus school is inevitable, however, the godfathers of international design business have emerged from New York in the 20's and 30's. Raymond Loewy, Henry Dreyfus, Walter Dorwin Teague and Norman Bel Geddes are some of the infamous names of that era (Myerson, 1992). Walsh (1992), adds the fact that unlike their colleagues in the US and Nordic

countries, British design industry started to be noticed in the 60's. Consultancy business grew during the 70's and by the 80's they had become 'billion pound' businesses, employing nearly 30,000 people in over 2700 firms (Walsh, 1992). This growth was due to a large government funding to support the development of the design industry. Besides government support, other factors like relaxed credit controls and cheaper mortgages, stimulating consumers to invest in houses, furnish them and make use of that booming design industry have also played as catalyst (Myerson, 1992). The designer's dream of a decade disintegrated as client complaints piled. Excessive fees and superficial designs with poor design management made especially smaller consultancy businesses to bankrupt.

In "Winning by Design" Walsh notes that companies well known for their design consciousness has set important examples in how outsourcing can be of benefit to an organization. The example of US-owned office furniture firm, Herman Miller, has retained eminent consultant designers on a long-term basis to do most of its product design since the 1930's. Another example in this area is Italian multinational Olivetti, where the concept of "in-house independent designers" was generated. "These are teams of independent designers, led by internationally known designers like Ettore Sottsass, employed on a long-term consultancy basis and provided with offices, administrative support and full access to the company's operations" (Walsh, 1992, cited from Kicherer, 1990)

2.3.2 Why Organizations Outsource Design

Reiple, Haberberg and Gander (2005) conclude that product innovation is an important source for competitive advantage. In many industries like, computer hardware, aircraft and car manufacturing, increasing number of alliances have been seen in the recent years. Also a fragmentation of their organizational structure resembling networks has been noted. These

developments appear to have come about as a result of the increasing awareness of the knowledge content of innovative products and recognition that management expertise, as well as organizational culture, is specialized and not easily transferred among different product and operational types. (Reiple, Haberberg and Gander, 2005)

Design consultancies offer the right kind of expertise. Especially a business that is not large in scale may find it efficient to assign specific technological expertise to outsourced designers. Many consultancies have built enduring reputations on their capabilities in certain areas in which they regularly deliver at top level (Tennity, 2003). Less Wynn (2000) notes; the shift from mass production to mass customization may make it necessary for a product's image to represent the customer's values rather than the company's. Thus an outsourced design resource being less caught in company specific issues may be more inclined to anticipating image shifts that haven't yet occurred. Verganti (2003) describes this ability of external designers as "brokering of languages" in which "they search for radically new product languages by looking at socio-cultural phenomena that are not so visible now but that will be trends tomorrow and reality in the future" (Verganti, 2003) . Large manufacturing companies like Henry Dreyfus, IBM and Olivetti hire "language brokers" on a long-term basis to ensure their success.

Why organizations outsource can have many reasons. Although the basic reason for outsourcing usually stands nearer to financial constraints, when outsourcing of design expertise is considered, innovativeness and know-how become high on the list. The decision to outsource design requires an awareness of what design can bring to an organization. The following is a list, gathered from the literature (Tennity, 2003; Von Stamm, 1997; Jevnaker, 1998), on what influences organizations to outsource design.

- ***Financial constrains:*** Small organizations may not have the resources to finance an in-house design capability, therefore, they tend to hire external resources when ever necessary. In Von Stamm's (1997) study, two arguments were addressed regarding the treatment of design by SME's (Small and Medium Sized Enterprises). First argument is based on the fact that "design and product development is a luxury and that one can get by without it", which is a sad, however true fact for non-European countries as well. Second argument is a much more design conscious approach, in which the degree of and the need for creativity and new ideas play a major role in the decision for outsourcing by SME's.

- ***Time constraints:*** The design team at hand may not be able to manage the work load and meant intended deadlines.

- ***The need to generate new ideas:*** Either from time to time or on a long-term basis, outsourcing design can help foster new idea generation. Especially when projects become monotonous and design staff suffers from developing new concepts for products, external inputs may help trigger creative flow.

- ***Knowledge constrains:*** Industrial designers are expected to be competent in human factors, ethnography, man-machine interaction, and the use of new media. However it is impossible for any designer to know everything. "Clients identify design firms based on their exemplary strengths and cultivate long-term relationships with what they regard as boutique enterprises" (Tennitiy, 2003, pp: 10-11).

- ***Technological constraints*****:** Competence in computing equipment, prototyping tools and modeling equipment may be a selling point to organizations that do not possess such competencies in-house.

The above list addresses the shortcomings that organizations would like to patch up by contacting their choice of design expert. However, that may not always be the case, for instance geographical constraints may form a barrier in the hiring of extraordinarily creative designers and specialized design strategists an organization needs (Buchner, West and Zaccai 2000). Thus, it can be stated that deciding to outsource design and being able to hire the desired design consultant is a two way road. Organizations must also be aware of the following items regarding the treatment of design. The following list is taken from a study by Von Stamm (1998), which must be taken into account when deciding to outsource design.

- ***The market segment:*** Research on the customer's purchasing decisions should be taken into account, especially when that segment of buyer is a part of a traditional market that is not open to radical product ideas.

- ***Innovator or follower:*** An organization with a *follower* nature can be in no need for innovating. Thus to harbor an in-house design capability would be financially challenging.

- ***Whether the product is a commodity or customized:*** The need for an outsourced designer can be decided by looking into the nature of the product that is being marketed. For instance the following questions may be important while deciding to outsource or not: "can specific features make a difference to the purchasing decision" or "does the purchase depend on reputation", "is it the product or the packaging which distinguishes one product from the other?"

- ***Frequency of the need to innovate:*** "Is it a one time thing" or "does the organization need to innovate constantly" forms as an important decision to be made. Closely related to the decision in item 2, whether a company is an innovator or a follower, the treatment of design highly depends on it.

2.3.3 Acquisition of Outsourced Design

Once an organization has decided that it is of advantage to outsource design, the first question that comes to mind is about how to choose the consultancy to work with. Von Stamm (1998), from a research on the methods of first contact with design consultants, has found that third party recommendation is a much more trusted way in initiating a relationship with outsourced designers. Interestingly the reputation of an external designer can come as a secondary issue, if not recommended by a third party. Below are the listings of "initiation of contact" in table format (Von Stamm, 1998).

Table-1. "How do designers and businesses get together?" (Von Stamm, 1998, p-45)

INITIATION OF CONTACT	FREQUENCY	% of respondents (n=244)
Third party recommendation	77	32
Existing client	49	20
Competitive & credentials pitch	26	11
Personal contact	24	10
Cold call & telesales	22	9
By client directly	15	6
Direct mail (by design consultancy)	12	6
Reputation	9	3
Roster	7	3
From design directory/yellow pages	3	1

The use of the Internet was not as wide spread as it is now which, consequently prevented it from entering the table above. The impact of the World Wide Web on outsourcing design is a matter that has potential to be discussed in further studies.

2.3.4 Advantages and Disadvantages of Outsourced Design

It is understood that with the pre-requisite of total support to the collaboration with design consultants by management, outsourcing design may bring organizations many benefits, which can be viewed from the list gathered by Bruce and Jevnaker (1998):

- ***Closer access to design expertise.*** Even though having an in-house design capability would enable a closer access to design expertise, not all organizations have the means to acquire design in-house, or purchase "tailor-made design skills" even yet, have the time to develop it. Therefore building a sustainable design competence may be possible by collaborating with external design resources.
- ***Managing uncertainty.*** Through long-term collaborations with designers, organizations can learn new processes and solutions to problems strengthening the client and consultant relationship and eventually resolve uncertainties.
- ***Visualization and product decisions.*** Visualization is an important factor in product decisions; therefore, the x-factor affecting decisions can lie in the technical capabilities of consultants. Consultancy firms with prototyping and computer animation skills have an advantage in relating to clients much easier.
- ***Design - "first mover" advantage.*** As indicated by Jevnaker (1998) a distinctive design approach in business setting was a fairly new item on the business agenda in the early 1990's; however, today with globalization, customer sophistication and technology opportunities, ingenious design can bring an organization the "first-mover" advantage.
- ***Access to a flexible but familiar design resource.*** Developing long-term relations with design experts can be beneficial especially for companies that need professional design services infrequently, that donot need in-house design capabilities or need outside creative input.

- ***Strengthen name and reputation.*** Hiring reputable designers can be beneficial in the advertising of both the product and its brand.
- ***Achieving a comprehensive visual image.*** "Using design strategically can bring commercial benefits and serve to motivate and differentiate the company by creating a coherent corporate identity".

Table-2. Advantages and disadvantages of in-house and external designers (Von Stamm, 2004, p-17)

	Advantages	Disadvantages
In-house	• Cost- efficiency (depending on volume) • Instant and continuous accessibility • Easier coordination with other in-house departments • Company retains control • Designer develops intimate understanding of company • Connected with internal networks • Control and ability to prioritize	• Lack of creativity/new ideas • The need to keep the design team busy - e.g., the need for ongoing development work • Losing touch with external developments • Getting stale
External	• New inspiration • Access to specialists' expertise • Relieves work load • Accessibility of additional skills/staff • Speed • Opportunities for changing and exploring different options • Can be bought if and when needed	• Lack of understanding of company specific issues • Problems of ready accessibility • Problems in the coordination with in-house design and/or other departments • Potential lack of confidentiality • Company needs skills to evaluate the design work • Not-invented-here syndrome • Problems with industrializing the externally developed design • Loss of control • Credibility gap if design is too far removed from company's own station • Being made a low priority on agency's agenda.

Table2 reveals an evaluation of in-house versus external design resources according to their advantages and disadvantages by Von Stamm (1998). It can be seen from the table that in-house resources have the advantage of being familiar to company specific issues enhancing their ability to tracing and solving problems quickly. On the other hand, there is the risk of the in-house group becoming less creative due to exceedingly overwhelming company specific matters as well as loosing their touch with external developments. Outsourced design means new blood, and by that, an input of creativity, know-how and speed is introduced to the organization. However, certain disadvantages have also been associated with outsourcing design derived from the lack of understanding of company specific issues. Problems regarding the location of the design and development facilities have been an issue as well as coordination with in-house departments. There also is the probability of lack of confidentiality, which has been a cause for concern.

Even though disadvantages regarding external designer use seem like a longer list, some organizations tend to break the barriers by improving client-consultant relationships or even hire design managers to fix problems. The motivation behind this attempt can be justified with the eagerness to acquire innovative products that are also profitable (Faust, 2000; Reiple, Haberberg and Gander, 2005).

With design consultants, there is the risk of receiving hostility from internal staff that consequently ends up in having problems in being acknowledged as the source of new product ideas. Bruce and Jevnaker (1998) point out an example in a case study of Ericson, where problems lied in the corporate level. Incidentally, design consultants experienced difficulties in being recognized at a more senior level in the company which prevented the coordination of activities. Hence, top level of commitment is required for outsourcing design to work. (Design Alliances, Bruce and Jevnaker, 1998)

2.4 CLIENT'S PERSPECTIVES AND EXPECTATIONS

Cameron Foote, editor of the *Creative Business* newsletter in Boston, urges every consultant to put himself or herself "in the customer's shoes". In addition, client's perspective on risk, design, service and budget are explored in the summer 2003 issue of the "Design Management Journal":

- ***Risk.*** Specifications for design work are less precise than for nearly all other types of purchases. It is hard to foresee which product will be a hit in the marketplace, but still this service has to be budgeted. Besides, there is the reputation of the project manager that is fragile to an unsuccessful encounter with his/her choice of design consultancy.

- ***Design.*** With external design resources, problems can occur when there is a lack of communication. When sufficient interest is not been given towards clients business objectives, industry, how they operate and what their challenges are, it is harder to produce ideas for products that can win the heart of that particular company. Furthermore, "the orientation of most client managers is not in acquiring something that exhibits great design, but rather in producing bottom-line products." Therefore, clients expect their outsourced designers to be as result-oriented as they are. "Finally, most clients are concerned more about marketing consistency than they are about design brilliance. It is a consultancy's high batting average of marketing success, not their occasional design home run, that most impresses." (Foote, 2003, pp:44)

- ***Service.*** By training and inclination, most designers consider constant refining—reworking, tweaking, polishing—to be the norm of creative development. It is in the process by which "great stuff happens".

However, this concept is foreign to many clients. To them, good service is to get it right the first time, or at least quickly.

- ***Budget.*** Due to the impreciseness of the design process, budgeting has always been a problem area. “Many clients have little experience with what design services actually costs and others tend to set budgets arbitrarily, based on what they think things should cost.” Putting a fixed price has its risks, at least will not look good when the consultancy firm asks to make changes later in the design process, however justified the reasons are. (Foote, 2003, pp:45)

According to Potter (cited in Jevnaker, 1998) clients call upon designers in order to solve acute problems in projects or are wanted for styling purposes in projects that have been already planned out. Evidently, clients resort to design expertise when negative feedback from the market is obtained or otherwise are in a “push” situation (Jevnaker, 1998).

Foote (2003) has extracted several client wishes. For instance, clients expect designers to take more of an interest in their organization and its markets. Incidentally, collecting information on the client organization is as beneficial to the consultant body as well as the client. In doing so, unnecessary tension regarding the suitability of designs for production facilities can be avoided. Secondly, Foote points out that clients wish design consultants to have strong opinions, but also be flexible enough to make necessary modifications on products. Company specific constraints, especially in production technology, restrains the manufacturer in producing challenging designs. The third issue that Foote has noted on client wishes is to being kept in the loop. Since the design and development stages are located elsewhere, clients feel the need to be in control ever more, hence keeping the client up to date with developments is a crucial expectation. Figure-1 shows the client wishes quoted in Foote (2003):

"I'd like you to take more of an interest in our organization and its markets. Not just what you need to know to complete the design project you're working on, but our business, our industry, how we operate, and what our challenges are. I'm really looking nothing more than curiosity and general interest. Yet, I often get the feeling that you're only concerned with producing great design, not in helping us further all our objectives. I want to consider you as partner in helping us grow our business, but it's difficult when your interest appear so limited".	"I want you to have strong opinions, but also be flexible. I hire you because you have experience and skill I don't have. The bigger the job, the more I expect you to take the initiative and recommend what works best. If I don't agree, I'll certainly say so, but I expect you to try and convince me, to have the strength of your convictions. In the final analysis, though, I have to make the decision on which way to proceed. If we still disagree, I expect you to do things my way, and pleasantly. It is, after all, my money you'll be spending. I'm really looking for nothing more than curiosity and general interest. Yet, I often get the feeling that you're only concerned with producing great design, not in helping us further all our objectives. I want to consider you as partner in helping us grow our business, but it's difficult when your interest appear so limited".	"I don't want you to spring unpleasant surprises on me. I want you to keep me up to date. I know this often takes an effort, especially with projects involving problems or multiple changes. But it's your job. Remember, unlike you I work in a large organization where everything is planned, budgeted, and scheduled. Surprises, such as scheduling delays and budget overruns, can wreak havoc in our system, no matter how well justified. When this happens, I look bad to my boss. That's not a position I'd like to be in".

Figure-1. Client's wishes (Foote, 2003, p-44-45-46)

2.5 THE DESIGN BUSINESS: WHAT EXTERNAL DESIGN RESOURCES CAN OFFER

Mike Tennity (2003), vise president for design and development at KI, an office furniture company in Green Bay, Wisconsin, points out a list of

knowledge and skills that are embedded in a design consultancy's core which also constitutes their selling point. Know-how on human factors, ethnography, man-machine interaction, and the use of new media, are some of the skills that are used in order to come up with innovative ideas. Tennity refers to these skills as "bred in the bone".

In addition to what's "bred in the bone" four areas of expertise that outside design providers can offer to their clients may play an important role in a competitive market. Primarily design consultants are the skilled, proven resources that can work through the "fuzzy front end" of product development, where uncertainties in technology, market and strategy are sorted out. The fuzzy-front-end "is the transition from articulating market opportunity to setting goals before extensive resources are committed". This non-linear task is very suitable for designers since their talents consist of synthesizing market opportunities and technological developments in order to create new product ideas. Tennity, gives the example of famous design consultancy firm IDEO and their technique called "deep-dive" where, new product ideas are generated by tackling the fuzzy-front-end. (Tennity, 2003, pp: 12)

Second useful asset to a consultancy can be about their modeling and prototyping ability. The ability and infrastructure to present prototypes is advantageous since the clients get to see and feel how the end-product is going to be realized. Thirdly, a concept referred to as mass-customization is identified by Tennity; "It targets the broad-scale production of individually customized products and services". This aspect can work as an advantage, if a consultant chooses to specialize in mass customization. Finally, an advantage can come about if a design consultant can provide its client with "experience-designs". As important as new product design may be, today, companies are recognizing experiences as distinct economic offerings and as basis for growth. Therefore, designers have to keep in mind that not only

the product, but also the entire ceremony surrounding that product has a selling point in light of this development (Tennity, 2003, pp: 14).

Siegel (2003) has spotted the four elements stated below that successful consulting firms have in common via an informal survey conducted with executives from major firms.

- "*knowledge*: expertise and unique intellectual property".
- "*process*: how they apply this knowledge".
- "*core group*: formed of productive talented expert specialists and generalists led by experienced consultants and business managers".
- "*service*: which they provide by creatively focusing on developing innovations for clients and doing unique, powerful work."

Siegel also points out that successful outside design resources enhance themselves, in order to ensure a competitive advantage, to maintain the soundness of their service and pricing policy. These changes entail upgrading in knowledge, technology and processes as well as hiring, training, evaluating and retaining prime talent. Also preparing for the future is another aspect that they have to be good at. (Siegel-2003)

For a design source to maintain its success it has to innovate repeatedly. To do so, an outside design resource has to design for the future, instead of the present, as it is stated in the web page of the famous design consultancy firm Frog Design. Same remarks can be found in Roberto Verganti (2003), where an illustration of the success of the collaborations with designers and Italian manufacturing companies are portrayed. Their success is based on "the radical innovation of a product language and meaning where, designers are the brokers that decipher the unexpressed dynamics of socio-cultural models, helping to understand, anticipate, and influence the emergence of new product meanings" (Verganti, 2003, pp:35).

With this design-driven innovation approach and total support from senior management of manufacturing companies, Italian industry is noted to have a more design-intensive nature that nurtures new idea generation and all related processes. Another note on design-driven-innovation is that the novelty of a message and of a design language prevails over the novelty of functionality and technology. However, radical, this approach is claimed by Verganti (2003) to be one of the reasons giving Italian design its uniqueness. It is highlighted that design and development processes also contain the standard research on topics like consumer behavior and new technologies; however, what is different about the Italian approach is what they make of it all with the gathered data in the end (Verganti, 2003).

