

THE STATE OF DESIGN: TOWARDS AN ASSESSMENT OF THE DEVELOPMENT OF INDUSTRIAL DESIGN IN TURKEY¹

Alpay ER

INTRODUCTION

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It has been more than twenty-five years since the concept of industrial design was first introduced into the Turkish context. During this period, industrial design was primarily taught as an off-shoot course from the existing architecture and interior design programmes, then separate, fully fledged industrial design departments were founded at some universities. Today these departments have their own postgraduate programmes and the number of graduate industrial designers in Turkey is approaching towards one thousand. In 1994, even an international product design symposium was organised in Ankara.

At first everything seems to suggest a fast and healthy development in the field of industrial design. However, it appears to be somewhat problematic to picture the overall development of industrial design in Turkey as being fast and healthy, despite a quick expansion of industrial design education at university level in the last fifteen years. What is missing from a complete picture is the nature of developments taking place on the industry and government policy fronts. These are vital for an overall assessment of the development, or underdevelopment, of industrial design in Turkey. So far, it has not been possible to obtain such an assessment since we still lack a critical evaluation of the development of industrial design in Turkey, including the economic and political dimensions of its very existence in this country. This article, exploring the state of industrial design in Turkey through an empirical, field study, attempts to initiate a discussion for the critical evaluation of the development of industrial design and its role in the

process of new product design and development. For this aim, in addition to a critical review of the early literature on the Turkish industrial design, which is limited to a few articles and reports, the results of a comparative survey of industrial designers from Turkey and some other Newly Industrialised Countries (NICs) are also presented to obtain a more accurate picture of industrial design in Turkey. The data used in this paper relies on the initial part of a recent research project (Er, 1994).

As argued elsewhere (Er, 1993), the basic deficiency of design studies regarding developing countries has been the lack of empirical research investigating the nature of design practice. Turkey is no exception. On the contrary, our country seems to suffer more from the lack of research-based information in this field than many other countries. Therefore, it is hoped that, however limited in its scope, the presentation of empirical-based data will pave the way for a fresh look at the development of industrial design in Turkey.

NEWLY INDUSTRIALISED COUNTRIES (NICs)

Before discussing the state of industrial design in Turkey, it is imperative to have a look at the definition of NICs in order to understand the nature of comparison that will take place in the following pages. The number of countries included in the NIC category is elastic, and there are no commonly agreed criteria for membership of this group. However, Weiss (1988) argues that there are two main approaches in defining NICs:

One approach is to define NICs as those countries with an export-oriented strategy for manufacturing; another includes as NICs, those countries where manufacturing has reached some threshold share of gross domestic product (GDP) either 20 percent or 25 percent.

In this study, the developing countries where manufacturing has reached 20, or 25 percent of gross domestic product are considered as NICs. The most significant characteristics of all NICs is that they have explicitly attempted to develop their economies on the basis of industrialisation.

Nevertheless, although NICs represent some similar characteristic, there are also differences among these countries. In this context, it is problematic to regard NICs as a group with one single development strategy. In the economics literature, a conceptual division is generally made between the export-oriented Asian NICs and Latin American NICs with domestic market-oriented economic policies. According to this division, while Korea, Taiwan, Hong Kong, and Singapore constitute the former, Brazil, Mexico and Argentina constitute the latter group. There are also some other NICs like India, and Turkey with similar development experiences to Latin American countries, and Malaysia with similarities to Asian NICs. However, these countries are excluded from these two categories on the basis of their differences from both groups to NICs.

INDUSTRIAL DESIGN IN TURKEY

Turkey represents the mixed characteristics of two main groups of NICs; Asian and Latin American NICs. Between the early 1960s and 1980, the domestic market oriented Import Substituting Industrialisation (ISI) strategy was implemented in Turkey, and a significant degree of manufacturing capability was developed in many consumer and intermediate goods. However, since the ISI policies were not implemented in a flexible and selective manner, they resulted in over-protection and fragmented manufacturing industries with low international

competitive strengths (Kepenek, 1990). An outward looking development policy relying on export promotion, and the gradual liberalisation of the domestic market replaced the ISI strategy during the early 1980s. Despite the inefficiencies of a manufacturing sector developed under the ISI policies, industrial exports took off in this period. However, in terms of development strategies pursued, Turkey with her predominantly inward-looking industry and trade policies, appears to be similar to Latin American NICs rather than Asian NICs. In a rather similar way to Latin American NICs, the emergence of a modern industry in Turkey relied on a domestic market protected from foreign competition, which appears to constitute one of the most important characteristics of Turkish industry.

Given this background, the history of the early initiatives to establish industrial design as a profession in Turkey can be traced as far back as the end of the 1950s. Asatekin (1979) argues that the recognition of the newly established Turkish industry's need for trained industrial designers goes back to the early 1960s. Indeed, the history of the initial efforts to establish an industrial design activity and education in Turkey can be traced as far back as the end of the 1950s. Nevertheless, these early efforts were almost always related to the industrial design education, and relied on a somewhat unfounded belief in the necessity of educating industrial designers for Turkish industry's needs. Considering the future industrial prospects of the country, which were hoped to be achieved under the planned import substituting industrialisation; *i.e.* a western type industrialised market economy, it was estimated that Turkish firms would manufacture indigenously designed products, and therefore would need original design talent. In a report prepared at the beginning of the 1970s, it was stated that a careful analysis of Turkey's plans and targets for the future indicated an expanding industrial effort and capacity that would require the service of industrial designers (quoted in Reid 1978).

In fact, in a rather similar fashion observed in some other NICs such as Brazil and India, the introduction of industrial design into the economic and social contexts of Turkey was also associated with a view based on 'Modernist Development Paradigm' (Bonsiepe, 1990). As Er and Langrish (1993) discuss:

... under the influence of an optimistic development view, whose main argument was that developing economies would follow the same path as the industrialised market economies did before, it was considered that industrial design and new product development could root themselves into the economies of developing countries, provided that industry in those countries continues to grow.

As a typical example of the view described above, long before the new product design needs of Turkish industry materialised, industrial design schools had been planned in order to meet the future demand, which was expected to emerge as a spontaneous result of the ISI based development strategy. Thus, in Turkey, industrial design first emerged at educational level, prior to its actual practice that has a short history in Turkish industry.

The first known educational initiative was part of an international development programme by the US government in the late 1950s. Turkey was among the developing countries chosen by the International Cooperation Administration to be included in the programme (Pulos, 1988). As part of this initiative, the Turkish Ministry of Industry and the American Agency for International Development (AID) in 1960 prepared a joint plan to develop industrial design in Turkey. However, this did not bring about any practical result.

The second attempt took place shortly after the 1961 military takeover. The timing of the initiative coincided with the implementation of the ISI based development plans in Turkey. According to Asatekin (1979), the project was originally based on the proposal of the AID to set up a department of industrial design and a product centre at the Middle East Technical University (METU) in Ankara, which had been founded in 1956 with American assistance from the AID and the Ford Foundation. It was intended to establish the department through the collaboration of an American Design College and the support of the Turkish Ministry of Industry (Asatekin, 1979). However, the gigantic scale of the project made its funding impossible, and the project was abandoned.

Nevertheless, it had been officially decided, despite financial difficulties, to establish an industrial design department at METU. In 1969, the AID finally appointed David Munro, an American industrial designer, to help start that department. Munro worked for two years, training two assistants and producing a number of reports, the last of which was published in 1971. Munro called for 'speedy action upon the implementation of a viable department of industrial design at METU'. Nevertheless, due to the political disturbances in Turkey in the early 70s, and particularly the problems of student unrest at METU, the university council postponed the founding of the department. In the following year the AID withdrew from Turkey, and the plan for establishing an industrial design department at METU lost its impetus for a second time. However, the two assistants trained by Munro kept the scheme alive and offered industrial design as an elective course open to architectural students at METU.

