ANALYSIS OF DESIGN IN SLOVENIA
THE DEMAND SIDE

Nika Murovec

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Abstract

This working paper presents the results of the analysis of the demand for design services in Slovenia. A questionnaire, developed specifically for this purpose, was sent to 4000 directors of companies in Slovenia with more than 4 employees. The presented analysis was carried out on the data obtained by 503 filled questionnaires. The main conclusion of the analysis is that while the managers to a large extent claim to understand and use design in their firms, the data about the investments in design tell a different story. Design does actually not play a strategic role in companies and is in most cases perceived as a physical appearance of a product and as a factor supporting the brand image.

**JEL Classification:** D22, O31,

**Key words:** design, demand analysis, use of design.
Introduction

Creative industries (CI) and especially design have in the last decade moved from marginal debates about culture rights into the centre of the discussions regarding competitiveness. There has been enormous change in the design policy landscape across Europe – not only at the European level but also at national, regional and local levels.

In 2009, the European Commission held a public consultation on design as a driver of user-centred innovation, in 2009 the Competitiveness Council recognised design as a competitive advantage for Europe, in 2010 design was included in EU policy for the first time in ‘Innovation Union’ and since then the European Commission has set up the European Design Leadership Board in 2011, the European Design Innovation Initiative in 2012, the Action Plan for Design-driven Innovation in 2013 and most recently the European Design Innovation Platform in January 2014. A growing number of EU Member States have developed design policies including Estonia in 2012, Denmark in 2013 and Finland in 2013 (See Bulletin, 2014).

Slovenia is, however, lagging behind. While the issue of creativity and the CI has been in and out of policy discussions in the last years, there is still no programme or systematic support for the CI or design on a national level or even an accepted strategic document. Also the research on CI and design in Slovenia lags far behind (Murovec et al., 2012).

In 2010, however, the Ministry of Education, Science, Culture and Sport, the Ministry of Economic Development and Technology, and the Slovenian Research Agency issued a call for proposals for a Target Research project entitled The state of design, with focus on industrial design, as a part of creative industries, and best international practices as a foundation for fostering this sector in Slovenia. Within this project, the demand for design services in Slovenia was analysed. This working paper briefly presents the results of the analysis of the design services in Slovenia, which was carried out within this project.
Theoretical framework

Design

The word “design” is often being used in everyday speech when we talk about the products’ aesthetics. However, in its evolution, design has by far surpassed the mere aesthetical criteria. It presents the crossing of different factors which impact the product, message and identity of the firm. Good design will shape the product for ease of use, reliability and costs of production and maintenance. Decisions made during the design phase will affect the quality and ease of manufacture of the product. Elements of design, particularly graphic design, will form part of product, service and company branding and advertising strategy (DTI, 2005).

Design is often understood in relation with products, however, service design is a most important element of design. For services, design can affect how customers will experience a service, such as a bank or a fast food restaurant, including their experience in the queue. Design can therefore play a very important role in public services as well. The public sector is facing several challenges which require radical changes in public services, and the use of design methods can play a key role in enabling innovative and cost effective solutions, which will meet the complex needs of users (Design Council briefing, 2008). Design is a key driver not only of firms, but also of countries’ competitiveness. It is not only integrated into businesses as a strategic tool to drive innovation and growth, but also to foster national competitiveness by contributing to general creativity and the image of countries as a brand (Hollanders, van Cruysen Adriana, 2009).

Each product or service is designed, even if not by a professional designer. Much design implicitly takes place outside of a formal design function and is not done by a professional designer. This is often known as “silent design” (Gorb, Dumas, 1987). Design encompasses a wide range of disciplines, each offering its own specialist skills and services, and includes architecture as well, despite the fact that architecture is usually treated as a separate category.

The concept of design has been defined in different ways either focusing on design as an economic activity or more general as the translation of the ideas generated by creativity into new products and processes (Bitard, Basset, 2008):

“Design is what links creativity and innovation. It shapes ideas to become practical and attractive propositions for users or customers. Design may be described as creativity deployed to a specific end.”