What has worked for Italian manufacturers may not always work for other country organizations since cultural aspects play an important role in the understanding of design-driven-innovation. However, techniques can be studied and adapted in order to benefit from brokering of languages.

It is also a common understanding in literature that design consultants can catalyze cultural change in ways that stimulate and support innovation. A study conducted by Feldman and Boult from Brunel University (2005), investigates the design consultant-led metamorphosis on several companies. According to the study two out of the four companies investigated had success in both innovating and learning to make adjustments in their corporate culture for the sake of creating new product ideas. The successful examples followed a three phased model for this transformation:

Phase 1: Motivation to change

Willingness or motivation to change is the first and most important phase toward this metamorphosis. Accepting former methods for new idea creation has become unfeasible, members of the organization become aware that change is necessary and feel responsible for changing (survival anxiety), as

well as supported and safe in doing so (psychological safety), the second phase which is learning can begin.

Phase 2: Learning

Learning consists of four methods. First two methods mentioned in the study are stated by Schein (cited in Feldman and Boult, 2003).

- *Scanning, and trial and error*: Continuous experimentation.
- *Imitation and identification*: Making successful examples role models.
- *Team based learning*: Since cultural assumptions are embedded amongst group members, working as a team encourages different norms and ideas to be out in the open for discussion.
- *Parallel Learning*: This method is a combination of the three with one difference. The development team is removed from their cultural setting, enabling a sense of freedom from the cultural pressures and expectations.

Phase 3: Internalization

When a *parallel learning* application is successful, it can be promoted by the organization reinforcing the internalization of this method. In doing so, the design consultants perform as a role model in this process of change.

Another research on the subject of cultural change is performed by Victor Seidel (2000) from Stanford University stating that designers, given the opportunity, not only are equipt with developing successful products but also have the insight to develop successful business strategies. The study made on leading product design firms, addresses how design and design consultants can profoundly shape a company's identity and operations. Four roles that design consultants take part in are identified in order to achieve competitiveness:

- *Strategy Visualizer*. Creating physical examples and visual projections of

future product developments and pathways for growth.

- *Core Competence Prospector*. Highlighting dormant capabilities in an organization and extrapolating the potential of better leveraging these underused assets.
- *Market Exploiter*. Distilling consumer needs as the entree to new or expanded markets and market niches.
- *Design Process Provider*. Clarifying processes for managing design as they are linked to the formulation of business strategies.

On the matter of outsourced design as a means that catalyze change in organizations, Mulhern and Lathrop (2003) from furniture manufacturer Steelcase state that external designers can work as facilitators in helping clients to innovate instead of delivering the innovative product themselves. Mulhern and Lathrop mention a technique that their consultants facilitated that connected information, people, analysis and decision making, which have been the key aspects in their product development process. This connecting process has been named “experience bridges” where existing resources have been explored to generate new understandings and insights. (Mulhern and Lathrop, 2003)

2.6 MANAGING OUTSOURCED DESIGN

Bettina Von Stamm, in a research published in the 1997 issue of Design Issues, recites that the in-house product development and design activities have more positive impact on business growth compared to bought-in design. Even though effectiveness of design varies from business to business, Von Stamm notes that failure on part of outsourcing design was due to poorly carried out design management (Von Stamm, 1997). Hence, management of the client-consultant relationship is vital for this collaboration to be successful.

Authors from this literature review emphasize the importance of the development of a bridge between the client and consultant organizations so that communication and culture will no longer be barriers preventing new idea generation. Since designers and corporate managers come from different backgrounds of education a medium has to be established that can speak and understand both languages. By the mean time, for client-consultant collaboration to be successful, effort on both parties must be present in understanding how their companies work.

Readymade methods that can be easily implemented to any organization while managing client consultant relationships is practically non-existent as Bruce and Jevnaker (1998) point out the need for tailor made solutions for a fruitful collaboration. Nonetheless, some fundamental rules can be stated for an effective partnering of client and consultant bodies (Bruce, Jevnaker, 1998).

> The relationship between a marketing and manufacturing company and design consultancy is best modeled as an asset. Like most assets, an investment is required to build it. The design consultancy needs to learn about the client's business in order to be able to contribute appropriately, and the client needs to infuse its organization with design awareness.
>
> (Buchner, West and Zaccai, 2000, pp: 54)

Buchner, et al. (2000) state that relationship of client organization and design consultant should be handled by "asset managers". Since design relationship is considered as an asset and deserves attention at a high level for both parties' asset managers are the key in integrating design into the client organization. Therefore their job constitutes more than project management but in the client's organization, this person facilitates the design process and, more significantly, is the voice for the strategic value of design. On the

consultant's side asset managers nurture a client-focused design ethic and help orchestrate the consultant-client relationship (Buchner, West and Zaccai, 2000).

Reiple, Haberberg and Gander (2005) use a different phrase for *asset manager, which* is called "boundary spanner". As it is explained by the authors: "Boundary spanners, or bridges, as they are sometimes described, are people who move between both organizations, translating the norms of each into language and behavior that are acceptable to, and understandable by, the other" (Reiple, Haberberg and Gander, 2005).

According to Bruce and Morris (1998) the design manager has certain tasks to complete in order to build a strong client-consultant relationship. The initial responsibility of a design manager on the strategic level is to make the decision concerning the location of design expertise, particularly whether it should lie inside or outside the company.

> "The trend towards outsourcing is driven partly by cost considerations and belief that this may be cheaper than having design in-house. Keeping design in-house is driven partly by control factors, as well as by fear of leaking proprietary information and loss of expertise. The client's previous experience and the individual external design manager's personal preferences have a role to play in the decision about the location of design expertise, so a wide range of design management practices exist".
>
> (Bruce and Morris, 1998)

On a tactical level when design is outsourced, the responsibility of the design manager includes the procurement, commissioning and project management of the design capability. Another major task in the management process is the deciding to build close and long-term relationships, or arms-length and short-term relationships (Bruce and Morris, 1998).

Due to the complex and political nature of organizations, risk taking, unorthodox thinking and long term experimentation are not tolerated. This rigidity and lack of design awareness leads clients to acknowledge design as an unknown and dangerous quantity. A study focusing on maximizing creativity within UK design industry conducted by Cameron Watt (2000), states that "it is only through long-term relationship building and development that this paradigm can be changed" (Cameron Watt, 2000).

Key benefits of strong relationships and strategies for changing organizational understanding toward design are noted by Watt as follows:

Key benefits of strong relationships

- *Creativity*
- *Improved competitive differentiation*
- *Increased efficiency*
- *Higher levels of motivation and buy-in*

Strategies for change:

- *Break down traditional structures and cultures*
- *Change your management style*
- *Live and communicate with the client*
- *Encourage positive conflict through group diversity*
- *Socialize with each other*
- *Get everyone involved sooner rather than later*
- *Find real decision makers*
- *Communicate the benefits to your client*

The lifecycle of a design relationship as stated by Bruce and Morris (1998) "evolves from pure compatibility issues at initial purchase, to familiarity issues through successive purchases, to recognizable competency after an

appropriate period of time". Consequently, the evolution of the client-consultant relationship leads to a long-term based connection rather than a short-term one. Below Table3 reveals the advantages of both long-term and short-term collaborations with design professionals that has been cited from Bruce and Morris (1998).

> "Developing a long term relationship also helps to overcome issues such as the perceived lack of understanding of business specific issues or the "not invented here" syndrome".
>
> (Von Stamm, 1998)

Table-3. "Pros" and "Cons" of short-term versus long-term relationships (cited from ed. Bruce and Jevnaker, 1998, p-58)

Short-term advantages	Long-term advantages
1. ***Comparison purposes*** Having a relationship with more than one consultant enabled the client to compare quality and efficiency factors between consultants. 2. ***Cost*** Relationships were open to market forces. 3. ***Access to different expertise*** Gave the client more choice in the type of expertise required. 4. ***Time*** Consultants were used to relieve short-term in-house design workloads. 5. ***Compatibility*** By maintaining a short-term relationship with a consultant, if the relationship is difficult it gives the client the freedom to choose a more compatible design partner.	1. ***Familiarity*** This improved the effectiveness of the design input from project to project 2. ***Stability*** Once a project had been completed successfully with a consultant, management anxiety and uncertainty about the relationship and product development in general reduced. 3. ***Continuity*** Retaining the same consultant ensured that the brand proposition within and, if required, across product ranges remained the same. It also made the initial stages of each new project much easier because the process of using the same consultant remained consistent.

2.7 GENERAL RULES FOR SUCCESS

Although it is hard to come up with a general solution to remedy all problems related to the outsourcing process, a list of several tailor-made solutions that successful companies resorted to in the reviewed literature can be made use of in generating general rules to follow.

- ***Co-location.*** Bruce and Morris (1998) note a solution to the disconnectedness location causes from examples where, co-location is seen either by the consultant moving into the premises of the client organization or by an in-house team moving in for a period of time near external design resources.
- ***Long-term collaboration.*** It has come to attention from the literature in general that benefits gained from long-term relationships with design consultants are more than short term collaborations. It is noted by Bruce and Morris (1998) that long-term relationships enable "the design firm to gain a better insight into the needs of clients and thereby produce better quality solutions".

  > "With long-term relationships, it is expected that a degree of trust will be attained, thus enabling a greater sense of openness and fluidity of information exchange. The dilemma between the fear of loosing proprietary knowledge and wishing for an open and trusting relationship is handled by investment in long-term relationships between client and design professional. Achieving, and providing sufficient scope for the designer to give vent, to his/her creativity is difficult. With long-term relationships, the understanding cultivated between the client and designer may help to attain this balance".
  >
  > (Bruce and Morris, 1998, pp: 39-65)

- ***Shared costs.*** Bruce and Jevnaker (1998) points to the issue of costs savings, where, client and consultant bodies instead of overstraining one party share information and development costs.
- ***Forming a consistent and coherent understanding of design.*** Having a design-driven approach towards product development does not happen overnight; however, the benefits have been noted in the literature that certain tensions concerning what to expect of design consultants, concerns regarding privacy matters tend to disintegrate when the strategic impact of design is understood.

Table-4. Rules to be considered for building or sustaining a successful design consultancy business. (Siegel, 2003)

Rules of success	▪ Work under contract. ▪ Hold on to talented staff. ▪ Build long-term relationships. ▪ After assuring long-time clients, search for possible clients. ▪ Consider hiring senior business management professionals.
Rules of competitive advantage	▪ Demonstrate the intrinsic difference from the competition. ▪ Tell success stories (Prizes won, patents at hand, references) ▪ Define the pre- and post proposal process
Rules of profitability	▪ Know the competitive situation. ▪ Create expectations with clients and staff that can be fulfilled. ▪ Consider offering a fixed price for a fixed set of deliverables. ▪ Insist on strict compliance with agreed-upon payment schedules. ▪ Take whatever steps are necessary to make it easy to do business with your company.
Rules of marketing creatively	▪ Build a sales focused database around your defined target client archetypes and markets. ▪ Develop a “killer Web-site” ▪ Don’t wait for businesses to come to you. ▪ Hire experts for your own brand recognition. ▪ Get attention by publishing books, winning awards in competitions. ▪ Invest in developing the firm’s knowledge of clients’ niche areas of expertise. ▪ Let you’re A team work for your most important client.
Rules for future growth	▪ Focus on your core business. Do not try to be all things to everyone. ▪ Expand intelligently. Do not risk quality for your work. ▪ Consider growth by acquisition ▪ Consider being acquired.

Rita Sue Siegel (2003), founder of Rita Sue Siegel Resources in New York has investigated what design consultants need to survive as a business. Table-4 has been formed from the rules extracted from Siegel's work.

2.8 OUTSOURCED DESIGN IN TURKEY

Outsourcing design, as can be seen from the literature above, is one of the steps taken by organizations for obtaining success in the market. Consequently, particular steps have to be taken before coming to the outsourcing stage in design. As early literature has revealed, the design consultancy business ages back to the 1920's in Industrialized Countries. However, in the case of Turkey, the design consultancy business is a much recent development and to understand how it has come about, it may be beneficial to look at the emergence of industrial design itself.

Design is not a foreign concept for Turkey. Artisanship has its roots traced back to the establishment of the Ottoman Empire where design work was contracted. The emergence of industrial design in its contemporary sense however, was - as stated in a study by Er, Korkut and Er (2003) - "imported through a variety of transfer mechanisms" dating to a much recent time, the first half of the 1980's. The main mechanism was education and the establishments of industrial design departments were realized through external resources. In accordance with an aid program conducted by American based International Cooperation Administration (ICA) later to be known as Agency for International Development (AID), to support pro-western or neutral developing countries, has included a variety of non-financial aid mechanisms, one being support for industrial design. (Er, Korkut and Er, 2003)

Finally, in the late 1970's industrial design emerged initially as an elective course. The establishment of the industrial design department was realized in 1979 in the Faculty of Architecture at Middle East Technical University (METU). As far as chronologic developments go, for industrial design, the main concentration is in the education area until the 80's. The production industry required the assistance of industrial designers much later. A study by Er (1998), conducted on the electronics industry shows the initial steps designers took in entering the production industry. As it is stated in the study, the industry had no reason to hire designers or develop new products starting from the 60's until the first half of the 80's. This was because "the foundations were largely laid through licensing deals with foreign firms which provided the know-how and materials for the assembly of a range of products" (Er, 1998). This being the case, with the fact that the market being protected from foreign competition, the need for designers was practically non-existent. Although the process of learning imported technologies forms an important place in the social and economic modernization of an industry, without the competition either in the domestic or overseas markets, there was hardly any reason to hire product developers (Er, 1998).

In the second half of the 80's increasing competition in the domestic market forced the industry to invest in new technology. This was followed with export subsidies provided by the government that enabled firms to open to international markets. Hobday (cited in Er, 1998, pp: 1) states, "export demand shapes the pace and pattern of the acquisition of the marketing and technological capabilities by Newly Industrialized Country firms". It was by the export boom in the late 80's that has created the necessary conditions for the acquisition of design capabilities by Turkish firms. Some large-scale manufacturing firms hired designers to perform modifications on present products (Er, 1998). Primarily, organizations required design help for modification purposes and investing in new product development is seen more after the 90's in the Turkish industry.

As Ö. Er mentions (2001), support towards design, putting aside the indirect contribution portrayed in the establishment of design schools in state universities, has not been in the agenda of the Turkish government, unlike other governments from the members of the Newly Industrialized Countries like South Korea and Taiwan. The only stated exception is the legal arrangements that were requested which also contained the 554th Executive Order for Protection of Industrial Designs before the 1995 Customs Union Treaty was put forward. In addition, several attempts to support innovativeness have been mentioned in Er (2001), that R&D programs were supported by government establishments like TÜBİTAK, TİDEB and TTGV[1].

On the issue of outsourcing design, we can see from the data obtained from the literature review that a number of large-scale manufacturers with in-house design groups collaborate with external designers. Some of the mentioned organizations have made design or their relations with design consultants a means for marketing.

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[1] TÜBİTAK -TİDEB (Türkiye Bilimsel ve Teknolojik Araştırma Kurmu - Teknoloji İzleme Değerlendirme Başkanlığı, The Scientific and Technological Research Council of Turkey)

TTGV (Türkiye Teknoloji Geliştirme Vakfı, Technology Development Foundation of Turkey)

CHAPTER 3

DESIGN OF THE FIELDWORK AND DATA ANALYSIS

3.1 INTRODUCTION

This chapter describes the field survey that was carried out with the aim of gaining an insight on the outsourcing design process in the Turkish manufacturing industry. Due to the nature of the study, which required a qualitative approach, an internet survey consisting open-ended questions has been developed. This chapter deals with the preparations, applications and analysis of the fieldwork, which is articulated at length in three major sections. First, a background of the fieldwork is presented. This section revolves around the previous work conducted on outsourcing of design in the Turkish industry. Working as an infrastructure for the design and development of the questionnaire, this previous study has also brought valuable insight to the research conducted for this thesis. Second section describes the design of the questionnaire with particular reference to Internet research methods. Final section is the analysis of the fieldwork.

3.2 BACKGROUND OF THE FIELDWORK

A study was conducted by the author in 2000 on external designers and their participation in realizing a trend of outsourcing design in the Turkish manufacturing industry. This study constitutes an important infrastructure for the development of the questionnaire for this study. An in depth research concerning external designer use in the Turkish manufacturing industry was the initial phase regarding the previous study. Later the scope was narrowed down to the Turkish furniture industry, from which, after an analysis of the state of the industry with particular reference to the use of external designers, three major furniture firms were selected. These firms were large scaled organizations with in-house design capabilities that also made use of external design resources. In the stage of collecting data needed for the development of the case study, interviews with designers and observations by visits to the factories were planned. Nurus, one of Turkey's leading office furniture manufacturer's, was among the firms investigated in the study. The author conducted two interviews, one with the company owner/chief of design Renan Gökyay and secondly a member from the design staff, Murat Erciyas. The following sections are outcomes of various data from observations, interviews and the company's web site that has provided useful information.

3.2.1 Review of the Interviews Conducted at Nurus A.Ş.

From the interview with Renan Gökyay, the aquisition of latest technology, innovative design and the formation of international accountability have been the driving forces of the company. Hence, the constant investment in new technologies has provided Nurus with a very high-tech manufacturing facility. Through an observation of the manufacturing plant in 2000, high-tech machines replacing man power have been noted. It has also come to attention that operators of such machines were stated to be highly qualified

not only in their area but also in other areas. Production was very low at the time of the visit to the Nurus head quarters due to an economic crisis for Turkey which concequently effected the company. However, with optimism at hand, Nurus's design team known as Nurus D team has spent their time by modifications of previous work and designing for the future. As one of the design staff Murat Erciyas points out, "since the plant is working with minimum pace, rapid feedbacks can be obtained from protoypes that are prepared in no time, enabling designers to enhance their search for perfection".

The importance given to quality standards have also played significant role in their success as a firm. In 1997 the company earned an ISO 9000 quality certificate. The plant possesses certain machines that test the quality of their products. For instance a machine calculates how many times a drawer can be opened and closed, in short testing its durability.

Design work in Nurus can be categorized in three sections. First section is the research and development of new design ideas. Second constitutes the modifications required on existing products. Final section is the designs needed for contract works as Murat Erciyas explains. However, who designs what is a fluid concept. As it can be extracted from the interview notes, everyone can have an influence in the development of new designs, even the operators in the production plant. This collaborative understanding has triggered other collaboration ideas.