Meanwhile, in Istanbul where the major manufacturing industry was located, an independent initiative to found an industrial design department was already well developed. During the 60s and early 70s, the interior design department at Istanbul State Academy of Fine Arts (IDGSA) started to include the design of furniture and some other house-hold products into its project-based programme (Asatekin, 1979). Some of the graduates of this department that trained as interior designers were already working as product designers in companies around Istanbul. In 1973, the department was reorganised under the title of the department of interior and industrial design. It was the first degree course in industrial design in Turkey, leading to the equivalent of a European style MA. IDGSA also had a School of Applied Arts for a year diploma course in industrial design. In 1978, the department was officially separated into the two departments of industrial design and interior design.

In the second half of the 70s, the early efforts for the foundation of an industrial design society were started by academics from different design domains, and supported by two Turkish industrial groups (Asatekin, 1979). In 1978 the Turkish Design Association was established. However, it remained a very short lived institution since the number of industrial designers to support such an organisation was insufficient. In the meantime, after two decades since the original intention, the department of industrial design at METU was finally founded in 1979. Nevertheless, the department was established without any financial and professional assistance from abroad, it just relied on the limited experience accumulated during the 1970s. The members of staff were not industrial designers, but architects without any serious industrial experience. The first lecturers at IDGSA were not trained as industrial designers either, but interior designers or architects. Nor had they a great deal of professional experience. Therefore, the lack of professional feed-back, which appears to be one of the main characteristics of industrial design education in Turkey, was rooted right at the beginning.

The 70s witnessed some other activities directed at promoting industrial design in Turkey. Two major exhibitions in Ankara and Istanbul, respectively in 1972,

and 1976, included design competitions and seminars. Although the Turkish public, particularly the press, showed enthusiastic support, the government and industry did not seem to be interested in industrial design. The government support for industrial design in Turkey, which remained limited to the funding of the establishment of industrial design departments at state universities, was completely isolated and indirect. At different occasions and times, some bureaucrats promised to promote industrial design during the short history of industrial design in Turkey (e.g. Reid, 1978). However, this support never materialised. The government approach towards industrial design, when it somehow exists, has always been a paradox. For instance, one of the papers presented in the Ahmedabad meeting in India in 1979 on behalf of Turkey was by a government official from the Turkish Export Development Centre (IGEME) (Akalin, 1979). In this paper, the importance of design in exports was emphasised and it was proposed to set up an export design centre in Turkey. According to the same paper, IGEME recognised the importance of industrial design in export development and was planning to organise a national export design seminar 1979. The seminar was never organised, and IGEME has not shown any serious interest in design, even during the export oriented 1980s. On the other hand, it must be acknowledged that it was impossible for this early approach to materialise under the import substitution policies and political instability of the 1970s' Turkey. The policies similar to the ones suggested by the Turkish official in Ahmedabad, were started to be implemented successfully in the mid 80s in countries like Taiwan in a wider framework of a consistent and carefully planned export-oriented development strategy.

On the industry front, Turkey had already established a consumer durable goods industry during the 1960s under the ISI policies. However these protectionist policies played a significant role in creating a national manufacturing industry, they gradually led domestic firms to transfer standard products from international markets into the protected domestic market, without investing in new technology and product design (Er, 1991). Most of the private firms enjoyed high profits in the protected domestic market, without serious competition.

Munro and Denel (1972) described the state of industrial design in Turkey during the late 60s and early 70s as follows: 'Industrial design in Turkey is virtually unknown as a formal expression and totally unknown as a professional discipline for a variety of reasons'. The major hindrances to industrial design in Turkey, according to Munro and Denel (1972), were insufficient teaching of the subject, particularly at university level; a preponderance of montage industries; and captive market with often little or no competition as well as a low per capita income, which tends to suggest to a mass-producer, for example, that 'people don't care about design, they desperately need goods, so let's not bother, let's just give them something' - at high profit for the producer (Munro and Denel, 1972). However, in the final analysis, Munro seemed to be optimistic about the future. In his report he stated that:

A careful analysis of Turkey's present (*i.e.* 1971) economic situation as well as her plans and targets for the future indicated an expanding industrial effort, and capacity that will require the service of industrial designers (Quoted in Reid 1978).

According to Munro and Denel (1972), in the early 70s the majority of household goods, electronic components, and specialised mechanical products were being assembled in Turkey under foreign licence agreements. Manufacturers also resorted to an illegal, but popular, method of arriving at design for the customer, and that was by 'copying from catalogues or samples obtained from foreign manufacturers whose design and engineering inputs had already been accomplished

(Munro and Denel, 1972). However, not all Turkish manufacturers ignored design and development during the 70s. John Reid, a British designer who visited Turkey in 1978 as part of his UNIDO mission on the state of industrial design in developing countries, provided some interesting examples of industrial design activity at firm-level.

Although the overall use of industrial design by industry was still very low, it was possible to find some genuine examples of design activity in different industries in Turkey (Reid, 1978).

From his observations, it is now possible to identify two different patterns of design activity, which seem to be related to the firm and industry characteristics. The first group of companies using design in their activities were a few large to medium private furniture firms. According to Reid (1978), 'these were well equipped companies dynamically run by businessmen who knew what they were about'. These were generally domestic market oriented firms. Most of the design work was carried out by their own design staff, generally interior designers or architects who mostly copied and adapted foreign design concepts (Reid, 1978).

The most significant part of Reid's observations on industrial design in Turkey is about the design activity in large manufacturing companies, which represent the second pattern. Reid visited three large firms, and a private R&D centre, which was part of a large industrial group. The first firm was Türk Traktör in Ankara. Although it was a firm manufacturing tractors under the licence of FIAT of Italy, the necessary improvements and modifications to designs were made by Turkish graduate mechanical engineers in order to adapt products to local conditions. The role of graduate mechanical (design) engineers in product design and development in Turkey was strongly emphasised by Reid throughout his report.

In Istanbul, Reid first visited the R&D unit of Koç Holding AŞ. The design team had a staff of seventeen people, a core consisting of mainly engineers and a few industrial designers with masters degrees from abroad, and was serving more than sixty enterprises, many of whom were too small to have their own permanent product development groups. It was one of the first groups of its kind in the private sector in Turkey. From his report, it is understood that Reid was quite impressed by the projects and activities undertaken in the Koç R&D group.

This group is practising in exactly the way such a group should work and its educative effort is an example. It would be worthwhile considering asking them to prepare a paper for the UNIDO Indian Design Conference (Ahmedabad Meeting in 1979) as a classic example of what properly trained, skilled industrial designers can do for the industry of a developing country. It would come better from them than design experts from developed countries (Reid, 1978).

After the Koç R&D group, Reid visited a large white goods firm, Arçelik, which also belongs to Koç Holding AS. The product design department in Arçelik in the 1970s was staffed by engineers (mechanical/design) and one experienced industrial designer. According to Reid (1978), they were designing their own appliances and did not rely on licence agreements. Their method of designing was first to search the existing literature on the subject and then purchase and evaluate (*i.e.* reverse engineering) different foreign models of the appliance. Then they applied a critical analysis to the function and construction of the machines, changing the programmes to meet Turkish needs, changing the control system to allow for the widely fluctuating voltages of the Turkish electricity supply system, and designing parts suited to the manufacturing techniques available. It appears that the main product design strategy was centered around well planned product modification activities on the basis of adapting imported

product technology to local manufacturing and market conditions. As Reid (1978) stated, 'they often simplify and improve the design, obtaining better value from their detailed study and value analysis'. The second white goods firm visited by Reid was Profilo, the main competitor of Arçelik during the 1970s. Profilo had a design department consisting of four mechanical engineers and three industrial designers, and it was manufacturing white goods under different trade names. According to Reid (1978), as four trade names can require a new look all at the same time, this tends to cause design to become 'styling'.