“... design can be approached as an economic sector of activity. Basically, design definitions are based on design professions with the following four main ensembles: fashion design, graphic design, interior design and product design .... The list can be even more detailed,
encompassing industrial design, product design (furniture, toys, jewellery), visual, communication, advertising, packaging, fashion design, architecture design, landscape design, interior design, urban design, etc.”

While design has many different, comprehensive definitions, and is being understood in different ways, there is still a question whether design can be rigorously defined. There is no generally-accepted and precise definition of design as a concept. In 2009, academics made an attempt to formalise a synthesized definition of design activity as “a process, executed by an agent, for the purpose of generating a specification of an object based on: the environment in which the object will exist, the goals ascribed to the object, the desired structural and behavioural properties of the object (requirements), a given set of component types (primitives), and constraints that limit the acceptable solutions” (Ralph, Wand, 2009).

Design, and above all, industrial design, can have a very important influence on the economy. It is being more and more recognised as a key component of the economic prosperity and a key factor of the national competitiveness. It presents an important driver of innovation, and can also be understood as a bridge between creativity and innovation (HM Treasury, 2005). As R&D, design also presents a way to channel creativity for commercial purposes. Design can play a crucial role as a source of innovation and added value specially in those industries where R&D investments tend to be low (e.g. furniture or textile industry) (DTI, 2005) and can therefore be a valuable tool for restructuring of companies in traditional industries.

Design can be used to determine a variety of non-price characteristics of products and services, such as style, durability or waiting times. Besides, the use of design makes it easier for companies to build a recognisable image, marketing, create brand loyalty or reduce production costs through optimisation of product processes. A variety of evidence supports the role of design in enhancing firm performance. (DTI, 2005).

As well as boosting firm competitiveness, there is scope for creativity and design to generate wider economic gains. Consumers can benefit from greater variety and improved products and services. Ideas can be adopted or adapted to improve the performance of other firms (DTI, 2005). Furthermore, design can increase the quality of life and play a beneficial role in the wider social context as it can be involved in all managerial and planning processes dealing with solutions including a wide range of topics such as public transport, city infrastructure, environmental projects, inclusion of people with special needs, social cohesion, etc. (Klinar, 2008).

A number of existing studies have examined the link between creativity, design and economic performance. The Danish Design Centre (2003) found a correlation between the use of design
and economic performance and macroeconomic growth and that job creation, revenues and exports were higher in firms that used design compared to other firms that did not. Power (2004), in his comparative study of the design sector in five Nordic countries (Sweden, Denmark, Finland, Norway and Iceland), concluded that in spite of the small size of the design industry in these countries, design is crucial to the competitiveness of firms in other industries. The use of design by Nordic firms helped to increase their profitably and level of innovation. Moreover, Power concludes that the design industry has experienced high levels of growth and tends to be concentrated in large cities (Hollanders, van Cruysen, 2009).

In Slovenia, however, it seems that the potential of design has not been recognised. Not only is there no systematic support for design on the national level, it seems that the firms are not aware of its potential as well. The study of the supply side (Murovec, Kavaš, 2014) shows that the quality of the design services in Slovenia is internationally comparable. The designers point to the demand side and claim that the firms in Slovenia do not understand the importance of design, hence, they do not use the design services or at least not give design its appropriate role in the business process.

**Design thinking**

In the last years, “Design Thinking” has gained popularity and is now seen as an exciting new paradigm for dealing with problems in sectors as far a field as IT, Business, Education and Medicine. (Dorst, 2011, Brooks, 2010, Martin, 2009). Design thinking is however not a new term, and has been part of the collective consciousness of design researchers since Rowe used it as the title of his 1987 book (Rowe, 1987). The first Design Thinking Research Symposium was an exploration of research into design and design methodology, viewed from a design thinking perspective (Cross, Dorst, & Roozenburg, 1992). Multiple models of design thinking have emerged since then, based on widely different ways of viewing design situations and using theories and models from design methodology, psychology, education, etc.