Advantages have been noted in the company executive being with a design background, one of which having a positive impact on the development of Turkish industrial design. With Mr. Gökyay's efforts in establishing relations with international design establishments has had positive impacts. For instance, the membership BIFMA (The Business and Institutional Furniture Manufacturers Association) has provided Mr. Gokyay with the latest updates

in furniture manufacturing alongside strategic connections with international personalities in that area.

> "This is a non-profit organization of furniture manufacturers, suppliers and independent manufacturers' representative firms addressing issues of common concern that started in the early 1970's. The association's membership of over 300 companies represents over 80% of the value of North American shipments of office furniture. BIFMA's mission is to serve the North American office and business furniture manufacturing industry as an information resource, industry advocate and by offering professional and industry-wide trade development opportunities. BIFMA International provides an effective forum for cooperation and collaboration for the promotion of the industry. Strategic areas of focus include standards development, statistical data generation, government relations, industry promotion, education, networking and trade development activities".
>
> (Gökyay, 2000)

Nurus has anticipated to enter the European market. Initially they stepped into the Asian and later on the US. market improving themselves in international waters. They had decided that collaborations with infamous European designers would form a foot in the door in realizing their goal of entering the European market. This plan dated the 1990's, however could not be realized due to financial inconveniencies. However, in 1999 they collaborated with German designers Fritz Frenkler and Anette Ponholtzer and won an internationally acclaimed IF award in 2001 for their office system named I/X. In 2004 Nurus once again earned an IF award with the same liaison.

Collaborations with local designers like Atilla Kuzu has also been beneficial for both parties, since, Kuzu brought Nurus an IFDA (International Furniture Design Award) in 1999. Other local designers they have worked with are renown Turkish design consultants that have spread their reputations in Europe like Defne Koz, İnci Mutlu and Tanju Özelgin.

3.2.2 Implications Regarding the Nurus Case

- Design consciousness, either emerged from Mr. Gökyay's background in education or from a tradition that contained new product development, Nurus A.Ş. has used this aspect as an advantage when entering a very saturated international furniture market and maintained their success. They have achieved this goal by forming strategic alliances with European design consultants.

- Their collaborations with Turkish design consultants have been beneficial in terms of the recognition of Turkish designers in international fairs and events.

- Nurus has also made use of "design" as a marketing strategy by building a strong in-house design team as well as forming long-term relations with design consultants and advertising this factor in design circles. It can also be stated that design is a part of Nurus's corporate identity.

3.2.3 Effects of the Nurus Case on the Fiieldwork

For the Nurus case study, a "non-schedule-standardised interview" has been developed aiming to obtain an understanding of how design was perceived in general and how the process of outsourcing design was executed in particular. Revealing how design related tasks were executed and the impact of design in their product differentiation as well as recognition in both domestic and international markets was another goal in the investigation.

As can be seen from Table-5, questions were open-ended to encourage both Mr. Gökyay and Mr. Erciyas to articulate on the subjects as free as possible. However, during the interviews, several factors have constrained the development of the conversation. For instance, time constraints formed a

barrier in extracting the intended knowledge from respondents. Also shifting from subjects was noted as another constraint. Finally, inexperience of the interviewer was problematic in the guiding of the participant towards the desired subjects. The interviews at Nurus suffered from all three of the constraining aspects which resulted in shorter answers than the anticipated. Thus other visits were found necessary for further research.

From the draw backs of the interview experience, the author became more inclined to conducting an investigation containing a questionnaire for the field study of the thesis. With the same aim, investigating the state of outsourcing design in the Turkish manufacturing industry, questions from the interview were revised to be used in a questionnaire format.

In addition, the Nurus case has provided the author with an insight on the outsourcing design processes that took place in the Turkish manufacturing industry in the beginning of the 2000's. It has come to attention that Nurus is an important example for a successful collaboration with external designers. However, to understand the state of outsourcing, experiences of unsuccessful collaborations forms an important place as well. In addition, manufacturers that haven't outsourced design or do not wish to outsource design can also deliver information regarding the reservations companies have towards this concept.

A better understanding on how to address respondents has been formulated with the help of the Nurus case. Initially, warm up questions have been devised that can be easily answered. This aspect was missing in the Nurus case. Secondly, instead of boring respondents by asking detailed questions from the beginning, their experiences (negative and positive) with consultants were requested. The following questions could be filled out in guidance of the stories regarding their experiences.

Below is a table containing the translated interview questions addressed to Renan Gökyay in 2000:

Table-5. Interview questions for the Nurus case.

Interview Questions for Nurus Staff:
i. You have made use of both in-house and external design resources. When did you decide to outsource design? How does this system work to your benefit? How is this relationship managed?
ii. How did you decide on which designer to work with?
iii. Can you explain the process of working with external designers?
iv. How was the interaction between the in-house design group and external designers?
v. Can you explain, if any, the influences of external designers on the in-house design group.
vi. What were your expectations from the design consultants and what are the outcomes of this collaboration?
vii. Have you ever worked with design consultants other than Fritz Frenkler and Anette Ponholtzer?
viii. Do you have plans to work with other design consultants?
ix. You have worked with Defne Koz and Atilla Kuzu. Can you explain the process of working with these designers? Are the processes different from foreign external designers'?
x. Which is the most efficient design approach? In-house, external or both?
xi. What are your plans for the future regarding design?

3.3 DESIGN OF THE QUESTIONNAIRE AND INTERNET WEB-SITE

The contents of the questionnaire - as mentioned in the previous section of this chapter - have been influenced by the former study conducted in the year

2000 by the author. Notwithstanding the suitable infrastructure obtained from the mentioned study, the location of the author formed a barrier in the conduct of the research. The author, at the time of the study had been residing abroad, which made it difficult to obtain control over the distribution and collection of the questionnaire data. Thus, other means of data collection has been researched and internet based research has been found most appropriate. In the light of the study, Internet Research Methods by Hewson, Yule, Laurent and Vogel, 2003, advantages regarding internet surveys have been acknowledged.

3.3.1 Findings on Internet Research Methods

Internet based surveys are becoming very common in certain fields like marketing research where consumer attitudes, preferences and behaviours are studied. In addition, Internet based questionnaires and interviews have been widely used by social scientist like psychologists and political scientists. Hewson et al. (2003) mention that Internet based research contains the many advantages of the classical research methods with additions, due to the convenience of this technology.

Hewson et al. (2003), note numerous advantages of internet-based surveys that include questionnaire and interview techniques. Increased time and cost efficiency is the most crucial advantage that is mentioned. Distribution of hard copy questionnaire can be costly when postage and printing expenses are calculated. In addition, time spent in converting data from paper to computer is a fact that elongates the process. Secondly, a vast and diverse group of potential research participants can be accessed. Even traditional methods are claimed not to have the same capacity for accessing such large numbers. Thirdly, an internet-based questionnaire may be more appealing to participants than classical ones. The novelty value of responding to a questionnaire from the internet may enhance its appeal to potential

participants. Another appealing issue springs from the fact that the filling out and sending back stages can be done where ever and when ever the participant chooses. Moreover, like postal questionnaires, internet based ones also allow anonymity for both researcher and participant (Hewson et al., 2003)

Notwithstanding the many advantages noted by Hewson et al. (2003), a number of disadvantages have also been mentioned. When a survey is conducted on the Internet there is a chance of reduced level of researcher control and involvement. Thus, unlike a research done face-to-face, when materials are expected from the Internet, the control over the participant (for example, intoxicated, distracted and so on) in terms of their sincerity when filling out questions may be taken into consideration. Although not related to the questionnaire prepared for this thesis, however may be important in further studies is the disadvantage brought from the diversity of web designs prepared for the surveys (Hewson et al., 2003).

3.3.2 Designing the Internet Web-site

The questionnaire was initially designed for Internet use, in the light of the many advantages mentioned above. However, main concern was the aim of the study that required an inquiry of the use of design resources in Turkish manufacturing industry. Three approaches to the use of design resources are derived from the literature review, that consists of, in-house, outsourced and a mixture of the first two design resources. This finding automatically set the questionnaire to be formed of three sections, so that the Turkish manufacturing industry's design approaches could be derived from the data. Particular importance has been given to the third section in the questionnaire since the main emphasis of the study is based on outsourcing design, especially when an in-house design group is present.

As the study addressed the Turkish manufacturing industry, the questionnaire was prepared in Turkish (APPENDIX A). Later, outcomes of the survey were translated into English to be used in this study.

A qualitative study was found suitable for the investigation; therefore, open-ended questions were addressed since:

- Little is known about the state of outsourcing design in Turkey
- A closer investigation is necessary to 'get under the skin' of the organisations to find out how design is outsourced and what effects companies that hesitate to work with external designers.
- It is of benefit to view the cases from the inside out: to see it from the perspective of those involved in experiencing the outsourcing process which is why company and design managers' opinions are important for this study.

The three factors seen above have been influenced from lecture notes of Gülay Hasdoğan on the subject of qualitative research (cited from Gilham, 2000).

First page was a welcome page with a paragraph explaining the aim and scope of the study with reminders of privacy protection issues. Contact information of the author was given for questions to be asked regarding the study or the use of the web site.

After a short list of questions regarding the identity, company name, job description and address information, participants were asked which design resource they used in their company. They were to choose from a selection of four design resources:

( ) A - Only in-house designers or design team
( ) B - Only external design resources

( ) C - Both in-house and external design resources
( ) D - Other (Please specify.....)

After putting a dot in the empty space near the choice of resources, the "resume questionnaire" button was to be pressed to continue with the study.

Section A was formed of seven questions on the location of the design team in the company the job descriptions of designers and the company's expectations from them. However, the main interest for this study was the answers to the sixth and seventh questions, where future decisions on the willingness to acquire outsourced design services are asked.

Section B consisted of thirteen questions that were produced in the light of the previous studies and research questions. However, none of the companies that returned answers has selected section B. This is hardly an indication that external designer use is only considered by large manufacturing firms that also have in-house design capabilities; however, it is a small data strengthening the suspicions.

Section C consisted of eighteen questions that resembled the one in section B with additions addressing the influence of external designers on the in-house team. Also advantages and disadvantages of external and in-house design resources were expected to be laid out by the participants.

3.4 PILOT STUDY

The pilot study was conducted at Karel in December 11th 2005. Karel is a successful automatic electronic telephone systems company that was founded in 1986. Pioneering the transition from electromechanical telecommunications systems to electronic systems in Turkey they have

become the leading supplier in the Turkish market. Their range of expertise offer advanced telecommunications solutions in the fast growing and dynamic telecommunications industry. From its outset, Karel has designed and produced telecommunication systems by use of its own know-how and resources. Karel has conveyed its expertise and know-how in telecommunications, to design and produce electronic boards for home appliances and industrial control equipments. In 1991, Karel launched its products to the world markets that include 20 countries in Europe, Africa and Asia.

Karel's major activities include:

- Design, production and marketing of whole range of telephone systems
- Reselling of other telecom related products such as fax machines, cordless phones, DECT handsets, pagers, etc.
- Design and production of control cards for home appliances
- Production of industrial control equipments
- Joint projects with TURK TELEKOM

The company is proud to state that they are the only telecommunications electronics firm that does not have a foreign partner and they compete in international markets with their own expertise and know-how. Considerable financial support to the R&D department located in Bilkent Cyberpark where they recently moved in forms the foundation of their competitive success. Another issue that Karel underlines in the company web site is the design support given to major manufacturing firms from the Turkish industry like Aselsan and Arçelik.

Nearly the entire R&D department is constituted of engineers, however, they posses two industrial designers as a part of the development team. The pilot study was conducted with an experienced designer and educator (design-chief) Nurtan Meral.

The questionnaire was originally designed to be filled out from its web site, however, with the visit to Karel and Mr. Nurtan Meral, the questions were asked in the format of an interview. The author then filled the questionnaire with Mr. Meral's answers. Comments regarding the questionnaire were noted by Mr. Meral, after a thorough examination.

Before any questions were asked, looking at the aim of the research Mr. Meral noted that the company's experience with outsourcing design took place at a time where they did not have an in-house design capability.

The story of industrial design in Karel begins with a telephone that was planned to be developed in 1996. The company decided that they needed a designers touch in the development of this telephone since the engineers in their R&D department came short in developing an ergonomically sound and attractive looking product. Therefore, a design consultancy firm from İzmir named Nesnel was contacted. Nesnel took on Karel's design work and presented them with a telephone design in the same year. Having difficulties in communications due to geographical constraints and lack of design management, Karel hired Nurtan Meral in 1997. With the joining of Meral, Karel management had a platform that they could brief the consultants overcoming any language barriers. Although difficulties concerning industrial design were solved, other problems regarding the production of the telephone emerged. During the same period, Karel founded their moulding plant, where their new designs were to be produced. However, lack of experience had its tolls. Too much time was spent for solving minor production problems and orders were constantly delayed. In the end the design of Nesnel was finally produced in 2000.

The second half of the 90's has passed in the improvement of the moulding facility and today as noted by Meral, Karel Moulding is the third largest and successful moulding firm in Turkey. It has been stated that this plant now has

orders from foreign counties as well as from local industries that has enabled them to produce their new designs very efficiently.

As pointed out by Meral, working with outside designers seems problematic for Karel due to slow-paced company dynamics. The concentration to R&D prevents projects to be finished in short time scales. Thus, consultancy companies have the risk of loosing momentum with their work, maybe forgetting some details about the project. Although the relations with Nesnel has not been a negative experience, for Karel, in-house design working side by side with R&D staff has been more efficient considering company specific dynamics. Incidentally, management seems quite happy with their in-house design team formed of two designers. Another note on the subject is that Mr Meral has pointed the different views towards outsourcing by different departments in the company. For instance, the production department is more inclined towards the idea of in-house design and manufacturing done in Taiwan, whereas the marketing department prefers everything to be outsourced, especially design. They believe that working with infamous designers could have a positive impact on sales.

The pilot study conducted at Karel before the field study has provided the author to make final adjustments regarding the questions on the survey. In addition, an insight to a client-consultant relationship from the mid 1990's has been obtained. From the developments of industrial design in Turkey, it is understood that outsourced design is a recent event and not many design consulting experiences has been recorded from the 90's. Therefore, Karel's experience with outsourced designers can be regarded as valuable information in terms of recording historical developments in industrial design.

3.5 SELECTION OF THE POPULATION TO BE STUDIED

3.5.1 Databases

An important source in the selection of companies to address in this study was extracted from an exhibition organized by ETMK, the Industrial Designers Society of Turkey. The special exhibition for designs that created a difference in the 2000's that took place in October 27th-30th 2005 was held at TÜYAP within the Marketingist Fair. A major goal of the event was to articulate on the "competitive mind" in the Turkish industry. In relationship to the goal, designs and designers that made a difference in competition were to be identified. A list of firms and designers were put together by careful considerations from a group of design authorities formed of academicians and professionals. In addition, a list of criteria concerning the terms of evaluation of the candidate products were formulated by this group which can be viewed below (www.etmk.org, 2006):

Criteria for candidate product evaluation:

- To be produced after the year 2000
- To provide a clear functional difference that will benefit the user
- To make a difference in the innovative and unique design concept
- To provide differentiation with its aesthetic quality
- To provide a difference with its usability and comfort in use
- To improve the perception of the user/customer towards the company
- To enhance or build the value of the brand
- To increase the company's sales
- To open new market opportunities for the company
- To decrease costs and increase profits

As a result of the important step taken in the identification of the “Turkish Creative Industry”, thirty-five designs were selected that fit the criteria above. The list of the selected products (Appendix B), alongside their designers and the companies that they were designed for has been extracted from the ETMK web-site. (www.etmk.org, 2006).

Besides the Marketingist list, a database of METU Department of Industrial Design which was composed of the firms that the department collaborated in student projects has been made use of in both the selection and acquisition of contact information of the companies that were to be addressed in the conduct of the study.

3.5.2 Availability Sampling

A population of organizations has been selected from METU (Middle East Technical University) Industrial Design Department database regarding their approach towards design resources. Although the aim directs the study to lean more towards the external design resources, to have a better understanding of the state of outsourcing design in Turkey, organizations that have collaborated with external designers were addressed as well as organizations that did not. Therefore, a population of organizations, which utilize industrial design either by in-house or external means of resources was targeted. Companies with contact information from the mentioned database have been sent e-mail requests. Follow-ups have been performed by e-mail. Extra follow-ups have been made by distributing questionnaires by hand at the 2006 METU Department of Industrial Design Graduation Projects Jury that contained collaborative projects with the industry. Several manufacturing organizations that were present in the Jury have been addressed.

3.6 ANALYSIS OF THE DATA COLLECTED

Due to the qualitative nature of the study, calculating, coding or categorising of the data collected from the internet survey formed some difficulty. In addition, expected number of participation was not received. However, this data has laid a base for the future study in understanding why organizations outsource design in the Turkish manufacturing industry.

Seven designers or design managers answered section “C” from the questionnaire, indicating outsourcing of design had took place alongside in-house design activities in these company’s. Four company members selected section “A”, referring to a non-existent practice of outsourcing design. None of the participants selected section “B”, which indicates that outsourcing of design alone is not the favoured approach in this limited group of participants. The author categorised the answers according to the questions (APPENDIX C); this made it possible to view the general understanding regarding that question. Later both data from questionnaire and literature review was analysed and discussed by forming comparisons of outsourced design use in Turkey and in developed countries.

3.7 CONDUCT OF THE FIELDWORK

A questionnaire was distributed to the selected population of companies via e-mail. In the e-mail request, an introductory paragraph was written to explain the aim of the research. In addition, it was reminded that the privacy of participants were to be protected and would only be used in the conduct of the study. Finally, contact information of the author was added for questions regarding the study or questionnaire. Seventy-five companies were contacted from the addresses collected from the ETMK database, ten of which returned

the request. Three out of the ten questionnaires were from the same company, and two of them were from the same person, who was the design director who was unsatisfied with his first answers and added details in the second round. One company executive returned with an e-mail, with the complaint of not being able to open the web site of the questionnaire due to technical difficulties and requested the questions sent by e-mail. However, there was no returned questionnaire after the request was complied. In addition, a number of questionnaires returned empty. Taking into consideration the low average of returned questionnaires, other means of contact was sought. Some companies – of which the author was sure - that worked with both in-house and external designers were contacted again by e-mail with the same request. The supervisor of this study also participated in the contacting of companies to fill out the questionnaires. Some hard copy questionnaires were given out by hand during a conference. Three more results were collected from that effort.