The developments during the 1980s were mainly dominated by the expansion of design education at university level, and a sharp increase in the number of students studying industrial design. In the early 80s and the 90s the third and fourth industrial design departments joined the existing two. Today, industrial design courses are offered at four Turkish universities; METU, Marmara University, Mimar Sinan University (replaced IDGSA in 1982) and İstanbul Technical University (İTÜ). These are four-year courses leading to BA or BID. The universities based in İstanbul also have courses leading to an postgraduate degrees. However, the quality of these education programmes has hardly matched the over expansion of industrial design education. With the political pressure to increase the number of students enrolled in university programmes, the design departments were forced to accept more and more students, although they were not ready to accept so many students.

More importantly, there was no contact with the industry about whether it needed such large numbers of industrial designers; and if it did, what kind of qualities it would sought from an industrial designer. In fact, in the absence of a design promotion programme supported by the government, the industry was either unaware of the possible contribution of design in competitive performance, or extremely reluctant to employ industrial designers due to a highly discouraging economic environment. The increase in student numbers in the 1980s eventually resulted in an unemployment problem for industrial designers in the early 1990s. This also appears to be a striking similarity to the case in Latin American NICs, which was reported by the designers from those countries (Er, 1994). Eventually, as Kasap (1990) argues, in Turkey the design education itself has become a problem rather than a contributive factor to 'problem solving'. However, industrial design continued to be a popular subject for university education in the late 1980s and early 1990s. With increasingly more upper-middle class and women applicants, the student profile gradually changed. Interestingly, the rate of women industrial designers to their male compatriots in Turkey appears to be higher than, for example that in the UK (Lewis and Bruce, 1989). When one considers that the average rate of employment of women in industry is lower in Turkey than many European countries (Andrews, 1988), this can only be explained with reference to the nature of design education and profession in Turkey. One may argue that, in Turkey, an industrial design degree is increasingly perceived as a clean, arty, trendy career, a sort of 'soft' access to the consumption oriented business culture, rather than a productive, 'hard' profession. However, this may not be a special case for Turkey since a similar comment was made from Australia (Montague, 1992).

Design education seems to attract applicants who want a career, but do not want to commit themselves to a profession... Design is also seen, by many parents, as quite an acceptable career for young women.

Unfortunately there is no empirical study regarding the socio-economic profile of the industrial design student in Turkey. Nor is there a general study of the employment prospects of the graduate industrial designers. However, according to the records of the industrial design department at METU in the late 1980s

(quoted in Kasap, 1990), only 20% of the graduates were engaged in activities related to industrial design, including academic work and postgraduate study. In 1988 the total number of industrial designers graduating from METU was 106. It was found that only eleven designers were working as product designers in the manufacturing industry. While the majority of the graduates were engaged in professional or academic activities in interior or graphic design, more than forty graduate industrial designers were either unemployed or doing things that were not related to any kind of design.

From these figures, it may be speculated that the employment prospects for industrial designers in large scale, modern industries that were created under the ISI policies seem to be rather limited in Turkey. The bulk of the graduates appears to be working in small firms, particularly in the furniture industry, for which they are not properly trained.

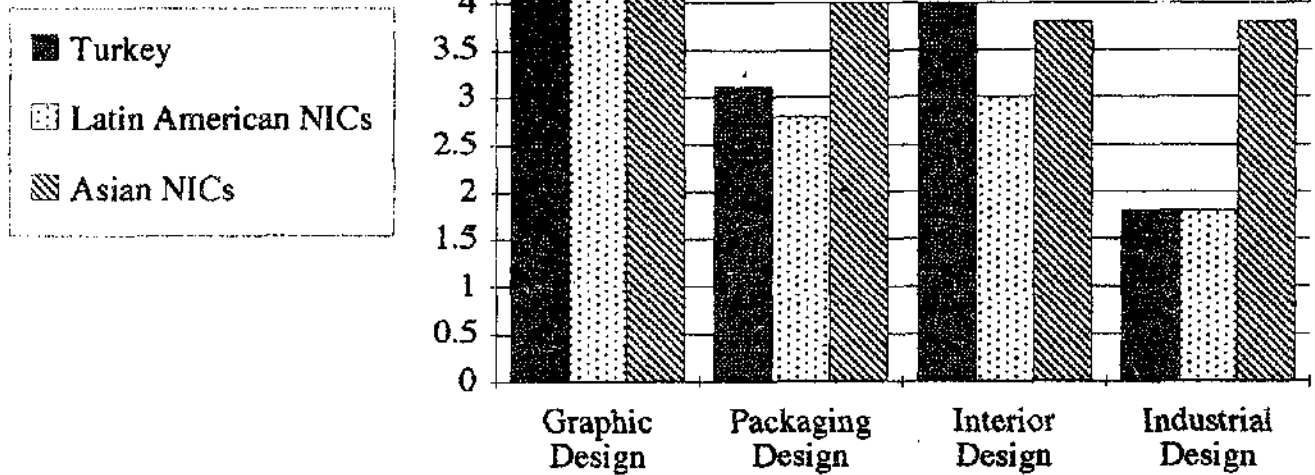
Since the mid 1980s, industrial design graduates have also begun to create their own self-employment opportunities, setting up small interior design and furniture studios. As with their counterparts in Latin American NICs, they have generally targeted the upper end of the domestic market. Interior design projects for the booming retail sector have become another activity of these small design firms. Nevertheless, none of those design firms has evolved into a new product design and development consultancy for manufacturing firms. As the apparent lack of an industrial design consultancy sector in the country shows, new product design activities in Turkey are predominantly undertaken by in-house designers employed in large manufacturing firms.

As a direct result of the increasing number of industrial designers, professional institutionalisation came to the Turkish designers' agenda once again at the end of the 1980s. Two associations of industrial designers were founded separately in Ankara and Istanbul. The association in Ankara (ETMK-Endüstriyel Tasarımcılar Meslek Kuruluşu) could start operating practically in the early 1990s, publishing a design journal. However, at present it is far from being in a position to represent all the industrial designers in Turkey.

Despite a rather gloomy picture in the areas of education, employment and professional institutionalisation, it is not fair to portray the 1980s as totally wasted for Turkish industrial design. A lively design press emerged, although this was biased towards interior design. The first generation of design lecturers with industrial design degrees began to take part in design education. Some graduates had opportunities to study design abroad at postgraduate level and returned to teach design. More importantly, with the change towards outward oriented economic policies in Turkey, and general developments taking place on a world scale, design and quality have appeared to be more significant factors in markets than they had been before. At last, a genuine need for new product design appears to be developing in some sectors of the industry. As a result of such developments, some experts from outer domains such as management realised the potential use of industrial design in new product development which could help improve the national economic performance (e.g. Şenses and Kırım, 1991).

However, the lack of empirical research makes an overall assessment of industrial design in Turkey quite problematic. In this context, the provision of a general picture of industrial design in Turkey in comparison to that of the other NICs would fulfil a significant gap in our understanding of industrial design in Turkey.

Figure 1. Scope of Design Activities in Turkey and NICs.