As pointed out by Mr. Nurtan Meral during the pilot study in 2005, the total amount of open-ended questions had the risk of intimidating the participants at first glance. The questionnaire was formed of three parts, with a grand total of thirty-eight questions all of which were open-ended. Even though, every participant was asked to fill out the questions in the relevant section, when such multi-sectioned surveys are considered, the participant tends to see it as whole. Thus, making the design of the questionnaire better suited for internet use. In the web page version of the questionnaire, participants were unable to see the grand total of questions at first glance. Participants were welcomed with an entrance page where they choose the sections by pressing a button. Then, they were directed to the questions relevant to their chosen section. After filling out the boxes with their answers, the questionnaire was finalised and sent back to the author by means of a “finalise” button at the end of the page.

CHAPTER 4

OUTCOMES OF THE SURVEY

4.1 INTRODUCTION

This chapter contains two approaches regarding the discussion of the outcomes of the survey. First section is a general look on the outcomes, where aspects affecting the use of outsourced design is scrutinized. For instance, indications are searched on the subject that size of an organization has something to do with being a better candidate for design awareness, thus being open to new processes like outsourcing. In the second section, outcomes of the survey are shaped in a case study format, investigating the use of outsourced design on company basis. Third section deals with an evaluation of the in-house versus outsourced design resources according to their advantages and disadvantages.

4.2 GENERAL OUTCOMES OF THE SURVEY

In this study an investigation was conducted on the use of external design in the Turkish industry. By means of databases mentioned earlier, seventy-five manufacturing companies were selected to be candidates for their design approach. These organizations were believed to be outsourcing design capabilities. The investigation aimed to point out if these organizations were collaborating with outsourced designers and how they were affected by this

relationship. In this respect, 75 request letters were sent via e-mail and despite the follow-up efforts made by e-mailing and face to face requests, only eleven responses were recorded.

4.2.1 Use of Design Resources

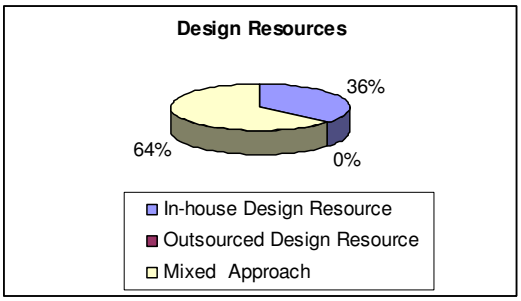

Figure-2. Design Resources

Seven out of eleven companies used a mixed approach regarding design, where both in-house and outsourced design capabilities were utilized. Four out of eleven companies made use of in-house design capabilities and had never worked with external designers. None of the companies that participated in the study depended solely on outsourced design resources. This could indicate that companies with in-house designers are more open to ideas that will enhance their capabilities regarding innovative product development. Incidentally, it can be noted from the outcomes that for companies without in-house design capabilities did not seek design help all together. Is this because the consultancy business a recent development for the Turkish industry that companies are slowly warming up to the concept or do companies manage to survive or even profit without any need for new

product development? These could be matters that can be scrutinized in further studies.

4.2.2 Size of the Company

It has come to attention from the literature that large-scale manufacturers have been making use of design capabilities more than middle or small-scale organizations in the Turkish industry. Through this investigation, the validation of this assessment is aimed.

As shown in Figure-3, nine out of eleven of the participants came from large-scale organizations and two out of eleven came from middle-scale organizations. It has come to attention from recent news in journals that in the Turkish manufacturing industry that large-scale organizations invest in new product development more than middle size companies do. In the light of this finding, the survey was directed to large-scale manufacturers to investigate outsourcing design activities.

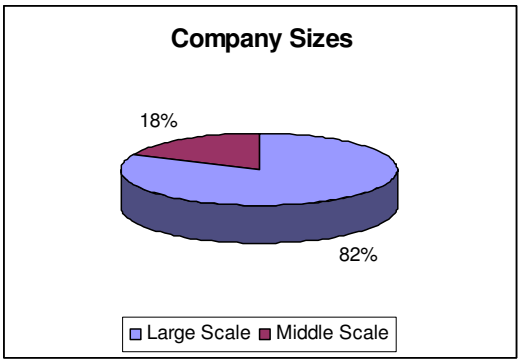

Figure-3. Company Sizes

4.2.3 Number of Designers Employed in the Company

Q: How many designers work in your company?

Company managers were asked how many industrial designers are employed in the Company. The results showed that the number of designers working for the companies investigated varies according to the scale and design consciousness of the organizations. For instance, large-scale organizations have the capacity for accommodating a larger number of industrial design resources. On the other hand, one of the respondents from Company K, which is a middle size organization has indicated that senior management is formed a group of designers. The group members are not necessarily with industrial design backgrounds; however, they are formed of architects and interior designers. Thus, when analyzing the use of design resources, the situation of Company K should be taken into consideration. Figure-4 pictures the number of industrial designers in the companies.

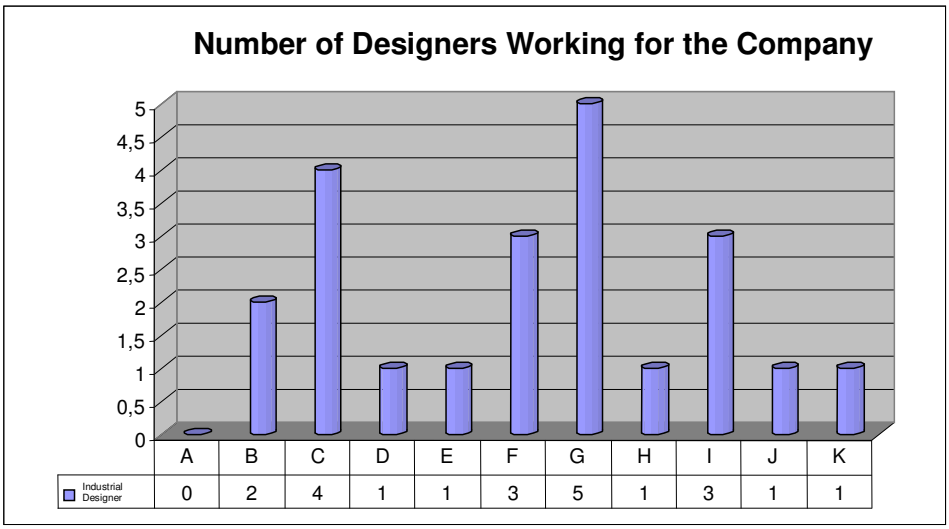

Figure-4. Number of industrial designers working for the company

4.2.4 Criteria for Employment of Designers

Q: What criteria did you seek in choosing designers?

From the list of criteria for selecting designers as can be viewed in Figure-5, graduating from design related schools stands out among all others. After education, experience in the field, talent/creativity and accomplishments of designers until this point can be named. Communication skills and competence in the required areas are other criteria mentioned by participants. A set of additional criteria have been listed as can be viewed below:

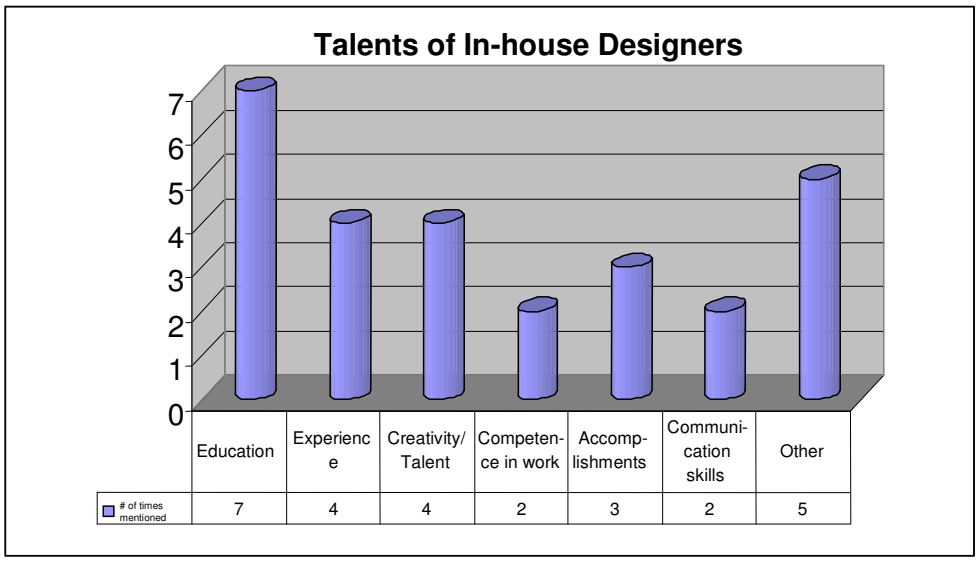

Figure-5. Most Mentioned Seven Talents of In-house Designers

Other criteria taken into account in the selecting process of in-house industrial designers are:

- 3D modeling skills

- References and portfolio
- Being a quick learner
- Adaptability to the company concept
- Enthusiasm
- Vision of life
- Believing in group work
- Notices new developments easily
- These criteria may be reconsidered according to the applicant's talents and accomplishments.

4.2.5 Selection of External Design Expertise

Q: What kind of design resources does your company use?

(4) Local design consultancies

(4) Foreign design consultancies

(1) Teaching staff from design schools

(3) Student projects conducted with collaborations from industries

(1) Winners of the design contests we organized

The Internet survey has addressed the types of design resources that Turkish manufacturers made use of by listing the resources and letting the participants choose according to their experiences. From the outcomes, it is understood that both local and foreign design capabilities have equally been made use of. In addition, three out of seven companies have participated in student projects organized by design schools. Finally, only one company has made use of design contest winners as external design resources.

When the decision for outsourcing design is made, the next step is selecting a suitable external design resource. In that respect, an open ended question that can be seen below was asked:

Q: What are the general aspects taken into consideration in the selecting process of external design resources?

Third party reference, has been selected the most mentioned criteria in the selection of a suitable design resource which, can be viewed in Figure 6. Von Stamm (1997) also mentions that third party reference is relied upon among all other criteria when outsourcing design. Previous achievements is another important selling point followed with the price of the service. Experience, surprisingly comes behind the mentioned criteria when hiring external design capabilities. Participants of the investigation have noted additional criteria that can be viewed below:

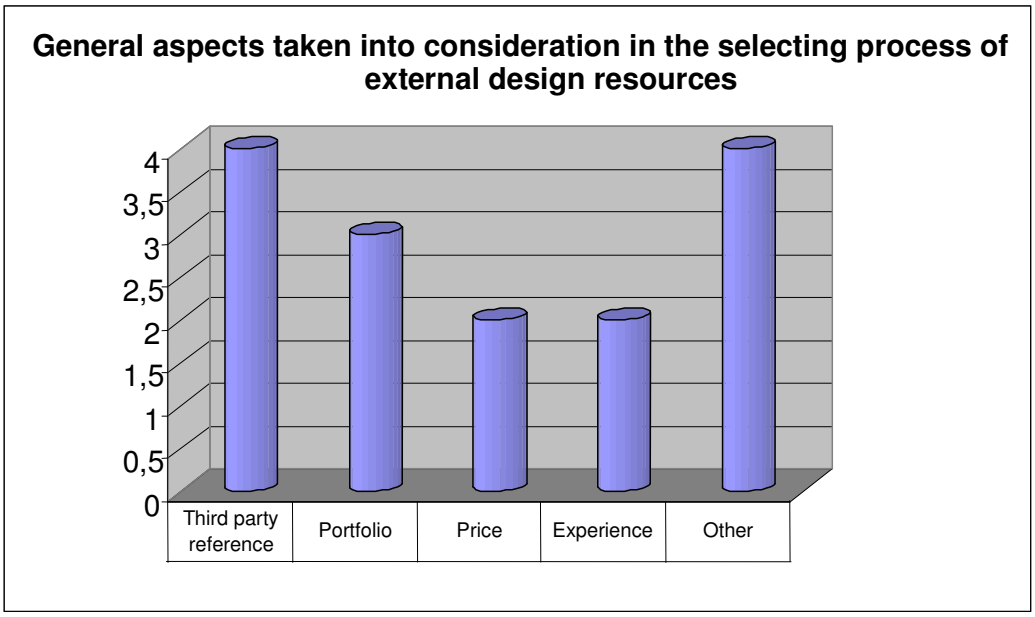

Figure-6. Five most mentioned aspects taken into consideration in the selecting process of external design resources.

Other criteria taken into account in the selecting process of outsourced industrial designers:

- Popularity (how their popularity can make an impact in the advertising of our company)

- Presentation
- Design infrastructure (design team)
- Technologic competency
- The impact of their designs in the market today
- Ability to capture our style
- Punctuality

4.2.6 Expectations from External Designers

Q: If any, what were your expectations from the foreign external design resources? Please list your expectations.

In the survey, the respondents were asked to articulate on their expectations and form a list. Later, a general list has been developed from the sum of answers and the order of expectations has been decided according to the frequency an expectation has received, which, can be seen in Table-6.

Generating a new design idea for a product and the execution of the project is the expectation that client organizations have mentioned the most. Additional expectations of clients consist of expertise (know-how) in specific fields, such as, technological details regarding industry and production, information on government standards related to products and copyright matters.

When investigating further on what is expected of local design consultants by Turkish manufacturers, abiding due dates, performing follow-ups until the end of the project, showing careful consideration towards client companies corporate identity, resources and expectations, determining reasonable prices and finally determining rules that are suitable for Turkey's economic and industrial conditions can be stated.

Table-6. Expectations from local external designers

Expectations from local external designers
▪ Building the product concept ▪ Development of new product ▪ Know-how on technological details regarding the industry and production facilities ▪ Know-how on standards ▪ Know-how on assembly systems ▪ Abidance towards due dates. ▪ Projects must be followed through until the end. ▪ Company specific issues like corporate identity, resources and expectations must be respected. ▪ Competency in their field and ability to use that know-how and talent in accordance with the company's limits. ▪ Determining reasonable prices. ▪ Determining rules that are suitable for Turkey's conditions (economic, industrial)

On the other hand, when outsourcing design offshore is considered, it can be seen from Table-7 that innovative designs that will approach a wide global audience which in return bring market success to the manufacturer is the highlight of the list of expectations.

Table-7. Expectations from foreign external designers

Expectations from foreign external designers
▪ Building the product concept ▪ Development of new product ▪ Know-how on technological details regarding the industry and production facilities ▪ Know-how on standards ▪ Know-how on assembly systems ▪ Designs that approach a wide range of consumers with different cultural backgrounds. ▪ Designs that are different from the products in competing markets. ▪ Learning new technologies. ▪ Learning new design processes ▪ Innovative, attractive, trendy, even yet beyond trendy, product designs ▪ Providing with detailed product solutions that are suitable for production.

Q: Have you spotted any differences in terms of services that foreign and local external designers provide? If you have, please explain.

Two companies have articulated on the differences between local and foreign design consultants. The most important difference noted by Company C is the lack of local design consultants that have experience in their specific industry. According to Company E, they have not seen much difference in terms of nationality; however, they state that productivity and efficiency of the process may vary from consultancy to consultancy.

4.2.7 Problems that Occur During Outsourcing Design

Q: Do you experience any problems in the process of working with external designers? If you are, please list these problems.

When such detailed lists of expectations are formed, it is inevitable to come across at least one or two disappointing experiences. Table-8 shows a combination of problematic areas that have been listed by participating companies. The main problem that has been determined by companies is the "designs not being suitable for the production facilities". Many reasons like barriers in communications, inefficient meetings, misunderstandings of client needs and demands can trigger problems in the development of designs. Inflexibility in completing the necessary modifications required due to company specific issues like technological limitations of the production facility is named to be another problematic area that has to be solved in client consultant communications. In addition, country specific issues also affect relations with consultants. Consciousness that the consultant will portray towards economic, political and demographic realities of the country can help set a foundation of trust in the relationships with the client.

On the other hand, a positive development in client consultant relations are portrayed by Company E, which is a design led organization that has the most experience with external designers. The company seems to have overcome issues regarding outsourcing design, thus noting that no problem that cannot be overcome has come to their attention.

Table-8. Problems that occur when outsourcing design

Problems that occur when outsourcing design
▪ Inability to provide production drawings that are suitable for manufacturing. ▪ Inflexibility in completing the necessary modifications required due to company specific issues. ▪ Inefficient communications ▪ Elongated processes due to disrespecting the due dates. ▪ Inconsistency in the follow-up of projects ▪ Misunderstanding our needs and demands. ▪ Inexistent set of working rules and standards. Rules and designs vary according to the companies they work with. They usually start making rules after they start working with us. ▪ Having a condescending attitude. ▪ They do not think like the tradesmen. ▪ Being far away from the realities of Turkey. ▪ Being unhelpful in providing technical details ▪ Inability to provide designs for the suitable technology ▪ Inconsideration towards the distribution of designer assignments

4.2.8 Concerns Regarding Outsourcing Design

Q: Have you ever considered outsourcing design (For instance, from design consultants)? If you have considered collaborating with design consultants what would your expectation be?

Q: What were your reasons for not considering collaborations with design consultants?

The companies that solely depended on their in-house design capabilities have also articulated on the reasons why they did not resort to outsourcing design. Questions 6 and 7 from Section-A in the survey, which can also be seen above, addressed these issues. Outcomes of the survey, suggest that adapting the company dynamics to a collaboration with external designers is a time consuming process for the companies. A design that will stay on paper and never be able to be produced is another concern of companies which strengthens their impulse to rely on their in-house capabilities. In addition, privacy in some industries forms an important aspect, which prevents them in entering such collaborations.

Table-9. Concerns about outsourcing design

Concerns about outsourcing design
▪ Adapting the company dynamics (Consciousness of brand identity, manufacturing facilities, etc.) to a collaboration with external designers is a time consuming process. ▪ Designs that will stay on paper. ▪ Privacy of company specific matters being violated. ▪ Structure of the company being incompatible to outsourcing design ▪ Having just established an in-house design department and need of time before outsourcing

4.3 OUTCOMES OF THE SURVEY ON COMPANY BASIS

The Internet survey aimed to reveal the present state of the outsourcing design activity, therefore a questionnaire mainly based on open-ended questions have been designed, as mentioned in Chapter 3, to encourage respondents to articulate on their experiences with external designers. Since the findings of the questionnaire consists of answers in the form of short stories depicting the experiences of outsourcing for each company, it was found suitable to mould these experiences in to company based case

studies. In doing so, the environment and conditions in which the outsourcing design process took place could be revealed.

4.3.1 Companies with a Mixed Approach to Design Resources

Company A

Company A is a large-scale glass-packaging manufacturer. The head of the Molding Department YC who is a mechanical engineer responded to the questionnaire and selected Section C indicating that both in-house and external design resources are made use of in the development of their products. Although industrial design activities take place in the company, an interesting finding is that no industrial designer is hired to perform the design work.