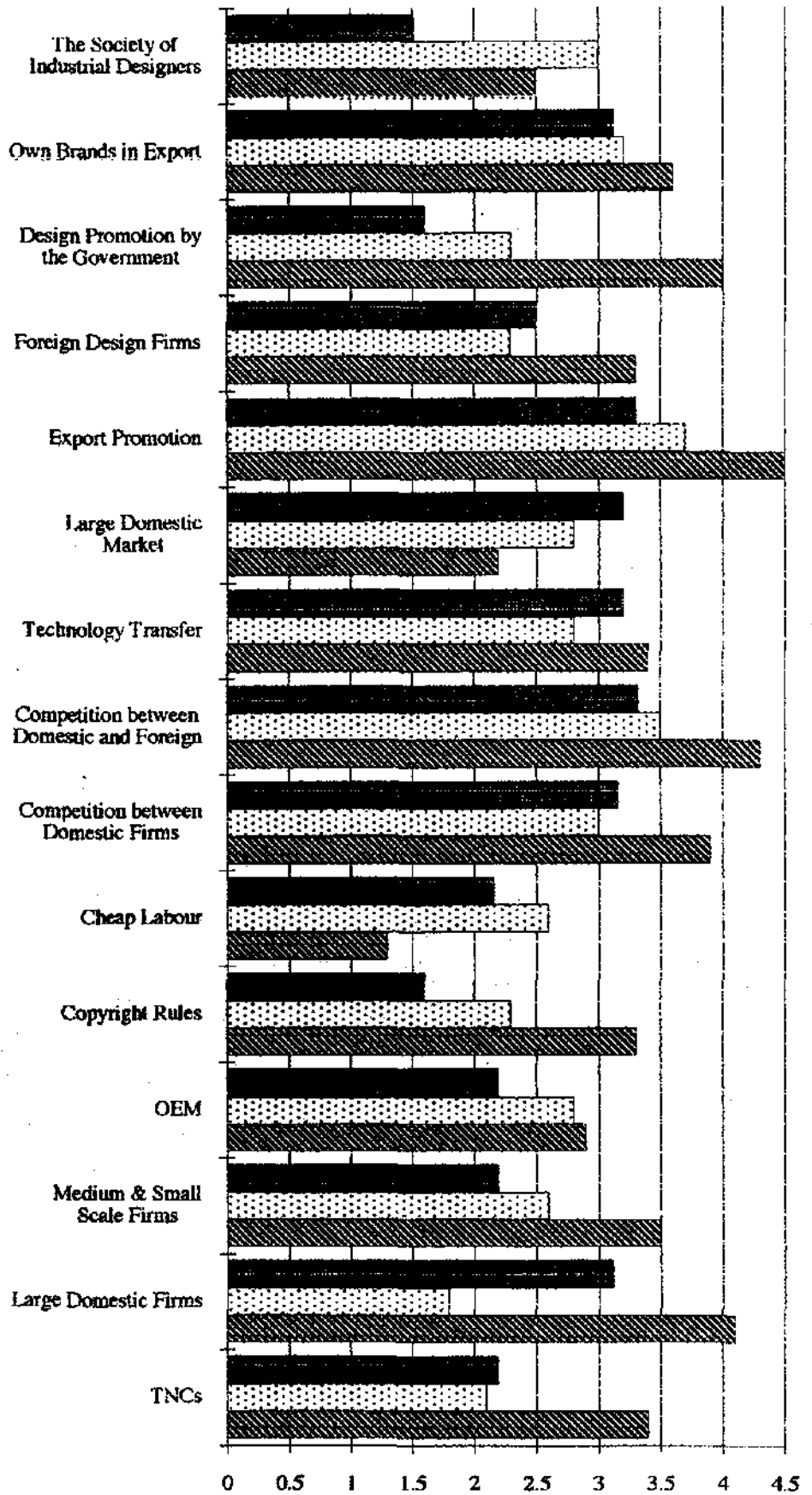
COMPARATIVE SURVEY OF INDUSTRIAL DESIGNERS IN TURKEY AND NICs

For the comparative survey which was the initial phase of a firm-level investigation of the acquisition new product design capabilities in NICs (Er, 1994), the same questionnaire format was used in the UK and Turkey. The survey sample was mainly made up of the industrial designers from NICs, who were studying for postgraduate degrees in the UK and the Turkish industrial designers working in the electronics and furniture firms. The total number of industrial designers included in the survey was forty-eight, twenty-five of them being Turkish. In the following pages the results of this survey are presented in comparison to those of the Asian and Latin American designers. With this comparison, it was hoped to clarify the state of industrial design in Turkey relative to the other NICs. However, due to the limited size of the sample, which was not statistically representative of all the designers in these countries, the findings of the comparative survey only indicate possible trends rather than accurate 'facts', which should be evaluated in the context of other complementary evidence.

The designers were asked to score statements drawn from the literature (*e.g.* Design Council, 1983) in the questionnaire, using a five point scaling system (1: lowest, 2: low, 3: moderate, 4: high, 5: highest). While high scores imply the respondents' agreement, low scores demonstrate their disagreement on the statements. The following charts, which rely on the averages of these scores, present a comparison of the Turkish results to the results of the groups of NICs. While the value for the Asian NICs is the average of the scores given by the Asian designers from Taiwan, Hong Kong, Korea and Singapore, it is the average of the scores given by the designers from Brazil, Mexico and Argentina for the Latin American NICs. As stated earlier, this division does not rely on the geographical location of the countries, but the conceptual division made in the development economics literature in terms of the major development strategies implemented in these countries.

The first finding emerging from the survey is that Turkish industrial designers are relatively young and not very experienced. The average age of the designers in the survey was twenty-eight, and the longest work experience recorded was only seven years. The average work/practice experience appeared to be about three years. In general this finding aligns with the fact that industrial design is quite a new profession in Turkey.

Figure 2. Factors Encouraging the Development of Industrial Design in Turkey and NICs.



The number of women industrial designers in Turkey was found to be quite high. Out of twenty-five Turkish designers who took part in the survey, seventeen were women. Twelve women designers were reported to be working in the furniture industry. This finding appears to support the observation pointed out earlier, regarding the higher number of women graduate industrial designers in Turkey compared with European countries such as the UK. On the other hand, the finding suggests that student women industrial designers are not solely seeking a degree, but on graduation appear to be involved in practice, particularly in the furniture industry.

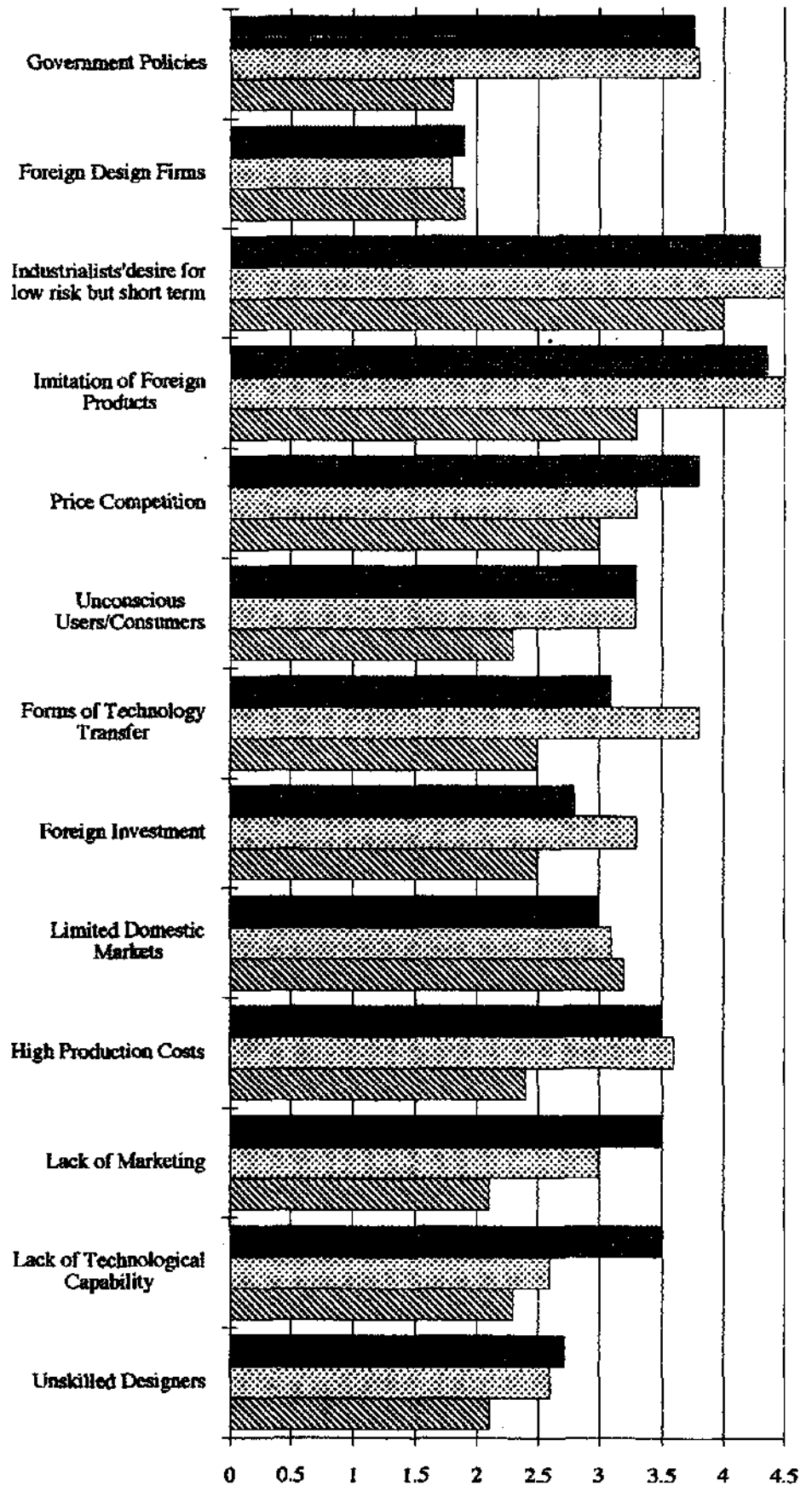
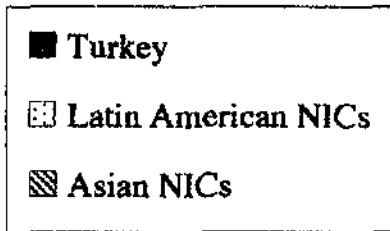
In Figure-1 the scope of design activities in Turkey is given in comparison to that in NICs. The numbers shown in the figure are the mean of responses on a five point scale. Graphic design appeared to be the most intensively practised design activity in Turkey and NICs. Interior design ranked as the second. While packaging design was ranked as the third, industrial design was the lowest scoring activity. Here the first similarity between Turkey and Latin American NICs emerges.

Figure-2 gives a comparison of the importance of certain factors encouraging the development of industrial design in Turkey and in NICs. According to the Turkish designers who took part in the survey, the most important factors encouraging the development of industrial design in Turkey appear as follows; 'competition between foreign domestic firms', 'large domestic market', 'competition between domestic firms', 'technology transfer', 'export promotion' and 'own brands in export'. On the other hand the least important factors encouraging the development of industrial design were 'design promotion by the government' and 'copyright regulations', which are both known to be effectively non-existent in Turkey.

In terms of market orientation, the figure seems to give mixed results for Turkey. For instance, 'large domestic market' and 'export promotion' appear to be equally important factors to encourage the development of industrial design in Turkey. Competition between domestic and foreign firms, and between domestic firms themselves also are regarded by the designers as being equally encouraging factors. This is likely to be a result of the outward-oriented trade regime that has been implemented in Turkey since the early 1980s, which has not only promoted industrial exports, but also, liberating the industrial import policy, has gradually opened up the domestic market to competition from foreign firms. It appears that, in the Turkish designers' eyes, competition either in a large domestic market or in international markets is the most important single factor stimulating the use of industrial design by the national industry, and in turn encouraging the development of industrial design in Turkey. For the designers, technology transfer seems to be another important factor helping the development of local industrial design activities. In addition, large domestic firms rather than medium or small scale firms are seen by the Turkish industrial designers as the most important factors to encourage the local development of industrial design in a competitive market environment.

Some common factors for NICs and Turkey emerge as the most significant agents fostering industrial design. In general these seem to be export related factors such as 'competition between domestic and foreign firms', 'own brands in exports' and 'export promotion'. On the other hand, some scores given by the Turkish designers exhibit a similar pattern to that of Latin American NICs. For instance, while 'large domestic market' and 'competition between domestic firms' are ranked similarly as relevant factors, 'design promotion by government' and

Figure 3. Factors Discouraging the Development of Industrial Design in Turkey and NICs.



'foreign design firms' rank as common irrelevant factors in the local development of industrial design.

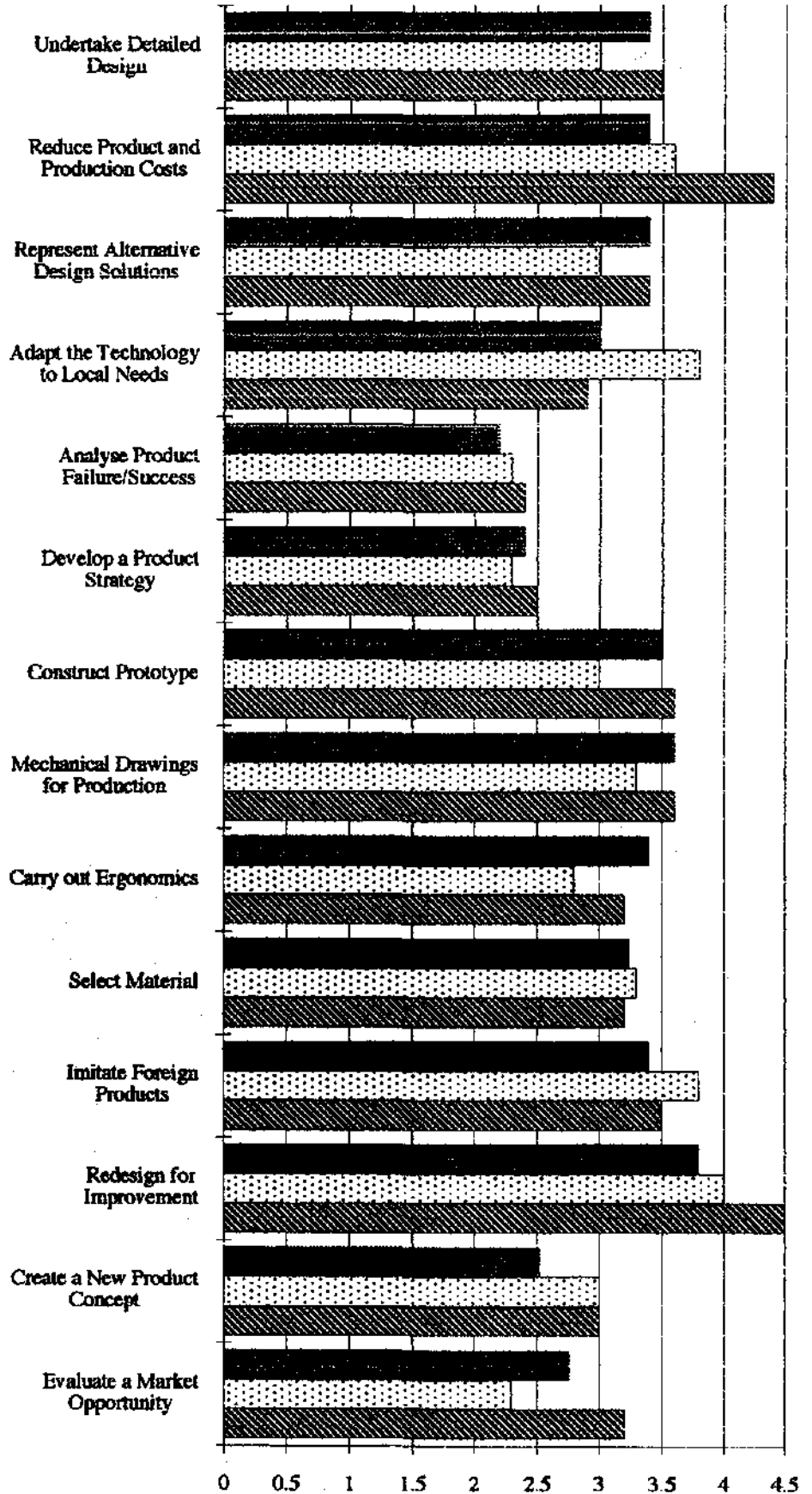
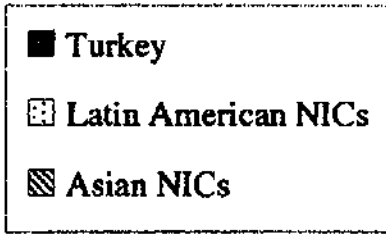
However, there also appear to be differences between Turkey and Latin American NICs. For example, the roles of large domestic firms and professional design societies emerge to be the most significant differences between Turkey and Latin American NICs. The difference regarding the role of large domestic firms may partly be explained with reference to the low presence of foreign investment in the Turkish economy. Unlike the Latin American economies where the large industrial enterprises are either transnational companies or joint-ventures, in Turkey large firms are predominantly owned by private domestic capital. Regarding the role of large domestic firms, the Turkish finding appears to be close to that of Asian NICs such as Korea. On the other hand, the most significant difference between Turkey and Asian NICs emerges as 'design promotion by governments'.