The identified external design resources include, teaching staff from design schools and design students participating in school projects that involve collaborations with the company. YC claims that glass packaging is an intricate task that requires specific know-how that prevents them to collaborate with design consultancies. However, the enthusiasm and interest displayed by the industrial design students from METU towards the design and processes of glass packaging has impressed them in such a way that they are repeating these collaborative projects with other university students.

In the evaluation of in-house versus outsourced design YC states the advantages in terms of new idea generating when design services are outsourced, however, it is also noted that in-house design capabilities are more advantageous to work with in terms of manufacturability.

Company B

Company B is a large-scale heating and cooling appliances manufacturer. Design manager and an industrial designer, ÖA responded to the questionnaire. Company B, has an industrial design department under marketing where two designers work. The job description of the designers entail, product design, logotype design, packaging design, persecuting intellectual property rights and management of corporate identity. According to the respondent, the selecting mechanism for design staff includes education, 3D modeling skills, human relation skills and social life.

Company B has made use of its in-house design department as well as external design resources. As it is stated by the design manager, a design for an oil radiator that was to be manufactured in China and sold to the European market was decided to be outsourced. An experienced Italian design consultancy specifically competent in the area of oil radiators' technical details was chosen. The collaboration was found efficient in terms of knowledge transfer in engineering services and 'slice' design.

External design resources are claimed to be difficult in finding and contacting. The portfolio of the company, client portfolio, the price and duration of the service to be hired are aspects that this company looks for in external design resources. They approach external designers with a set of expectations, which initially consist of designs that fit a wide range of consumers with different cultural backgrounds. For instance, these designs are expected to sell in the domestic market as well as the European market. Secondly, these designs have to be different from the products in competing markets. Thirdly, they expect to learn new technologies from their design consultants alongside new processes for designing innovative products. Even though the design consultants that Company B worked with provided them with products that had a language suitable/compatible to a wider audience; they were unable to fulfill the other expectations. For instance, the products were

unable to be differentiated from the competition. ÖA states that a style that was similar through-out the market was advised. In addition, company B was unable to receive some additional features to be included to the designs. This can indicate that the design consultants were not as flexible as expected. Further more, ÖA notes that they were unable to learn new approaches or methodologies concerning design processes. Beside unfulfilled expectations, there are a set of problems that company B has come across in the process of working with outsourced designers. Having problems in acquiring production drawings suitable for manufacturing is on top of the list. Secondly, inflexibility in completing necessary modifications that was required due to company specific (for manufacturing purposes) issues is followed with problems in communications with the design consultants.

Company C

Company C is a large-scale bathroom furniture and appliances manufacturer with a design department, which is located under general management. YA head of designs for Company C reported that four designers worked for them in the design department. Job descriptions of designers are stated as, product development according to customer demand, tracking of innovations of competitors in domestic and international markets (Fairs, print materials and so on) and providing technical support for the designs that are acquired externally (Checking for manufacturability or suitability to standards). Education and experience are the two basic features company C looks for in their designers.

This company has made use of in-house and outsourced design services at the same time but slightly for different reasons. Being a very large organization that has a history over fifty years in an area that is affected by aesthetic movements as well as technological developments has influenced them to see design as a strategic resource. This aspect can differentiate them from the first two companies. Company C has made use of external

designers as a means of advertising as well as new product development. Their most recent collaboration with a design consultant was with R.L. to enhance brand identity with a series called “İstanbul”. This project contained the design of an entire bathroom (bathing unit, bathroom furniture, accessories, etc).

The washing of feet easily like it is to wash hands was the standing point of the concept for the foot wash sink that was a part of the multifunctional washing unit that Company C outsourced the design services. However, due to miscalculated consumer demand, ergonomics, complications in clean and dirty water plumbing and most of all difficulties regarding production were reasons why the project was unsuccessful.

In general, the company contacts external designers through their offices located abroad or through the connections of their marketing and sales department. Due to the strategic locations of the abroad branches, for instance Germany, UK or the US, they do not experience trouble in finding the right designer to work with. Experience in the field of ceramics is a vital issue that Company C seeks in both in-house and outsourced designers. Notwithstanding the competent designers they work with they also come across difficulties or unfulfilled expectations. For instance, designs that are not suitable for their production facilities can be problematic. Thus, they repeatedly claim the importance of ceramics technology be studied very well and technical details solved carefully to decrease problems in manufacturing. In addition, they expect outsourced designers to abide by specific quality standards and be cautious about their assembly systems.

YA notes that long-term relations with experienced outsourced designers helps solve problems that occur during the design process. After working with the same designers for a few projects, problems tend to decrease. Therefore they somewhat leave things to time. In addition, the company’s design team

is always on standby and they usually step in to help solve technical details. Support of the in-house design team is vital.

Company C states that, as far as ceramics industry is concerned, finding external design help from abroad that has experience in this area is more likely compared to the local market. The most important difference is the lack of local design consultants that have experience in the ceramics industry.

Company D

Company D is a middle-size furniture manufacturer with one designer working for them in the Design and R&D Department, which is under General Management. The respondent, İD, summarizes the job description of the designer to lean more towards marketing instead of the new product development. They regularly design stands for fairs, prepare showrooms (sometimes they design accessories for these showrooms) and design catalogues and brochures minding corporate identity. The designer's job also entails the management of photo shoots for their catalogues.

Although İD is the only designer working in this company, certain characteristics were sought when they interviewed potential designers to work for Company D. Although they did not employ anyone at the time, main criteria was, competence in work, character traits with the addition of job experience, and being a graduate of design related departments.

When outsourcing design is taken into account, third party reference has played a major role in the selection process. In addition, comparisons between prices among the proposals are also taken into consideration. Despite the third party referencing system, finding the right external design resource for Company D has been difficult.

Company D has experiences only with local design consultancies and only with graphic design agencies unlike the rest of the companies investigated in this study. İD states that an alliance was formed with an İstanbul based production and design office. The design process is claimed to be an unsuccessful one due to complications concerning the design office's structure –or lack of it. A catalogue order that was decided to be presented in two weeks took two months to finish resulting with most of the work being completed by the in-house designer. The relations with the design consultant was problematic due to insufficient communication. Tardiness towards meeting dates and time schedules on behalf of the consultant company has elongated the design process. Client expectations were unable to be communicated to the consultant, thus resulting in miscalculated needs and demands. In addition there were fallouts in the follow-up of the project.

General expectations from outsourced designers include; keeping up-with due dates, taking care and responsibility in the follow-up of the project, having competency in the required field and being able to use the know-how and talent in accordance with the company they are collaborating with. However, Company D has experienced failing collaborations with external designers. Not only the listed expectations have not been met, but also additional problems have been experienced. For instance, İD has stated carelessness towards their corporate identity and mediocre designs that do not have a differentiating feature.

Company E

Company E is a large-scale manufacturer of office furniture. A design led strategy has been formulated for nearly twenty years. Thus, that directed them to make use of both in-house and outsourced design resources at a strategic level. EC one of the members of the design team responded to the questionnaire. From other source of data like newspapers and design

journals, it can be seen that design is an important issue in this company's differentiation in the market from other organizations.

As a means to entering foreign markets, producing innovative products and forming differentiation in the market, Company C has formed alliances with both local and foreign design consultants. They select their outsourced designers according to the successful work they have done, to the belief that they will understand their sense of style and their experience in the required fields. The CEO, with a background in industrial design, is responsible for selecting the company's design resources by means of personal connections in the area of furniture design.

One of the successful stories mentioned regarding outsourced design is about the long-term relationship with a design consultancy firm from Germany. They have collaborated with this firm for seven years dating back to 1999 and during this time not only has the company benefited in terms of market success but also they have gained international recognition. In addition, the outsourced designers have earned acclaimed design awards with their work for this company. This collaboration brought two important awards, one in 2000 and the other in 2003. Company E has also worked with local design consultants. A seating unit designed by a local design consultant for Company E was found so successful that it was exhibited in a foreign design museum. The collaborations with local designers had an impact in the development of industrial design as a profession in Turkey. Turkish designers were recognized internationally. Notwithstanding the successful examples in outsourcing of design, there is also a project mentioned by EC that was terminated due to failures in the process of designing. However, overall, Company E is satisfied with the outsourced design resources they have worked with. The building of the concept and the product development stages are the most important stages Company E expects outsourced designers to work in. The process of getting the product ready for manufacturing and

solving technical details is something that the in-house design team accomplishes with the coordination of the external designers.

Company E's experiences with outsourced designers prevents them to think any existing differences between foreign or local designers. However, E.C. notes that differences in design work may vary from consultancy to consultancy.

Company F

AKÖ, R&D Coordinator and Executive Board Member has responded to the questionnaire from Company F, a large scale furniture manufacturer founded in the 50's. Design is held under the R&D department. The designers are under the R&D Coordinator, which is under the supervision of the president. Architecture, project development, framework upholstering and graphics are departments that work under R&D. The job description of designers for Company F is designing products according to demand, preparation of 3D model of designed product via computer, calculation of size and proportion values, following the prototyping process and performing modifications on existing products. They look for talent for generating new ideas and education in their designers that are to accomplish the listed jobs.

Company F has collaborated with local design consultants, participated in student projects and worked with winners of the design competition that they have organized. They claim to have difficulties in finding and contacting the suitable external design resources. Design and furniture fairs are places they initiate contact with external designers they want to work with. In addition, they contact designers that received design awards. Former work, brands that they worked with and the impact of their designs in the market today are the main criteria in their selecting process.

Even though the setting for admitting new ideas and new processes seems suitable for outsourcing design; Company F has encountered unsuccessful experiences with external designers. AKÖ articulates on a failed outsourcing design experience with a local design consultant. After generating the ideas for new products, the consultant provided them with cardboard models. However, the consultant was unable to make the system work in prototypes. One and half year later, a welder from the framework atelier came up with a solution to salvage the design.

General problems that Company F has come across while collaborating with local external designers emerge from the profession of design consulting being young in Turkey. AKÖ states that rules and designs vary according to the companies they work with. Design consultants have a tendency to start making rules after they start working with them. Another aspect that has a negative impact in client consultant relations is the condescending attitudes of external designers towards the client. AKÖ notes that not only their noses are in the air but they also lack the sensibility to empathize with the clients conditions. These conditions or borders that they work in are drawn from the realities of the industry and the realities of a developing country, for which AKÖ believes the outsourced designers had no clue. Consultants tend to ask excessive prices that companies are not ready to pay under today's circumstances. It is again noted that external designers have a chance of acquiring work on a regular basis if they had addressed Company F with reasonable prices. Finances (prices that are ridiculously high) and rules that are imported from developed countries lead manufacturers to deal with their product development issues in-house. This approach reduces new product development models and increases copying designs that are cheap to produce. Thus, only a small amount of designers from only specific firms get to see their designs produced.

Company G

Company G is another furniture manufacturer with one of the largest design team among the companies that participated in the study. Sales Manager and designer, BD and R&D and Design Department Manager Mİ have responded to the questionnaires. With a grand total of five designers, three under R&D, and the other two under sales and custom projects, the in-house design department is active in sales and marketing as well as product development. The design department has an equal standing with the vice president and was established under the name of Design Group Management. Being directly connected to the Board of Management, this group works with orders from Office Furniture Sales and Household Furniture Sales Departments. Subsections of the Design Group Management are Technical Bureau, Production Planning, Production, Sales and Quality Control. The two designers from the Department of Concept Development also help with office furniture designs and contract projects. Below is the job distribution as stated by Mİ:

(1) Designer - Section Leader and Design Director
(1) Designer - Designer that is responsible from Household Furniture
(1) Designer - Designer that is responsible from Office Furniture
(1) Designer - Sales and supporting projects and contracts projects manager
(1) Designer - Vice president for contract projects

The job description of designers for Company G can be listed as; preparation of products concept drawings, project development, follow-up of the modeling stage with R&D, the preparation of required technological infrastructure, listing of the required orders from abroad and presentation of the finalized data to the Planning Department. Main criteria for choosing in-house designers has been listed as; experience in that industry, good references, impressive portfolio, design education, creativity, being a quick learner,

adaptability to the company concept and being young of age. These criteria are reconsidered according to the applicant's talents and accomplishments.

Company G has worked with foreign design consultants and participated in student projects. BD states that the experience with a German design consultancy was a success in terms of innovative product development. The uniqueness and practical use of the design had a good impact on sales. Mİ notes that collaborations with foreign design consultancy firms were pleasant, especially an Italian firm they worked with met all of their expectations in terms of new idea generation and technical drawings.

Company G looks for references, popularity and presentation of the outsourced design resource as well as how their popularity can make an impact in the advertising of their company. They also like to know about their competencies in terms of design infrastructure and new technologies. In spite of the careful considerations taken place in the selecting of designers, there are a number of unsuccessful encounters with consultants.

BD notes a failed design process when they encountered some problems with a local design consultant. The designs were not suitable for production. Later technical details regarding the design had to be revised which lead to an increase in the production costs. Besides the concerns regarding the price of the product, there were usability issues that needed to be reconsidered. Meanwhile, Mİ notes an unsuccessful encounter they had in 2003. Distribution of responsibilities was problematic in this case where the in-house design group had to perform the majority of the work instead of the outsourced designers. After the concept development stage, they encountered problems with the static models, working models and prototypes. This was due to the incompetence of the design consultancy that failed to generate new solutions. Company G had to solve all problems regarding the development of the product in spite of the contract that was agreed on. Due to miscalculations of the design process by both parties,

problems were experienced. The design process was conducted by one party and because of the time constraints; the in-house designers were unable to interfere to solve problems. Thus, expectations were failed to be met. As a result, Company G was provided with unsuitable designs for manufacturing that incidentally led them to fail to produce the intended designs.

Initially, Company G searches and locates design consultants through industrial publications, third party references, web sites and by the consultancy's recognition among designers. They expect innovative, trendy, even yet beyond trendy product designs, technical support regarding production, detailed product solutions that are suitable for production from the consultants they work with. However, sometimes expectations have not been met by outsourcing design. Especially after the concept developing stage, problems regarding suitable technical details and suitable technology are experienced. Besides issues regarding technical data, distribution of designer assignments have been known to be problematic in some projects.

4.3.2 Companies that only Prefer In-house Design Resources

Company H

Company H is a large-scale furniture manufacturer that has one designer working under the chief of designs. The in-house design department has a prototype atelier that makes R&D easier. The design of new products and the follow-up of the product until it is produced is a part of the job description of the designer. This company looks for designers that are inquisitive and enjoy designing as well as, being equipped with good communication skills, open to group work and a graduate of design related schools. Having experience in the job is not a priority. The designer, SÖ has participated in the study stating the position of Company H on the subject of outsourcing design. They have

considered outsourcing design, however, they concluded that it would be a time consuming process to adapt the company dynamics (consciousness of brand identity, manufacturing facilities, etc.) to make that relationship work. In addition, they have concerns that the designs will never exceed the virtual stage.

Company I

Company I is a large-scale porcelain kitchenware manufacturer that has a design team with three industrial designers. AK a member of that team is responsible from new product designs and modifying existing products. The main criteria they seek in their in-house designers are experience and talent. They have concerns regarding outsourcing of design due to privacy matters, which is why they realize new product development and production in-house.

Company J

Company J is a middle-scale children's accessories manufacturer. Contract work entailing the production of children's furniture is also another area they provide services in. R&D forms the core of this company and it is formed of architects, interior designers and one industrial designer. KA from the R&D department has responded to the questionnaire stating that designers are expected to develop new products and make necessary modifications on existing products according to the criteria supplied by the Sales Department. In-house designers are selected according to their view of life, ideas they produced until now and their expectations from the company.

Company J has considered outsourcing design, however due to company specific matters, they believe that working one to one with external designers would be a difficult process. Despite the difficulties, KA adds that outsourcing

a limited amount of the design work regarding singular units (desks, chairs, etc.) would be possible in the future.

Company K

Company K is a large-scale industrial kitchen units and equipment manufacturer. EY, from the Industrial Design Department, responded to the questionnaire noting that one designer works for this company. The newly established design department is under the general management for the time being. Developing new products according to demand and the follow-up work of the design is the responsibility of the designer. Observing consumer and market demand, developing new ideas and products and making modifications on existing products summarizes the job description of the designer. Designers are selected according to their education, talent, accomplishments in their work and their enthusiasm towards the industrial kitchen industry.

On the issue of outsourcing design, taking into account of the newly established design department, an alliance of this caliber can be considered only in the near future. EY notes that such collaborations would be beneficial in the development of the design department, enhancing design processes. In addition, different perspectives can be implemented into the company by working with outsourced designers in various projects.

4.3.3 Advantages and Disadvantages

Q: Please evaluate the in-house versus outsourced design capabilities according to their advantages and disadvantages for your firm.

One of the most intriguing outcomes of the survey is the evaluation of the in-house versus outsourced design capabilities according to their advantages and disadvantages that can viewed in a summary in Table-10.

When advantages of in-house design resources are considered, “designs that can be easily produced” is the most frequently mentioned. Indicating the importance of the location of the design department. When R&D or design departments are close to the production facilities, uninterrupted communications can be acquired as well as quick remedies to problems that are caught in a short time. Following the projects’ developments when processes are in-house is a much easy task; however, it has the risk of being too closed to what is happening outside the premises. Familiarity towards the company’s weak and strong spots has its advantages for in-house designers. It can be of benefit in knowing how to deal with routine problems. On the other hand, it can be of disadvantage when these constraints affect designer’s innovative abilities. Company specific limitations or borders may prevent designers to think out of the box. Incidentally, they may end up producing designs that repeat each other.

Design consulting, a practice that is around for no longer than a decade in Turkey, has been beneficial for many organizations coming from Industrialized Countries that can be seen in the literature review. The outcomes of the survey have brought to attention a list of advantages and disadvantages of outsourcing design. The most highlighted advantage is in “creating innovative products” which enables product differentiation and incidentally provides recognition or success for the company in domestic and international markets. In addition, for client companies, collaborations with external designer’s means learning new technologies, processes and cultures that has noted in the literature review to have an impact in the changing of the culture of the company.