Figure-3 shows the comparative relevance of the factors discouraging the development of industrial design in Turkey and in NICs. As in the case of Asian NICs and Latin American NICs, the most important two factors discouraging industrial design activity in Turkey are 'industrialists' desire for low risk but short term profit returns' and 'imitation of foreign products'. These two appear to be common barriers across NICs. The competition heavily relying on price factor was also ranked by all the designers from NICs including Turkey, as being a serious barrier to the development of industrial design. Lack of marketing skills and technological capability, and high production costs were also referred to by the Turkish designers as significant barriers to the development of industrial design in Turkey.

As in Latin American NICs but unlike Asian NICs, the government economic policies emerge as one of the most significant barriers to the development of local industrial design activities in Turkey. Policies implemented by the government are important because they can improve or worsen the general economic environment which largely determines firms' approach towards new product development, of which industrial design is part. When considering the factors discouraging the development of industrial design, with the exception of 'foreign investment', Turkey's position parallels Latin American NICs rather than Asian NICs.

In Figure-4 the functions of industrial design in Turkey and NICs are presented. 'Mechanical drawing' and 'redesigning' were ranked by the Turkish designers as the most performed functions of industrial design in Turkey. 'Constructing prototypes', 'carry out ergonomics' and 'imitating foreign products' were also among the functions with higher rates. The least performed functions were 'analysing product failure/success', 'creating new product concepts' and 'developing a product strategy'. The functions with higher rates in Turkey were also among the highest ranked functions in Asian and Latin American NICs. In general there seems to be a common pattern in terms of the role of industrial design in NICs. However, both Asian and Latin American NICs differentiate from Turkey in the cases of 'reducing costs' and 'adapting technology to local needs', which were among the highest ranking functions in both groups. These differences between NICs appear to be closely related to the different development policies implemented in each country; *i.e.* cost reduction appears to be associated with outward-oriented policies, while adaptation is more common in countries with inward-looking policies. Adaptation by design was widely observed in the Turkish firms during the inward-looking 1970s (Reid, 1978). There is also a common pattern shared by all the NICs including Turkey in the least

Figure 4. Function of Industrial Design in Turkey and NICs.



performed functions of industrial design across NICs. These are 'developing a product strategy' and 'analysing product failure/success'. Ironically, these are the functions of industrial design that newly emerging design management literature has been praising (e.g. Oakley, 1990).

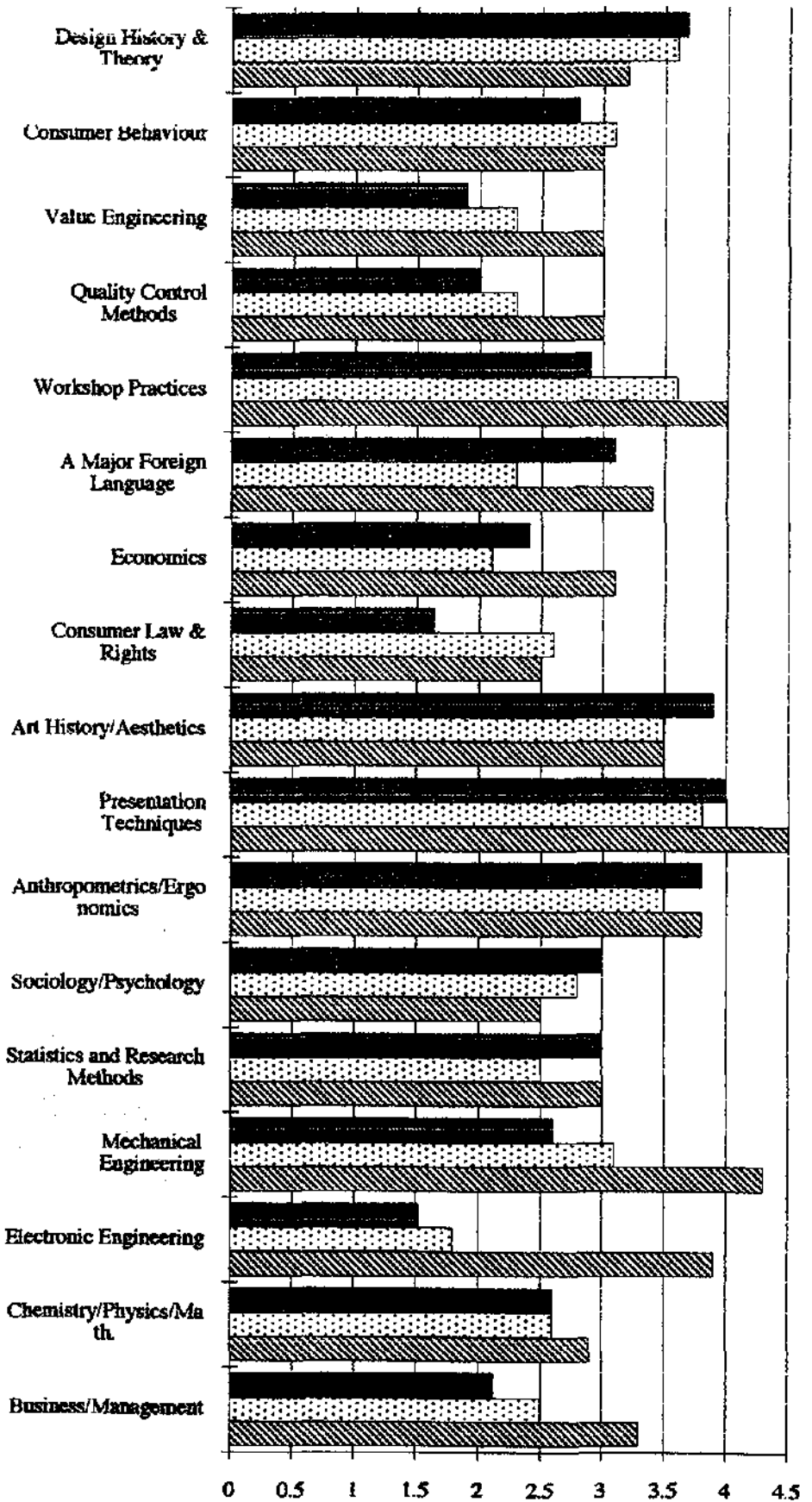
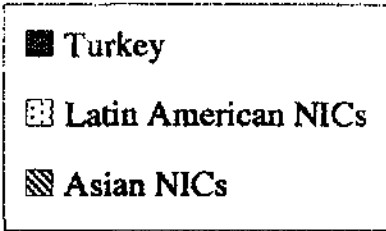
Figure-5 gives the components of the working knowledge of industrial designers in Turkey. Visual presentation techniques, art history, aesthetics, anthropometrics, design history and theory emerge as the most significant components with higher ratings. On the other hand, electronics and value engineering, quality control, and consumer rights and legislation were given the lowest scores. These appear to constitute an insignificant part in the Turkish industrial designers' professional body of knowledge. It appears that the main body of industrial designers' knowledge is form/aesthetic (presentation techniques and art/aesthetics) and history (art/design) oriented. Engineering and business subjects do not seem to account significantly in the composition of their professional knowledge. Speaking a major foreign language was highly rated. However this may be biased since ten out of twenty-five designers in the survey were graduates of METU where the medium of instruction is English. Therefore the rating regarding foreign language knowledge would be lower if the survey was conducted with the Turkish industrial designers from the other universities.