Table-10. Advantages and disadvantages of in-house versus outsourced design

	IN-HOUSE	OUTSOURCED
ADVANTAGES	▪ Designs compatible for the production facilities ▪ Fast, practical solutions ▪ Uninterrupted communications between R&D and production ▪ Designs can be produced with minimum fault due to familiarity of production technology, standards and know-how on product functionality. ▪ Ease in work follow-up ▪ Abidance to delivery dates ▪ Internalization caused from the familiarity of the company structure. ▪ The design process can flow much easier and quicker when production facilities are near. ▪ Better understanding of what the target audience wants ▪ Company knows what to expect ▪ The expectations of the company are being met and solutions to problems that are developed in-house are more easily reflected on the designs. ▪ Nearly 100% exactness can be obtained in the end results of the designs. ▪ Modeling and prototyping approvals are done much quicker. ▪ More cost efficient design expense in the short run ▪ Mastery in production details, technological variables and materials has a good impact on finances.	▪ Creating product differentiation ▪ An outsiders opinion towards products and market ▪ Learning new processes. ▪ Learning new cultures and markets ▪ Learning new technologies. ▪ Better time management by shared work-load. ▪ Free, unrestrained design process. ▪ A more innovative approach in concepts development. ▪ Advantageous in terms of marketing (Enhancing brand recogniition) ▪ Successful in capturing trendy design ideas
DISADVANTAGES	▪ Problems can emerge in creating differentiation ▪ Design that replicate it self ▪ Different design approaches may be prevented due to company specific problems in production ▪ Lack of outsiders opinion/Not being able to look at things objectively ▪ After some time, designers may be caught up in a vicious cycle. ▪ Higher design expenses in the long run. ▪ Hardship in separating oneself from the general notion of the company. ▪ Not being able to spare time for making research and find new ideas for products due to intense work load. (designer trying to solve every little detail increases the work load.) ▪ Difficulty in adapting to new technologies.	▪ Designs incompatible for manufacturing ▪ Being unable to supply the need due to financial and time constraints ▪ Having problems in communications with the clients R&D and Production Departments. ▪ Inflexibility in getting necessary modifications done. ▪ The lack of 3D modeling support needed for production ▪ Inattentiveness in the follow-up's. ▪ Delays in delivering on the intended time ▪ Not being able to internalize the company structure. ▪ They try to sell the ideas or designs that they couldn't sell to previous clients. ▪ The prices are too high. ▪ Concerns regarding company privacy ▪ Model or prototype approvals take too much time as well as the meetings. ▪ Extra expenses (Travel, accommodation, etc.) ▪ Tardiness in providing technical data ▪ Difficulties in solving technical and practical details, selection of suitable materials, determining processes and in surpassing target product prices.

On the other hand, a list of disadvantages has been noted and the most stressed problem is in the "designs that are not suitable for production

facilities". Consultancies lack of sensitivity towards company specific matters like certain limits regarding technology or resources has been problematic when designs were attempted to be prepared for production. All extra efforts in solving technical detail for the designs to work are reflected on the price of the end-product which is another cause for concern. Another important factor for the client consultant relationship to fail is the inflexibility of design consultants towards modifications. Communication at this point becomes an important source in surpassing barriers, however, as the participant companies have declared; even very legitimate excuses for modifications have been turned down. Additionally, price of services has been cause for concern by Turkish manufacturers. The economic and industrial situation of Turkey is claimed to be poorly studied resulting in pricy services.

CHAPTER 5

FINDINGS AND CONCLUSIONS

This chapter contains three sections regarding the general conclusion of the study. First section deals with the general discussions regarding the literature review and outcomes of the internet survey. Second section contains findings regarding the main research questions that are expected to elucidate the state of outsourcing design in Turkey. Finally, a list is composed to be reference to future studies on outsourcing design capabilities in the Turkish manufacturing industry.

5.1 REVISITING THE RESEARCH QUESTIONS CONCERNING THE LITERATURE REVIEW

As markets flow with all sorts of products for a tougher and more sophisticated population of consumer, companies that are willing to survive the competition have to come up with innovative systems to get ahead in the race. “Producing innovative products” is one of the systems that can provide differentiation in the market, hence, help an organization be recognized, better yet maintain a successful route. In order to achieve innovations in products, it has come to attention from the literature review that outsourcing design capabilities has proven to have positive effects on new idea generation in organizations coming from Industrialized Countries. It has been noticed that examples regarding the processes, benefits and “disbenefits” of

outsourcing design has been widely researched in these countries. However, the use of outsourced design in the Turkish manufacturing industry has been scrutinized in a limited sense, hence constituting the reason for this study to be conducted.

Looking back on the literature review regarding outsourcing design in Industrialized Countries certain outcomes can be listed that can also be comprehended as a set of rules that is abided by organizations who have successful collaborations with external design resources. These rules have been derived from the answers of general research questions regarding the literature review on outsourced design. The main research question regarding the literature review was: How has companies from Industrialized Countries made use of outsourced design capabilities? The following are sub research questions that consequently when added together address the main research question.

Why do organizations outsource design?

Tennity, 2003; Von Stamm, 1997; Jevnaker, 1998, have articulated on the reasons clients outsource design. Factors effecting the outsourcing decision are manifold and can be categorized under two parts. The first part constitutes the constraints that lead organizations to resort to design experts. The second part is more about the setting that must be taken into consideration before deciding any approach towards design.

Right kind of expertise. Companies big or small may not always possess every technological development in-house and therefore, design consultants that can deliver the right kind of expertise are sought.

Creativity. New idea generation is a valuable source for an organizations' success. Design consultants are stated to be prone to new idea development more than in-house groups since they are less restrained from company specific issues and more likely to come up with fresh ideas.

Finances. The main reason for outsourcing in general is justified with cost saving matters. The balance between the cost of the outsourced and in-house design services matters most when size of the organization is considered.

Time constraints. Work load that prevents in-house staff to deliver the project at the intended time is one of the reasons why organizations outsource design.

Looking at the outcomes of why organizations outsource design, several factors come to attention that has been pointed out in the literature review to be taken into consideration. These factors are related to the climate of the organization where the outsourcing event takes place. For instance, the market segment has to be considered by calculating the need for an innovative product to enter that specific market. Research on the customer's purchasing decisions can reveal if buyers are open to new product ideas or they are content with the present state. Secondly, whether an organization is an innovator or a follower tells a lot about how design capabilities should be treated. Not all organizations are in the need to innovate all the time. It can be a one-time thing or an organization may not ever have any need to resort to design specialists. Factors effecting an organization being an innovator or a follower lie in the size, market and industry of that company. Finally, the decision concerning the product being a commodity or not will shape the approach towards outsourcing design. For instance, certain questions may help understand the nature of the product and also determine the need to seek outside resources for new product design.

- "can specific features make a difference to the purchasing decision of the product?"
- "does the purchase depend on reputation?"

- “is it the product or the packaging which distinguishes one product from the other?”

How do firms choose their outside design resource?

According to Von Stamm (1998), third party reference has been the most highlighted means of contact when outsourcing design. Similarly, outcomes of the survey suggest that third party reference is an important factor in initiating first contact with design consultants in Turkish organizations. In addition, long-term relations with consultants make it easy in initiating contact alongside knowing what to expect of them.

What can outsourcing design offer organizations?

There are a set of standard features that consultants offer to their clients which are expertise, experience in the field and a creative flair that will provide clients with innovative products. As manufacturers seek designers that will develop the most innovative product which will eventually bring market success, design consultants also seek for new systems that will help them to work through market opportunities and technological developments in order to achieve creative ideas. Since design is a business, differentiating features like the ones stated below can be of advantage if acquired by consultants.

Working through the fuzzy front end. The fuzzy-front-end “is the transition from articulating market opportunity to setting goals before extensive resources are committed”. This non-linear task is very suitable for designers since their talents consist of synthesizing market opportunities and technological developments in order to create new product ideas (Tennity, 2003).

Prototyping. The ability and infrastructure to present prototypes is advantageous since the clients get to see and feel how the end-product is going to be realized. (Tennity, 2003)

Mass customization. "It targets the broad-scale production of individually customized products and services". This aspect can work as an advantage if a consultant chooses to specialize in mass customization (Tennity, 2003, pp: 14).

Experience design. As important as new product design may be, today, companies are recognizing experiences as distinct economic offerings and as basis for growth. Therefore, designers have to keep in mind that not only the product but also the entire ceremony surrounding that product has a selling point in light of this development (Tennity, 2003).

What are the advantages and disadvantages of outsourcing design compared to in-house design?

From the literature review, it has come to attention that with the pre-requisite of total support on behalf of management towards the collaboration with design consultants, outsourcing design may bring organizations many benefits, which can be viewed below:

Closer access to design expertise. Even though having an in-house design capability would enable a closer access to design expertise, not all organizations have the means to acquire design in-house, or purchase "tailor-made design skills" even yet, have the time to develop it. Therefore building a sustainable design competence may be possible by collaborating with external design resources (Bruce and Jevnaker, 1998).

Managing uncertainty. Through long-term collaborations with designers, organizations can learn new processes and solutions to problems strengthening the client and consultant relationship and eventually resolve uncertainties. (Bruce and Jevnaker, 1998).

Visualization and product decisions. Visualization is an important factor in product decisions therefore, the x-factor affecting decisions can lie in the technical capabilities of consultants. Consultancy firms with prototyping and computer animation skills have an advantage in relating to clients much easier (Bruce and Jevnaker, 1998).

Design - "first mover" advantage. Today with globalization, customer sophistication and technology opportunities, ingenious design can bring an organization the “first-mover” advantage (Bruce and Jevnaker, 1998).

Access to a flexible but familiar design resource. Developing long-term relations with design experts can be beneficial especially for companies that need professional design services infrequently, that does not need in-house design capabilities or need outside creative input (Bruce and Jevnaker, 1998).

Strengthen name and reputation. Hiring reputable designers can be beneficial in the advertising of both the product and its brand (Bruce and Jevnaker, 1998).

Achieving a comprehensive visual image. If used strategically, design can offer many opportunities such as commercial benefits. The differentiating of the company can be achieved by a cleverly formulated corporate identity (Bruce and Jevnaker, 1998).

Table-10, in Chapter 4 by Von Stamm (1998) elucidates the advantage-disadvantage balance of outsourcing. From this study, new inspiration, access to specialists’ expertise, relived workload and the freedom to choose when to work can be noted as the advantages of outsourcing design. On the other hand, lack of comprehending company specific issues, problems in ready accessibility, problems in the coordination’s with in-house staff and a

potential lack of confidentiality can be stated as disadvantages for external designer use. Additional disadvantages to outsourcing are as follows:

- Company needs skills to evaluate the design work
- Not-invented-here syndrome
- Problems with industrializing the externally developed design
- Loss of control
- Credibility gap if design is too far removed from company's own station
- Being made a low priority on agency's agenda.

5.2 REVISITING THE RESEARCH QUESTIONS CONCERNING THE FIELDWORK

In the past ten years, outsourcing industrial design capabilities has been noticed in the Turkish manufacturing industry. Through a literature review and outcomes of an Internet survey, it has come to attention that companies from the selected origin have made use of external design help for several reasons. One of the most highlighted reasons is to attract attention in prospective markets. Due to the implications aroused by the negotiations with the EU and the increase in the variety of products with the entrance of imported goods from countries like China, large-scale Turkish organizations have sought other markets to export their products. To survive in such markets, building or enhancing design capabilities in-house for product development was one of the solutions. Another solution was to collaborate with design consultants especially from the same origin of the intended market. An interesting detail found from the outcomes of the survey was that among 11 respondent's only companies with in-house design capabilities tended to outsource design. In the light of this finding, it can be estimated that designers helped organizations to understand the importance and the need to innovate, thus seeking many ways to achieve this goal.

The main research question regarding the literature review is:

"How is outsourced design made use of in the Turkish Industry?"

However, to understand how design is outsourced in Turkey, several sub-questions have been addressed as can be followed below:

Which of the outside design resources do Turkish companies tend to choose?

The Internet survey has addressed the types of design resources that Turkish manufacturers resorted to by listing the resources and letting the participants choose according to their experiences. As can be seen from the outcomes of the survey in Chapter 4, manufacturing companies from the study have resorted to both local and foreign design consultants equally. In addition, some of the companies participated in student projects organized by design schools. However, a mass inclination toward one type of resource could not be recorded which can be the result of a low participation rate. In addition, none of the organizations depended solely on outsourcing design expertise which can be an indication of:

- Organizations are not ready to outsource design yet,
- Organizations do not need to innovate to stay in the market they are in,
- Organizations are content with their in-house design capabilities
- Organizations are considering outsourcing design but they are hesitant in several matters like, privacy and adapting company specific issues towards the concept.

What motivates Turkish organizations to outsource design services?

Two major goals are sought by Turkish organizations which also lie as the reason for outsourcing of design services. First goal is to obtain success in the domestic market. Secondly, recognition in international markets is an

important reason for organizations to hire design experts to produce innovative products.

How do Turkish firms choose their outside design resource?

The choices are determined according to certain aspects. The findings in this area are from the outcomes of the survey listed below:

Third party reference. Outcomes of the literature review and internet survey state that third party reference comes ahead of even the popularity of a design consultancy.

Portfolio. Previous work done gives clients an understanding of what the consultants are capable of, also portfolio stands as a form of third party reference for the client.

Price. In many sectors, outsourcing is preferred for financial reasons, however, when design is considered, as can be seen from the list of aspects, price of the service comes after references and consultancies talents.

Experience. All large-scale manufacturers have deliberately stated that experience in their specific industry as a very important aspect.

Specialization. Competence in specialized areas for design consultants has benefits for both parties. From the study, the example of Company B can be noted, since the need to outsource design capability was derived from the need to acquire certain expertise in the design of an oil radiator. In that case technological know-how regarding radiators were acquired from design consultants.

Popularity. (The impact of their designs in the market today) The popularity of a consultant or consultancy can work as a means to advertise both the product and the company.

Presentation. Presentation of previous work as well as the talents and technological infrastructure that the consultancy possesses is an important aspect in attracting clients.

Design infrastructure (design team). The design team or core group that is responsible for product development is one of the major assets that clients tend seek out in successful design consultancies.

Ability to capture our style. Especially two of the large-scale furniture manufacturers highlighted this issue. This can indicate that these companies have built a distinguishing style in their products that also is a part of their corporate identity.

What is the expectation from outside design resources?

In order to acquire information about the perspective of the Turkish industry towards local and foreign design consultants, the expectations have been categorized under two sections. Turkish organization's expectations from local design consultants can be summarized with Tennity's "bred-in-the-bone" analogy, where expertise, experience and creative flair are the required features. Determining reasonable prices, rules that are suitable for Turkey's economic and industrial conditions are other features expected from local design consultants.

On the other hand, when outsourcing design services from foreign countries is considered, it can be seen from Table-6 from Chapter 4 that innovative designs that will approach a wide global audience which in return bring market success to the manufacturer is the highlight of the list of expectations. Turkish organizations seek especially ingenuity in their products when they address foreign design consultants, along with learning new processes, technologies, cultures and materials.

Have Turkish organizations met their expectations after working with outside design resources?

Only one of the companies stated that they did not experience a notable disappointment by outsourcing design. On the contrary, they claimed that their expectations had been met. However, for the remainder of the companies the outsourcing design processes resulted with a list of problematic areas which were listed in Chapter 4. Inability to provide production drawings that are suitable for manufacturing has been noted as the most problematic area during the collaborations. Inflexibility in completing the necessary modifications required due to company specific issues is noted as the following problem. In addition, difficulties that take place due to inefficient communications like misunderstood demands, needs and due dates form as a problem in the client consultant relationship.

Do Turkish manufacturers address any advantages or disadvantages concerning outsourcing design?

Major advantage of outsourcing design for Turkish manufacturers is new idea creation. Organizations are in need of producing products that will be differentiated –in a good way- in both local and international markets. In that respect, the companies have met their expectations through their collaborations when innovation is concerned. On the other hand, they have experienced difficulties in preparing these design ideas for production.

Another advantage concerning outsourcing is in the learning process. When collaborating with design consultants, Turkish organizations have had the opportunity to learn new technologies, cultures, markets and most importantly design processes that were stated to be beneficial in their future collaborations.

However, inflexibility in changing designs that client organizations demand due to technical constraints of the production facilities form a barrier in client-consultant relations. Poor communication between two parties can be the

cause for these actions where needs and demands are misinterpreted. Pricey services are claimed to be another disadvantage.

Have Turkish manufacturers distinguished any differences between local and foreign design consultants?

Two companies have articulated on the differences between local and foreign design consultants. The most important difference noted by Company C is the lack of local design consultants that have experience in their specific industry. According to Company E, they have not seen much difference in terms of nationality; however, they state that productivity and efficiency of the process may vary from consultancy to consultancy.

5.3 RECOMMENDED STRATEGIES TO IMPROVE THE STATUS OF OUTSOURCING DESIGN IN TURKEY

Although it is hard to come up with a general solution to remedy all problems related to the outsourcing process, a list of several tailor-made solutions that successful companies resorted to in the reviewed literature has been summarized in Table 11 in the following page.

Additions to the table have also been made from the outcomes of the fieldwork. The lists in Table 11 consists of recommendations that client and consultant bodies may take into consideration for building successful businesses as well as strong relationships.

As it is noted in the literature review, successful design consultancies have four important aspects in common, which are *knowledge*, *process*, *core group* and *service.* Any attempt to enhance these basic structures will be of benefit not only for the consultancy but also for the client. In addition, being open to new possibilities that consultants may bring to the organization and

showing support to the entire client-consultant relationship at senior level will help smoothen the new product development process.

Table-11. Recommendations for a successful business and client-consultant relationship.

Recommendations for client's	Recommendations for consultant's
▪ Knowing every aspect of the market segment ▪ Deciding whether there is a need for new product development ▪ Deciding the benefits to be gained from hiring external design help. ▪ Embedding design awareness into the core organization (becoming familiar with how design processes work) ▪ Deciding which design consulting firm to benefit from ▪ Co-locating to be closer to the design consultant ▪ Long-term collaboration and reciprocal mobility ▪ Sharing costs ▪ Communicating the exact need and forming design briefs ▪ Being clear about the distribution of responsibilities. ▪ Supporting the client-consultant relationship.	▪ Co-locating to be closer to the client company ▪ Long-term collaboration and reciprocal mobility ▪ Sharing costs ▪ Enhancing modeling prototyping ability ▪ Keeping up-to-date about new technological developments ▪ Keeping the client up-to-date about progress ▪ Keeping privacy matters at top priority ▪ Working under contract ▪ Holding on to talented staff ▪ Hiring senior business management professionals ▪ Demonstrating the intrinsic difference from the competition ▪ Communicating the pre- and post proposal process ▪ Knowing the competitive situation ▪ Making an in-depth research about the client. ▪ Setting a fixed price for fixed set of deliverables ▪ Developing a "killer web-site" ▪ Not waiting for businesses to come to you ▪ Hiring experts for own brand recognition

Outsourcing design is a new development for Turkey. Knowing that industrial design entered Turkey by means of education, in this respect, it can be noted as another responsibility bestowed upon design schools to inform students about the outsourcing design processes. Since some of the companies that participated in the questionnaire took place in student projects in a collaborative effort with design schools, it can be possible for other projects

to emerge around the issue of outsourcing. In addition, alumni that have experience in the consulting field can share opinions in debates organized by design schools.