When the Turkish results are compared to those of Latin American NICs and Asian NICs, 'presentation techniques' appears to be most significant common item across the NICs including Turkey 'Anthropometrics/Ergonomics' is another common item in all the NICs. However, the similarity seems limited to these two. While the Asian designers' ratings present a clearly engineering/practice oriented professional body of knowledge, the Latin American and Turkish designers' results exhibit either art/ aesthetic or social sciences, but generally a more 'theory' oriented pattern.

The most significant difference between Asian NICs and Turkey emerge in the case of 'electronics engineering'. This confirms the fact that Asian NICs' specialisation in the electronics industry on a global scale also reflects itself in the configuration of the working knowledge of the Asian designers. Neither Turkey nor Latin American NICs have such a specialised role in the world economy. In addition, the profile of the working knowledge of industrial designers in a particular country can give some useful insights about the nature of design of design education in that country. When the low scores given to engineering and business subjects by the Turkish and the Latin American designers are compared to the high ratings of those subjects by the Asian designers, it is reasonable to argue that the link between manufacturing industry and industrial design education is much stronger in Asian NICs such as Taiwan. The same link is apparently very weak in Turkey.

Figure-6 presents the findings regarding the skills of industrial designers in Turkey and NICs. 'Selecting colour/textures/form', 'sketch drawings' and 'presentation drawings' were rated as the leading skills possessed by the Turkish designers. 'Managing a project' and 'estimating and controlling costs' received the lowest scores. In general, regarding the skills that the NIC designers possess, a similar pattern emerges. The first three items with highest ratings are the same for all the groups. The most significant difference between Turkey and the other NICs appears to be 'estimating and controlling costs', which was rated lowest by the Turkish designers as a skill they possessed.

Figure 5. Working knowledge of Industrial Designers in Turkey and NICs.



CONCLUSIONS

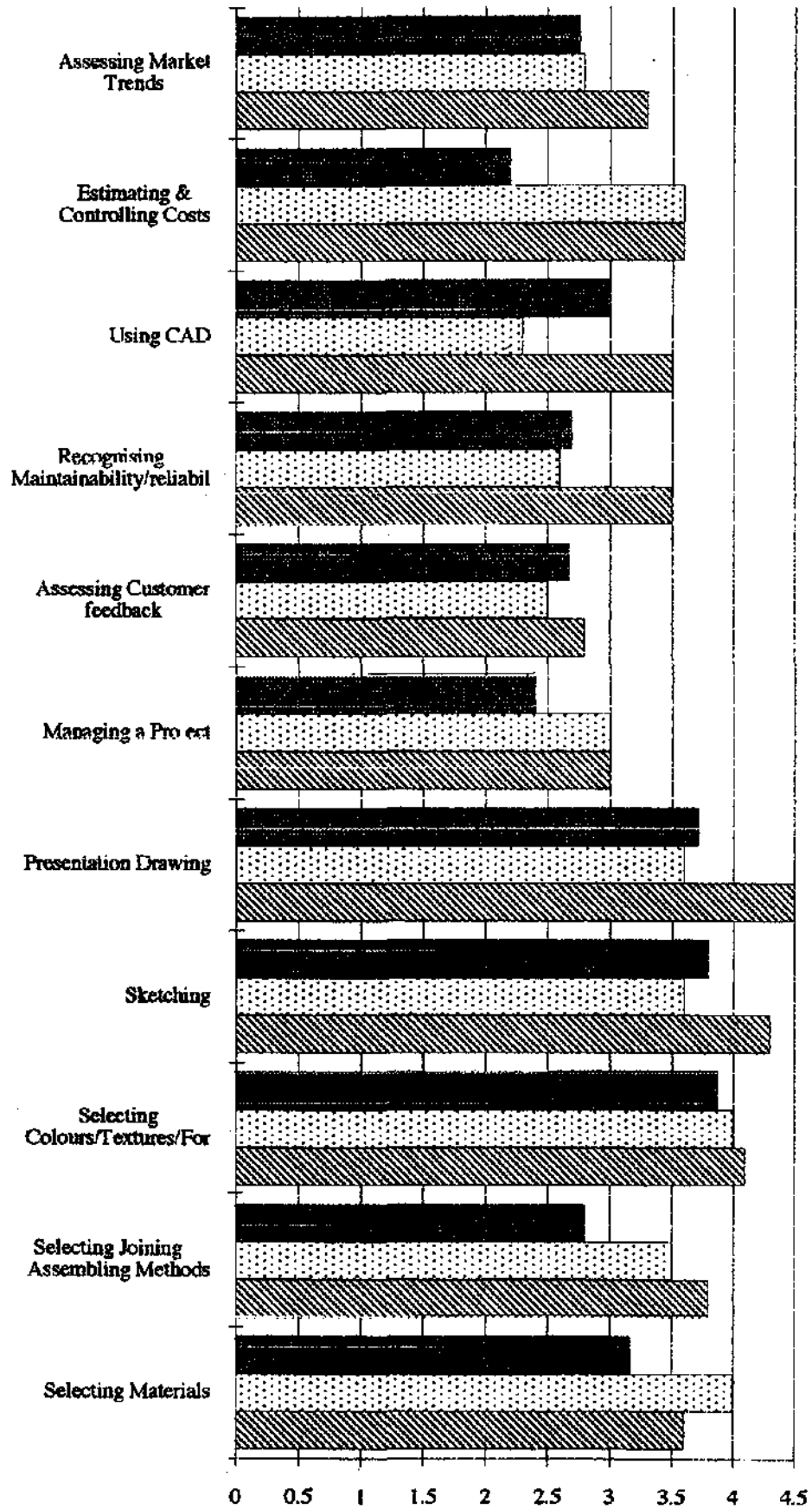
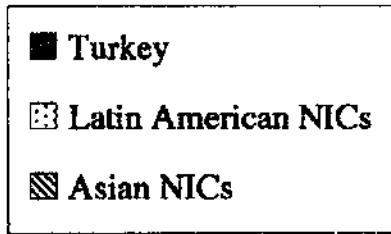
In many ways, the historical evolution of industrial design in Turkey appears to exhibit a rather similar pattern to the experiences of Latin American NICs. A comparison of the results reveals that, with some exceptions, the characteristics of industrial design in Turkey are similar to those in Latin American NICs rather than Asian NICs. For example, government policies serve as significant barriers to the development of industrial design activity in Turkey as in Latin American NICs. However, there also appear to be differences between Turkey and Latin American NICs, such as the role of large domestic firms in utilising industrial design.

The most important results of this survey can be summarised as follows; first of all, the findings reveal that, in developing countries such as Turkey the establishment and continuing expansion of a manufacturing sector are not solely adequate for the development of industrial design activity in industry, though these are certainly prerequisite to such a development. Experience shows that industrialisation without design is possible in many developing countries, including Turkey and Latin American NICs. The vital ingredient for a healthy development of industrial design in developing economies appears to require competition either in domestic or international markets. However, the findings from the survey also indicate that export markets have advantages over domestic markets in facilitating the necessary competitive environment. For example, in export-oriented Asian NICs industrial design has rooted itself more firmly in industry than that in domestic market-oriented countries. The correlation of exports and the development of industrial design is also confirmed by an industry-level study (Er, 1994a). Therefore, it may be concluded that in countries like Turkey, the overall development of industrial design is conditioned by the market orientation of economic/industrial activity, which itself is determined by the government development strategies in the context of a globally organised world economy. According to the survey findings, government policies also have direct impacts on the development of industrial design.

Secondly, from the survey results, it appears that the main role of industrial design in Turkey, as in many other NICs, is not to contribute to the creation of novel products as it is generally thought, but to modify existing products or foreign samples for adaptation. This finding was also verified by the firm-level studies of industrial design in two Turkish industries (Er, 1994). Finally, it should be noted that differences emerged between the Turkish designers' professional body of knowledge and that of the Asian designers have strong implications for the missing link between the industrial design education and the needs of industry in Turkey. The design education should be made aware of constantly changing realities of global competition to be able to improve itself and to adapt to newly emerging conditions. Otherwise, it is likely to lose its way in the deep discussions of other disciplines that contribute to its interdisciplinary cognitive structure.

The findings of the survey have several other implications for the reconfiguration of our understanding of industrial design in the Turkish context. Above, only a few of these many implications has been raised. As this investigation into the state of industrial design shows, there is much to discover for design research in Turkey, and such empirical, field studies will be the basic tools to find out new and effective ways of using industrial design in our attempts to improve the overall competitiveness of Turkey in global markets. After all, this should be the reason for the existence of industrial design in this country.

Figure 6. Skills of Industrial Designers in Turkey and NICs.



TÜRKİYE'DE ENDÜSTRİYEL TASARIMIN DURUMU VE GELİŞMESİNE İLİŞKİN BİR DEĞERLENDİRME

ÖZET

Alındı : 10. 2. 1995
Anahtar Sözcükler: Endüstri Tasarımı, Tasarım Eğitimi, Türkiye'de Kalkınma, Kalkınma Stratejileri, Kalkınma Stratejileri.

Endüstriyel ürün tasarımı kavramının Türkiye'ye ilk girişten bu yana yaklaşık çeyrek asır geçti. Bu süre içerisinde, üniversitelerdeki endüstri tasarımı eğitimi veren bölümlerin sayısı artarken, doğal olarak mezun tasarımcıların sayısında da oldukça hızlı bir artış yaşandı. Ancak eğitim alanındaki bu hızlı yayılma, Türkiye'de endüstriyel ürün tasarımının sağlıklı bir gelişme içinde olduğu sonucunu rahatlıkla çıkara-bileceğimiz anlamına da gelmiyor. Aslında endüstriyel tasarım olgusunun Türkiye'deki gelişimiyle ilgili kapsamlı bir değerlendirme olanağından bu alandaki ampirik çalışmaların azlığı nedeniyle yoksunuz. Bu makale konuyu karşılaştırmalı bir alan çalışmasıyla inceleyerek, ürün tasarımının yeni endüstrileşen bir ülke olan Türkiye'deki gelişmesinin eleştirel bir analizi yolunda taruşma başlatmayı amaçlamaktadır. Her ne kadar kapsam açısından sınırlı da olsa, makalede sunulan bulguların, Türkiye'de tasarım olgusuna yeni, taze bir yaklaşımın gelişmesi için yardımcı olabileceği düşünülmektedir.

Türkiye ile karşılaştırılacak diğer yeni sanayileşen ülkeler uyguladıkları gelişme stratejilerindeki farklardan dolayı, ekonomi literatüründeki ihracata yönelik Güney Doğu Asya ve iç pazara dayalı bir gelişme gösteren Latin Amerika ülkeleri olarak iki ana grupta incelenmektedir. Bu çalışmadaki anket bulgularının karşılaştırılmasında, Türkiye ve bu diğer iki yeni endüstrileşen ülke grupları temel alınmıştır.

Anket bulgularının sunumu öncesinde, Türkiye'de endüstriyel ürün tasarımının tarihsel bir arka planını çizmek amacıyla, konuyla ilgili kaynakların bir taraması yapılarak, tasarımın Türkiye'deki gelişimi kısaca özetlenmiştir. Ürün tasarımı olgusunun Türkiye'nin gündemine ilk girişi 1960'lı yılların başında, ithal ikameci sanayileşme planlarının uygulanmaya başladığı döneme denk düşer. Benzer birçok başka ülkede de olduğu gibi, endüstrileşmenin doğal olarak yeni ürün tasarımına gereksinim yaratacağı düşüncesiyle, tasarım okullarının kurulması çalışmaları başlatılır. İthal ikameci sanayileşmenin olgunlaşma dönemine girdiği 1970'lerde ilk tasarım okulları kurulur, fakat, bir iki istisnai durum dışında, endüstri ve siyasi iktidarın ürün tasarımına karşı duyarısız ve tasarımın yapabileceği ticari, ekonomik katkıya ilgisiz oldukları gözlenir. Ancak 1980'li yılların dışa açık politikalarının bir etkisiyle 80'lerin sonu 1990'lı yılların başlarında bazı endüstri kollarında ürün tasarımı etkinlikleri yaygınlık kazanmaya başlar. Bu anlamda tarihsel gelişme çizgisi açısından Türkiye, Latin Amerika'daki yeni sanayileşen ülkelere benzer bir görünüm sergiler. Anket sonuçlarının karşılaştırmalı bir analizi de, ürün tasarımını özendiren ve engelleyen unsurlar, tasarımın rolü, tasarımcıların bilgi ve yetenekleri konusunda Türkiye'nin Güney Doğu Asya'daki Kore, Tayvan gibi yeni sanayileşen ülkelere çok Arjantin, Meksika gibi Latin Amerika'daki ülkelere yakın olduğunu doğrulamaktadır.

Bulgulardan çıkartılabilecek sonuçlardan bazıları şöylece özetlenebilir; endüstriyel ürün tasarımının ancak rekabetçi bir endüstriyel gelişmenin gereksinim duyduğu bir etkinlik olduğu, ve Güney Doğu Asya'daki gibi dışa açık rekabetçi ekonomilerde iç pazara dayalı bir endüstrileşmenin gerçekleştiği ülkelere oranla daha fazla geliştiği. Ayrıca, ürün tasarımının Türkiye'deki temel işlevinin yeni ürün yaratımına katkıdan çok, varolan ürün ve örneklerin uyarlanmasına yönelik olduğu ve tasarım eğitimi ile endüstrinin ihtiyaçları arasında sağlıklı bir ilişki olmadığı da bulgulara eklenebilir.

Türkiye'de tasarım konusunda araştırılmayı bekleyen bir çok nokta vardır ve ancak bu tür çalışmaların yardımıyla endüstriyel ürün tasarımını küreselleşen pazarlarda ülkemizin rekabet gücünü artıracak bir öge olarak kavramak ve uygulamak mümkün olacaktır.

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