5.4 RECOMMENDATIONS FOR FURTHER STUDY

The current state of the study can form a basis for further research to be conducted on outsourcing design in general and on the Turkish manufacturing industry in particular.

This study aimed to reveal the state of outsourcing design services in the Turkish manufacturing industry. An internet survey developed in this pursuit has reached 75 companies where the response rate was 15%. For further studies, a greater number of companies can be persuaded to participate in the study, which in return the outcomes will stand as a greater portrayal of the state of design as a business in the Turkish industry. Taking this assessment one step further by supporting the questionnaires with interviews in further studies will create a closer perspective on outsourcing design and result in more detailed case studies.

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APPENDIX A

INTERNET SURVEY

TÜRK ENDÜSTRİSİNDE TASARIM DANIŞMANLIK HİZMETİNİN KULLANIMI

Bu anket Orta Doğu Teknik Üniversitesi Endüstri Ürünleri Tasarımı Bölümünde yürütülen bir Yüksek Lisans tezi kapsamında, Türk endüstrisinde tasarım hizmetini firma dışından alan üretici kuruluşların alınan hizmetler konusundaki görüşlerini araştırmaktadır. Araştırma ülkemizde tasarım hizmetlerinin geliştirilmesine veri sağlamayı amaçlamaktadır. **Anketi firma içindeki tasarımdan veya üretimden sorumlu yöneticinin doldurması beklenmektedir.**

Lütfen Anketi web sayfasından doldurduktan sonra "gönder" tuşuna basın. Böylelikle cevaplarınız araştırmayı yapan Yasemin Oran'ın e-posta adresine otomatik olarak yönlendirilecektir. Anketin cevap ve sonuçları sadece tez kapsamında kullanılacak, tezin sonuçları kişisel bilgilere ve firma ismine değinilmeden sunulacaktır.

Katılımınız için teşekkür ederiz.

Yasemin Oran
Tel1: 0 392 661 22 55 (ODTÜ-KKTC-ofis)
Tel2: 0 312 210 33 54 (ODTÜ-Ankara-ofis)
Fax: 0 312 210 12 51
yasemins@metu.edu.tr

1. Adınız soyadınız, ünvanınız:.....

2. Elektronik posta adresiniz:.....

3. Çalışmakta olduğunuz firmadaki göreviniz:.....

4. Çalışmakta olduğunuz firmanın adı: ....

5. Çalıştığınız bölümün adı:..... .....

6. Firmanızın adresi:.....

7. Firmanızda üretilen ürünlerin endüstriyel tasarımını gerçekleştirmek üzere geçmişten bugüne kadar ne tür kaynaklardan faydalandınız?

(a.) Sadece firma içindeki tasarımcı veya tasarım ekibi
(b.) Sadece firma dışı tasarım hizmeti sunan kaynaklar
(c.) Hem firma içi hem de firma dışı tasarım kaynakları
(d.) Diğer (Lütfen belirtiniz.....)

******4. soruya (a) cevabını verdiyseniz Bölüm A'nın altındaki, (b) cevabını verdiyseniz Bölüm B'nin altındaki ve (c) cevabını verdiyseniz Bölüm C'nin altındaki soruları yanıtlayarak anketimize devam edebilirsiniz.******

BÖLÜM A
1. Firmanızın bünyesinde kaç endüstriyel tasarımcı çalışmaktadır?
2. Firmanızdaki endüstriyel tasarımcı veya tasarımcılar hangi bölümün altında çalışmaktadır?
3. Endüstriyel tasarımcıların çalıştığı bölümün organizasyon şeması içindeki yeri nedir? Bağlı olduğu üst bölümler ve ona bağlı alt bölümler nelerdir?
4. Firmanızda çalışan endüstriyel tasarımcıların görevleri nelerdir?
5. Firmanızdaki tasarım ekibi oluşturulurken ne gibi ölçütler dikkate alındı? (Eğitim, deneyim, uyruk vb.)
6. Tasarım hizmetini firma dışı bir kaynaktan (Örneğin tasarım danışmanlık firmaları gibi) sağlamayı hiç düşündünüz mü? Eğer düşündüyseniz bu tür bir hizmetten beklentileriniz ne olurdu?
7. Eğer düşünmediyseniz bunun nedenleri nelerdir?

BÖLÜM B
1. Firmanızın başvurduğu ve kullandığı firma dışı tasarım kaynakları nelerdir? Birden fazla seçenek işaretleyebilirsiniz.
( ) a. Yurt içi tasarım danışmanlık firmaları ( ) b. Yurt dışı tasarım danışmanlık firmaları ( ) c. Tasarım okullarından öğretim üyeleri ( ) d. Tasarım okulunda yürütülen öğrenci projeleri çerçevesinde işbirliği ( ) e. Projemiz için açtığımız yarışmayı kazanmış kişiler ( ) f. Diğer (Lütfen belirtiniz)
2. Varsa firmanızın dışarıdan aldığı başarılı bulduğunuz bir tasarım hizmetinin hikayesini kısaca anlatınız. Bu hizmeti hangi açılardan başarılı buldunuz? Lütfen maddeleyiniz.
3. Varsa firmanızın dışarıdan aldığı başarısız bulduğunuz bir tasarım hizmetinin hikayesini kısaca anlatınız. Bu hizmeti hangi açılardan başarısız buldunuz? Lütfen maddeleyiniz.
4. Firma içinde tasarımcı bulundurmama kararının nedenleri nelerdir?
5. Genel olarak tasarım hizmeti veren firmaların seçiminde nelere dikkat ediliyor?
6. Firmanız tasarım hizmeti veren firmalara nasıl ulaşıyor?
7. Firmanıza uygun olabilecek tasarım danışmanlık firmasını bulmakta zorluk yaşıyor musunuz?
( ) Evet ( ) Hayır

8. Tasarım hizmeti veren firma ile çalışma sürecinde sorun yaşıyor musunuz? Eğer yaşıyorsanız bunlar nelerdir?
9. Eğer çalıştıysanız, yurt içinden aldığınız tasarım hizmetlerinden beklentileriniz nelerdi? Lütfen maddeleyiniz.
10. Bu beklentiler ne ölçüde karşılandı? Lütfen her beklenti için ayrıntılı bilgi veriniz.
11. Eğer çalıştıysanız, yurt dışından aldığınız tasarım hizmetinden beklentileriniz nelerdi? Lütfen maddeleyiniz.
12. Bu beklentiler ne ölçüde karşılandı? Lütfen her beklenti için ayrıntılı bilgi veriniz.
13. Yurt içi ve yurt dışı tasarım firmalarının sunduğu hizmetler arasında farklılık gözlemlediniz mi? Bunlar nelerdir?

BÖLÜM C
1. Firmanızın bünyesinde kaç endüstriyel tasarımcı çalışmaktadır?
2. Firmanızdaki endüstriyel tasarımcı veya tasarımcılar hangi bölümün altında çalışmaktadır?
3. Endüstriyel tasarımcıların çalıştığı bölümün organizasyon şeması içindeki yeri nedir? Bağlı olduğu üst bölümler ve ona bağlı alt bölümler nelerdir?
4. Firmanızda çalışan endüstriyel tasarımcıların görevleri nelerdir?
5. Firmanızdaki tasarım ekibi oluşturulurken ne gibi ölçütler dikkate alındı? (Eğitim, deneyim, uyruk vb.)
6.Firmanızın başvurduğu ve kullandığı firma dışı tasarım kaynakları nelerdir? Birden fazla seçenek işaretleyebilirsiniz.
( ) a. Yurt içi tasarım danışmanlık firmaları ( ) b. Yurt dışı tasarım danışmanlık firmaları ( ) c. Tasarım okullarından öğretim üyeleri ( ) d. Tasarım okulunda yürütülen öğrenci projeleri çerçevesinde işbirliği ( ) e. Projemiz için açtığımız yarışmayı kazanmış kişiler ( ) f. Diğer (Lütfen belirtiniz)
7. Varsa firmanızın dışarıdan aldığı başarılı bulduğunuz bir tasarım hizmetinin hikayesini kısaca anlatınız. Bu hizmeti hangi açılardan başarılı buldunuz? Lütfen maddeleyiniz.
8. Varsa firmanızın dışarıdan aldığı başarısız bulduğunuz bir tasarım hizmetinin hikayesini kısaca anlatınız. Bu hizmeti hangi açılardan başarısız buldunuz? Lütfen maddeleyiniz.
9. Genel olarak tasarım hizmeti veren firmaların seçiminde nelere dikkat ediliyor?
10. Firmanız tasarım hizmeti veren firmalara nasıl ulaşıyor?

11. Firmanıza uygun olabilecek tasarım danışmanlık firmasını bulmakta zorluk yaşıyor musunuz?
( ) Evet ( ) Hayır
12. Tasarım hizmeti veren firma ile çalışma sürecinde sorun yaşıyor musunuz? Eğer yaşıyorsanız bunlar nelerdir?
13. Eğer çalıştıysanız, yurt içinden aldığınız tasarım hizmetlerinden beklentileriniz nelerdi? Lütfen maddeleyiniz.
14. Bu beklentiler ne ölçüde karşılandı? Lütfen her beklenti için ayrıntılı bilgi veriniz.
15. Eğer çalıştıysanız, yurt dışından aldığınız tasarım hizmetinden beklentileriniz nelerdi? Lütfen maddeleyiniz.
16. Bu beklentiler ne ölçüde karşılandı? Lütfen her beklenti için ayrıntılı bilgi veriniz.
17. Yurt içi ve yurt dışı tasarım firmalarının sunduğu hizmetler arasında farklılık gözlemlediniz mi? Bunlar nelerdir?
18. Firma içi tasarım fonksiyonu ile firma dışı tasarım hizmetini, firmanız için avantaj ve dezavantajları açısından karşılaştırınız.

Firma içi	**Firma dışı**
Avantajlar:	**Avantajlar:**
Dezavantajlar:	**Dezavantajlar:**

APPENDIX B

PRODUCT LIST FOR THE ETMK – MARKETINGİST SPECIAL EXHIBITION

1. KÜTAHYA PORSELEN - KZY ÇAY TAKIMI – GÖKHAN ERZİ
2. NUMARİNE - TEKNE 52 OPEN - CAN YALMAN
3. LİG FUTBOL AYAKKABILARI– KRAMPON TABANLARI - TRİO TASARIM
4. MAK- SLOT ANAHTAR – KEMAL COŞLU
5. ELA CİNDORUK/NAZAN PAK – YÜZÜK TASARIMLARI – ELA CİNDORUK
6. ÇELİK DİZAYN – DALGA AYDINLATMA – ASLI KIYAK İNGİN
7. ÇELİK DİZAYN – DÖNDÜR AYDINLATMA – ASIL KIYAK İNGİN
8. VİTRA - FOTOSELLİ PİSUAR – GAMZE GÜVEN
9. TÜRMAK – PICNIC SETİ - CAN YALMAN
10. VESTEL – QUADRO – AYŞEGÜL ÇOKTALAŞ
11. VİKO- THEA ELEKTRİK ANAHTARLARI – MİRZAT KOÇ
12. HİSAR – ŞAH ÇATAL KAŞIK – CAN YALMAN
13. HİSAR – FAMİA ÇATAL KAŞIK – İNCİ MUTLU
14. ROCA KALE – ZEN LAVABO – CAN YALMAN
15. BANAT – EXCLUSIVE DİŞ FIRÇASI – KUNTER ŞEKERCİOĞLU
16. MEY İÇKİ - YENİ RAKI ŞİŞESİ – GAMZE GÜVEN/ METE AHISKA
17. FRİGA-PAK - SUNPRIDE ŞİŞESİ – OYA AKMAN
18. OYA AKMAN – BUBBLE BARDAK
19. AY TASARIM – TIBBİ İMPLANT
20. ARÇELİK – BEKO– STEAMO ÜTÜ - ÜMİT ALTUN

21. ARÇELİK – TELVE KAHVE MAKİNASI – ARÇELİK TASARIM GRUBU
22. VESTEL – YAZAR KASA – T DESIGN
23. KOLEKSİYON – TRİSDAN OFİS KOLTUK
24. NURUS – OTURMA BİRİMİ – İNCİ MUTLU
25. BİRİM - CUBE KOLTUK – TANJU ÖZELGİN
26. HAKAN METAL A.Ş. - HANDY – KAPI KOLU – ÇİĞDEM KAYA
27. TARİŞ - İLKEL ZEYTİNYAĞI ŞİŞESİ
28. DERİN DESIGN – İSTANBUL, BUBBLE, FLY
29. KAVIS DESIGN – KOLTUK – YANKI GOKTEPE
30. İKS - MOON KALEM – KUNTER ŞEKERCİOĞLU
31. İKS – OMEGA KALEM TUTACAĞI – KUNTER ŞEKERCİOĞLU
32. BİLSAR – BIL'S BEYAZ GÖMLEK – AYÇA SİTMEN
33. ARZUM- CEZWE – KUNTER ŞEKERCİOĞLU
34. T DESIGN- DENIZ TAKSİ – T DESIGN TASARIM GRUBU
35. EFE – YAŞ ÜZÜM RAKISI – TAYLOR DESIGN

APPENDIX C

RESPONSES TO THE QUESTIONNAIRE

Below are the answers of participants that selected section “C”.

Company Name	Participant Name & Title	Position in Company
Company A	YC, Mechanical Engineer	Manager for Moulding Development (?)
Company B	ÖA, Industrial Designer	Design Manager
Company C	YA, ?	
Company D	İD, ?	Designer
Nurus	EC	
Company F	A.KÖ, ?	R&D Coordinator and Executive Board Member
Company G	BD, Industrial Designer	Manager of Ankara Region for Company G
Company G	Mİ, ?	R&D and Design Department Manager

1. How many designers work in your company?						
Company A	Company B	Company C	Company D	Nurus	Company F	Company G
0	2	4	1	1	3	6*

* Design manager from Company G has stated that five designers work for their company, where as one of the designers noted that the number of designers is six.

2. What is the location of the designers or design department in your company?	
Company A	-
Company B	Industrial Design Department
Company C	Design Management
Company D	Design and R&D Department
Company E	-
Company F	R&D
Company G	Three of the designers are under R&D, and the other two are under sales and custom projects

3. What is the position of the design department in your organization chart?	
Company A	-
Company B	The department is under the vice president of Marketing
Company C	Under the general management
Company D	Design and R&D department is under the supervision of the vice

	president. R&D Application is a subsection of the design department with other subsections of its own like R&D Framework and R&D upholstery.
Company E	-
Company F	The designers are under the R&D Coordinator which is under the supervision of the president. Architecture, project development, framework upholstering and graphics are departments that work under R&D.
Company G	The design department has an equal standing with the vice president and was established under the name of the Design Group Management. Being directly connected to the Board of Management, the design management works with orders from Office furniture sales and household furniture sales. Subsections of the Design Group Management are Technical Bureau, Production Planning, Production, Sales and Quality Control. In addition, 2 more designers are present in Department of Concept Development whom also help with office furniture designs and contract projects.

4. What are the jobs of the designers in your company?	
Company A	
Company B	Product design, logotype design, packaging design, persecuting intellectual property rights, management of corporate identity.
Company C	Product development according to customer demand. Tracking of innovations by competitors in domestic and international markets (Fairs, print materials and so on). Technical support to the designs that are acquired externally (Checking for manufacturability or suitability to standards).
Company D	Stands designs for fairs or showroom designs, corporate identity designs, graphic designs (for catalogues and brochures), alongside management of photo shoots and supplementary product/accessories design are the main assignments of designers instead of by new product development (unfortunately…)
Company E	-
Company F	Designing products according to demand, preparation of 3D model of designed product via computer, calculation of size and proportion values, following the prototyping process doing modifications on existing products.
Company G	(BD's answer) 3 people in R&D – Product development and Production 2 people in Istanbul Headquarters- Presentation and Projects 1 person in Ankara Office - Management and Sales (Mİ's 1st answer) 1 person - Section Leader and Design Director 1 person - Designer that is responsible from Household Furniture 1 person - Designer that is responsible from Office Furniture 1 person – Sales and supporting projects and contracts projects manager 1 person - vice president for contract projects (Mİ's 2nd answer) The preparation of products concept drawings, project development, follow-up of the modelling stage with R&D, the preparation of required technological infrastructure, listing of the required orders from abroad and presentation of the finalised data to the Planning Department.

5. What criteria did you seek in choosing designers?	
Company A	-
Company B	Education, 3D modelling skills, human relation skills, social life
Company C	Education Experience
Company D	There is no other designer than me working in our company. However, there once worked a newly graduate interior designer that was hired according to third party reference by the company manager. Apart from that experience with the motivation of forming a design team, I interviewed some designers for the firm. The main criteria I looked for was competence of their work and their character traits. However, other general criteria also discussed was, experience and being a graduate of design related departments.
Company E	-
Company F	Talent for new idea generation, education
Company G	(Mİ's 1st answer) Many criteria can be named, these are:, Experience in that industry, References and portfolio Education, Creativity, Being young of age These criteria may be reconsidered according to the applicants talents and successes. (Mİ's 2nd answer) Education, talent and being a quick learner, the adaptability to the company concept.

6. What kind of design resources does your company use?	
Company A	c. Teaching staff from design schools d. Student Projects conducted in collaboration with the industry.
Company B	b. Foreign design consultancies
Company C	a. Local design consultancies b. Foreign design consultancies
Company D	a. Local design consultancies
Company E	a. Local design consultancies b. Foreign design consultancies
Company F	a. Local design consultancies d. Student Projects conducted in collaboration with the industry e. Winners of the design competition that we organized.
Company G	b. Foreign design consultancies d. Student Projects conducted in collaboration with the industry

7. Please articulate on a successful outsourcing experience, if any. In which aspects have you found this experience successful? Please make a list of these aspects.	
Company A	The glass packaging design experience with Industrial design students from METU. The enthusiasm and interest of students towards glass packaging was very impressive for us. Similar collaborations are taking place with other university students as well.
Company B	A design for an oil radiator that was to be manufactured in China and sold to the European market was decided to be done by external

	designers. An experienced Italian design consultancy specifically competent in the area of oil radiators' technical details was chosen. The collaboration was efficient in terms of knowledge transfer in engineering services and 'slice' design.
Company C	The collaboration with Ross Lovegrove to enhance brand identity with a series called İstanbul. This project contained the design of an entire bathing room (bath, bathroom furniture and accessories etc).
Company D	The design service that was hired externally usually consisted of catalogue designs and booth designs for fairs. Unfortunately, the designs were mediocre. There were some that were very unsuccessful to my point of view.
Company E	It can be noted as a successful process considering the 7 years of collaborations with German design consultancy firm f/p. Designs with the collaborations of f/p he I/X series was awarded in 2000 and the Kiss series was awarded in 2003 the infamous IF award. Another one of the successful external design processes was conducted with Atilla Kuzu and his seating unit 'Taklamakan' that is a successful design that was admitted to be exhibited at the Marta Herford museum.
Company F	I have no recollection of a successful outsourcing design experience to be told.
Company G	(BD's answer) Design consultancy company from Germany named ID designed for us. The uniqueness and practical use of the design had a good impact on sales which can be noted as a successful process. (Mİ's 1st answer) We find it suitable to collaborate with external designers for new concept generation. There has been two foreign design consultants that we made successful collaborations with during the past years. (Mİ's 2nd answer) Our collaborations with an Italian design firm in 1996 -97 has produced '000' series where from the concept generation to the technical drawing was very pleasing.

8. Please articulate on an unsuccessful outsourcing experience, if any. In which aspects have you found this experience unsuccessful? Please make a list of these aspects.	
Company A	none
Company B	-
Company C	The multi-functional bathing unit. The washing of the feet was the standpoint of the sink with foot-washer concept. Due to miscalculated consumer demand, ergonomics, complications in clean and dirty water pluming and most of all difficulties regarding production were reasons why the project was unsuccessful.
Company D	An alliance was formed with an İstanbul based production and design office. However, due to complications concerning the design office's structure –or lack of it - the catalogue that was decided to be finished in 2 weeks took a lot of work done on our behalf and finally finished after 2 months. Disrespect by the design office manager, being late to meeting or not coming at all without notice elongated the process. The end result was far from satisfactory. However, the main issue here is not the end result but the process itself. Not only the responsible designer was not acting responsible in delivering the catalogue at the intended time but also ethical issues were at hand regarding sloppiness in remembering meeting dates. This was indications for us to never work with them again.

	Other companies we worked with had the similar problems with a few extra as can be seen as follows: - Elongated process/Not respecting due dates. - Fallouts in the follow-up of the projects - The miscalculation of our needs and demands.
Company E	There was a project that has been stopped due to failures in the design process.
Company F	The designer produced new ideas. Small prototypes were prepared out of cardboard. However, the designer was unable to make the system work in the real-life prototypes. One and half year later, a welder from our framework atelier came up with a solution to salvage the design.
Company G	(BD's answer) Freelance designer Inci Mutlu's projects failed at production level. In addition, the prices had to be high due to costly production and also problems were present regarding usability of the product. (Mİ's 1st answer) An experience in 2003 has a negative reference. The project development stages were dumped on the in-house design group where it was the external designer's responsibility. (Mİ's 2nd answer) After the concept stage, we encountered problems with the static models, working models and prototyping stages. This was due to incompetence of the design consultancy or the sub design team lacking in coming up with new solutions. We had to solve all problems regarding the development of the product notwithstanding the contact we agreed on.

9. What are the general aspects taken into consideration in the selecting process of external design resources?	
Company A	Because packaging design with the material being glass is a subject that requires specific know-how that prevents us to work with external designers.
Company B	The portfolio of the company, client portfolio, the price and duration of the service to be hired.
Company C	To be experienced in the ceramics industry.
Company D	Noting that this is not done in a very professional manner; 1. Usually by third party reference 2. The comparison of proposals (price comparison) 3. Presenting of finished work at the intended time
Company E	The freelance designers that we work with are usually people that we think are successful in their work, close to the Company E style and are generally experienced in their area of expertise.
Company F	1. Former work 2. Brands that they worked with 3. The impact of their designs in the market today
Company G	(Mİ's 1st answer) References, Popularity Presentation (Mİ's 2nd answer) References, Industrial references, how their popularity can make an impact in the advertising of our company, design infrastructure and design team, technologic competency.

10. By what means does your company initiate first contact with external designers?	
Company A	-
Company B	via internet or telephone
Company C	By means of Marketting and Sales Services Department or Local Sales Companies (like, Vitra.U.K,Vitra U.S.A ,Vitra Bad Germany)
Company D	By means of references from a third party.
Company E	Our CEO, Renan Gökyay happens to be an Industrial designer whom also the design leader at Company E. A freelance designer is selected in accordance with his/her ability to produce designs for Company E's understanding of style by our CEO.
Company F	fuarlar, yarışmalar
Company G	(Mİ's 1st answer) References, Industrial publications, By means of good references from their products that have been manufactured (Mİ's 2nd answer) Web site, Being known by our design staff by their tracking of the market, Fairs, Press

11. Do you have difficulty in finding a design consultancy suitable for your company?	
Company A	no
Company B	yes
Company C	no
Company D	yes
Company E	no
Company F	yes
Company G	(Mİ's 1st answer) yes/ (Mİ's 2nd answer) no

12. Do you experience any problems in the process of working with external designers? If you are, please list these problems.	
Company A	-
Company B	1. Having problems in acquiring production drawings suitable for manufacturing. 2. Inflexibility in completing the necessary modifications required due to company specific issues. 3. Problems in communications
Company C	Problems can be present in manufacturing and in technical details.
Company D	The answer to question 8 applies.
Company E	We usually do not have problems
Company F	1. Rules and designs vary according to the companies they work with. They usually start making rules after they start working with us. 2. Their noses are in the air. They do not think like the tradesmen. 3. They are so far away from the realities of Turkey. They behave as if there are buyers that would appreciate good design and they price their products accordingly.
Company G	(Mİ's 1st answer) After the concept stage, problems regarding suitable technical details and

	suitable technology are experienced. (Mİ's 2nd answer) The distribution of the mentioned designer assignments can be problematic as well as acquiring data from technical solutions.

13. If any, what were your expectations from the local external design resources? Please list your expectations.	
Company A	
Company B	-
Company C	1. Ceramics technology and production must be studied very well. 2. Standards 3. Assembly systems
Company D	1. Keeping up with due dates. 2. Taking care and responsibility in the follow-up of the work. 3. To understand and evaluate the corporate identity, resources and expectations. 4. Competency in their specific area and ability to use that know-how and talent in accordance with the company they are collaborating with.
Company E	What is expected from the freelance designer alone is in the building of the concept and the development stages. The process of getting the product ready for manufacturing and solving of technical details is something that the in-house design team accomplishes with the coordination of the external designers.
Company F	Designers have a chance of acquiring work on a regular basis if they address us with reasonable prices. Finances (prices that are ridiculously high) and rules that are imported lead manufacturers to deal with their product development issues in-house. This approach reduces new product development models and increases copying designs that are cheap to produce. Thus, only a small amount of designers from only specific firms gets to see their designs produced.
Company G	-

14. To what extent have your expectations been fulfilled? Please explain every expectation in detail.	
Company A	
Company B	-
Company C	1. It is left to time. Company's design team solves problems during design process meetings. After working in a few projects, these kinds of problems can go down to a minimum. 2. The consultants abide by the expectations to some extent.. 3. In-house help is required..
Company D	1. We have constantly experienced problems in due dates. 2. We were unable to work with people that showed the expected care and responsibility in the following-up of the work. (For instance, after designing a catalogue, a lack of following-up of work in terms of what happens when the designs are gone into printing has been noted) 3. External designers lack the care for the corporate identity of the firm they are working fore. They tend to come up with generic solutions that can be applied to any company. However, the issue of differentiation is not considered. It is as if the same "pill" is presented for every problem. However, the newly establishing brand and

	identity concepts in Turkey has something t o do with all this, still, I believe we were unable to work with designers that could act professionally and have a wide perspective in their area of expertise. 4. Finally, the external designer we worked with – that had a third party reference and did not cause major problems – produced designs that were unimpressive to me.
Company E	The required expectations have been met.
Company F	-
Company G	-

15. If any, what were your expectations from the foreign external design resources? Please list your expectations.	
Company A	
Company B	Design that are suitable for global consumer demand and cultural differences. Differenciated designs from global competitors. Teaching of new technologies. Know-how and inputs they will add to our company and designing process.
Company C	It develops in the same line of the 14th question. Not many problems occur with experienced design consultants.
Company D	We never worked
Company E	Same expectations are valid for foreign external designers.
Company F	-
Company G	(Mİ's 1st answer) Innovative, trendy, even yet beyond the trend, supporting the company's production technology, providing with detailed product solutions that are suitable for production. (Mİ's 2nd answer) Designing products that are more trendy more innovative and more attractive.

16. To what extent have your expectations been fulfilled? Please explain every expectation in detail.	
Company A	-
Company B	○ A design language has been obtained that can relate to various customers and cultures. ○ Products were unable to be differentiated from the competition. A similar style was advised. ○ We were unable to receive the expected additional features and specific needs. ○ There were no differences in the approach to the design process or the methodologies used.
Company C	-
Company D	-
Company E	Expectations were met
Company F	-
Company G	(Mİ's 1st answer) only the new concept generation and the formation of a new style was pleasing in this experience (Mİ's 2nd answer) Due to miscalculations of the design process by both parties, problems

	were experienced. The design process was conducted by one party and because of time constraints; the other party was unable to interfere for solving problems. Thus, expectations were failed to be met. If we are to articulate the failed expectations: designs that were not suitable for our production facilities and failure in preparing the exact product series.

17. Have you spotted any differences in terms of services that foreign and local external designers provide. If you have, please explain.	
Company A	
Company B	-
Company C	In terms of the ceramics industry, finding external design help from abroad that has experience in this area is more likely compared to the local market. The most important difference is the lack of local design consultants that have experience in the ceramics industry.
Company D	-
Company E	Foreign or local are not that different to my experience. However, the productivity and efficiency of the process may vary from company to company.
Company F	-
Company G	-

18. Please evaluate the in-house versus outsourced design capabilities according to their advantages and disadvantages for your firm.				
	In-house		Outsourced	
	Advantages	Disadvantages	Advantages	Disadvantages
Company A	It is of advantage in terms of compatibility for manufacturing	It is of disadvantage in creating differentiation	It is of advantage in creating differentiation	It is of disadvantage in terms of compatibility for manufacturing
Company B	1. Fast, Practical solutions 2. Designs that are suitable for the companies production facilities and structure 3. Unlimited communications regarding R&D and production	1. Design that replicate it self. 2. Problems in creating differentiation 3. Problems in designing products that pushes the company to move forward. Structure wise.	1. An external perspective towards products and the market 2. Differentiation and end of monotonousness 3. Multi-variety	1. Being unable to supply the need due to financial and time constraints 2. Having problems in communications with the clients R&D and Production Departments. 3. Inability in being flexible. 4. The lack of support of 3D modelling that is needed for production

Company C	Designs can be produced with minimum fault due to familiarity of production technology, standards and know-how on product functionality.	Different design approaches may be prevented due to company specific problems in production.	1. Different design style and ideas. 2. In-house teams may benefit from comparing the different working processes of external designers. 3. External designers from different countries may also teach their clients of cultures and habits of their countries.	production technology, finances and standards have the risk of falling out of consideration
Company D	1. Work follow-up 2. Delivery dates 3. Internalization caused from the familiarity of the company structure. 4. Finances	1. Repeating oneself after a specific time 2. Lack of outsiders opinion/Not being able to look at things objectively	1. Different point of view/ outsiders opinion 2. Better time management by shared work-load. Thus, increase of in-house team's quality in work. (support for in-house design work)	1. Lack of care in the follow-up of work 2. Delays in delivering on the intended time 3. Not being able to internalize the company structure. Therefore being unable to produce required designs. 4. Finances
Company E	The design process can flow much easier and quicker when production facilities are near. (The productions of designs can show us if that particular design is usable and worth mass-manufacturing. In addition, production staff's feedback on designs can be valuable in terms of developing products for efficient manufacturing)		The design process is not restrained and more free.	After the product is designed, detailed production drawings are prepared with the collaboration of the designer and production department. Any problems regarding the design and production that are noticed after the first prototyping, is a very late stage in the design process. Turning back to square one when a product has production difficulties is a time consuming and hard thing to do.

Company F	Having an in-house designers in may company makes more sense. The designers are aware of the production facilities, their winner aspects and shortcomings. They tend to have a better understanding of what my target audience wants and they know what I expect of them.	After some time, designers may be caught up in a vicious cycle. New blood must be entered to the design group, however the old staff must also be protected.	Working with different designers enables our products to be designed in different styles.	They try to sell the ideas or designs that they couldn't to their previous clients. The prices are too high. I am concerned of company privacy being disturbed. (Aliye beğendiremedikler ini veliye sunuyorlar)
Company G	1st answer: 1. The expectations of the company are being met and solutions to problems that are developed in-house are more easily reflected on the designs. 2. Nearly 100% exactness can be obtained in the end results of the designs. 3. Due to open communication channels, the R&D stages are much quicker. 4. Modelling and prototyping approvals are done much quicker. 5. More cost efficient design expense in the short run 2nd answer: Mastery in production details, technological variables and materials has a good impact on finances.	1st answer: 1. Higher design expences in the long run. 2. Hardship in separating oneself from the general notion of the company. 3. Not being able to spare time for making research and find new ideas for products due to intense work load. (designer trying to solve every little detail increases the work load.) 2nd answer: 1. Having problems in new idea generation 2. Difficulty in adapting to new technologies.	1st answer: 1. A more innovative approach in concepts development. 2. Advantageous in terms of marketing. (Infamous designers have a positive impact on the sales of products in international markets) 3. External design team has stronger instincts when strategies for international markets are considered. (When working with foreign designers.) 4. They are more successful in capturing trendy design ideas that is targeted for a specific product. 2nd answer: The possibility of coming across with new ideas and new materials.	1st answer: 1. Communication : Model or prototype approvals take too much time as well as the meetings. 2. Extra expenses (Travel, accommodatio n, etc.) 3. In the following stages, the tardiness in providing the client with technical data. 2nd answer: Difficulties in solving technical and practical details, selection of suitable materials, determining processes and also in surpassing target product prices.

Below are the answers of participants that selected section A.

Company Name	Participant Name & Title	Position in Company
Company H	SÖ, Architect	R&D
Company I	AK	Üretim Takımları Yöneticisi
COMPANY J	KA, Architect	R&D
Company K	EY, Industrial Designer	Designer

1. Firmanızın bünyesinde kaç endüstriyel tasarımcı çalışmaktadır?	
Company H	1
Company I	3
COMPANY J	1
Company K	1

2. Firmanızdaki endüstriyel tasarımcı veya tasarımcılar hangi bölümün altında çalışmaktadır?	
Company H	Ar-Ge
Company I	Modelhane Takımı
COMPANY J	Ar-Ge departmanı
Company K	Endüstri Ürünleri Tasarımı Bölümü

3. Endüstriyel tasarımcıların çalıştığı bölümün organizasyon şeması içindeki yeri nedir? Bağlı olduğu üst bölümler ve ona bağlı alt bölümler nelerdir?	
Company H	Tasarım uzmanı olarak çalışmaktalar. Tasarım şefine bağlı olarak çalışmakatalar. Kendisine bağlı prototip atölyesi bulunmakta.
Company I	Üretim Takımları Yöneticiliği\'ne bağlı olarak çalışmaktadır.
COMPANY J	Satış (Fiyat, Kalite) → ARGE ← Üretim (Kolay Üretilebilirlik, Modülerlik)
Company K	Talebin geldiği noktaya göre değişir. Talebin geldiği noktadan itibaren bütün evrelerde etkinlik gösterebilir.Yeni fikir talebi tasarımcıdan gelirse şemanın başından sonuna kadar yer alır. Tasarım bölümü, Genel Müdüre bağlıdır. Yeni yapılandığı için bu bölüme bağlı başka bir bölüm yoktur.

4. Firmanızda çalışan endüstriyel tasarımcıların görevleri nelerdir?	
Company H	Panel mobilya yapmaktalar. Tasarım yapılmasından markaya kazandırılmasına kadar tüm aşamaları takip eder.
Company I	Yeni ürünler tasarlamak ve mevcut ürünlerde iyileştirmeler yapmak.
COMPANY J	Satıştan aldığı kriterlerle gerekli değişimleri tasarımlarına aktarmak ve yeni tasarımlar.
Company K	Kullanıcı ve piyasa gözlemleme, yeni ürün ve fikir tasarımı, ürün geliştirme ve iyileştirme görevleri en belirginleridir.

5. Firmanızdaki tasarım ekibi oluşturulurken ne gibi ölçütler dikkate alındı? (Eğitim, deneyim, uyruk vb.)	
Company H	İletişimi yüksek, grup çalışmasına inanan, radarları açık, tasarımı seven, vizyon sahibi olması ve tasarım okullarından mezun olması şartı ararız. Deneyimsiz olması bizim için avantaj.
Company I	Ekip oluşturulurken dikkat edilen en önemli unsur deneyim ve yetenektir.
COMPANY J	-Hayata bakışı -O ana kadar ürettiği fikirler -Beklentileri
Company K	Eğitim, yetenek, o ana kadar yapılan işler, heveslilik gibi bazı ölçütler dikkate alındı.

6. Tasarım hizmetini firma dışı bir kaynaktan (Örneğin tasarım danışmanlık firmaları gibi) sağlamayı hiç düşündünüz mü? Eğer düşündüyseniz bu tür bir hizmetten beklentileriniz ne olurdu?	
Company H	We did think about it. However, adapting our company dynamics (Consciousness of brand identity, manufacturing facilities, etc.) to external designers would be a time consuming process. I also have concerns that the designs will never exceed the virtual stage.
Company I	We realize both production and design in-house. If we were to outsource the design capability, we would have concerns regarding the privacy of

	company specific matters being violated.
COMPANY J	We are thinking about it. However, we also think it would be hard to work one on one with external designers in terms of the modular format of the company.
Company K	The establishment of the Industrial Design Department in our organization is recent, thus, a collaboration can be considered in the near future. With this collaboration, the structure of the design department could be enhanced. Better experiences can be encountered. Different perspectives can be implemented in to the company by working in various projects.

7. Eğer düşünmediyseniz bunun nedenleri nelerdir?	
Company H	-
Company I	Being a large scaled enterprise directs us to take precautions in dealing with certain things in-house. For instance, design related issues are dealt within the organization due to privacy matters.
COMPANY J	We may consider outsourcing design only in a limited sense, which is in singular units (desks, chairs, etc.)
Company K	-