The business and management communities are very much interested in the Design thinking concept due to their urgent need to broaden their repertoire of strategies for addressing the complex and open-ended challenges faced by contemporary organisations (Stacey, Griffin, & Shaw, 2000). To them, “Design thinking” or a designer’s way of thinking, presents a special approach to problem solving, which builds innovation activity based on the behavior patterns of society (characteristics, traditions) and is trying to explain the problems from the perspective of various disciplines. Companies are encouraged to think outside the outside the
box and find a solution due to new, different understanding of complex situations (Brown, 2008). The essence of the process designer’s way of thinking is depicted in Figure 1.

Figure 1: Design’s Multidisciplinary Approach

In order to start solving any problem, according to design thinking, we need to ask ourselves three things: whether the proposed solution is technically feasible (technical feasibility), whether the solution is usable or desirable for someone (usability, desirability), and whether it is profitable (economic viability). Only when the solution is satisfactory according to all this three aspects, it has the potential for success. From this it can be concluded, that in order to solve a problem efficiently, interdisciplinarity is essential, since team members contribute to solving the problems from different points of view.
Different authors emphasize different steps of the design thinking process, however, the content of these steps is very similar, only differently classified into groups according to different details. Brown (2008), one of the founders of the design thinking, defines the following three phases which each project should include:

- **Inspiration**: At the inspiration phase, firstly, the circumstances should be defined in order to determine the changes and to decide which problem we want to solve and who does it matter. We need to answer the questions of where opportunity lies for us and what is the thing that will make the project a success;
- **Ideation**: In this phase we should collect all findings resulting from the previous step, organize, and further explore them through visualization (rapid prototyping) and brainstorming;
- **Implementation**: selection and implementation of the final idea. In this phase, high-quality products result from the preliminary low-cost prototypes.

*Figure 2: Design Thinking Process*
Stanford University started teaching new service and product development through design thinking and was soon followed by others. d.School is the answer to traditional business schools and seeks to introduce the much needed creativity in solution finding and new knowledge creation to the market. The long term goal is to teach users to create a better user experience, acceptance of criticism, the savings in time and other virtues. d. School has been introduced in Slovenia on the Faculty of Economics, University of Ljubljana. However, the management community seems to be still very much lacking the knowledge about the importance of design, multiple angles approach, rapid prototyping and creative problem solving in multidisciplinary teams.

**Methodology and data**

Since there is no generally-accepted definition of design or any framework for its measurement (Finbarr, Moultrie, 2008), analysis of design is not an easy task. Several methodological issues and challenges need to be taken into account when interpreting the results. Therefore, in order to analyse the use of design in Slovenia, a special questionnaire was developed for that purpose. Literature analysis, case studies and interviews with experts served as an input for the questionnaire, which was designed according to Dillman’s (2000) methodology.

Dillman (2000) has developed a set of procedures for conducting successful independent research to achieve high-quality information and a high level of response. Dillman warns that the response rate and the measurement error also depend on the design of a questionnaire. Poor and incomplete questionnaire design may cause the response bias or the overlooking of the questions. A respondent-friendly questionnaire is attractive and ensures that all respondents have the same understanding of the questions. Throughout the entire questionnaire from the headlines until the last question, the respondents are led by graphic symbols. Well-designed questionnaire prevents the possibility that a respondent overlooks a certain part of the questionnaire and questions. In our questionnaire, we have included the following Dillman’s (2000) suggestions:

- The use the book format for: the questionnaire, which has has eight pages, consists of two folded and stapled A3 sheets,
- The use of guidelines to administer questions
- Installation of instructions exactly at the place where they are needed,
- Use of increased font sizes for specific written elements in order to attract attention (eg. Question numbers)
• Use and maintenance of simplicity, accuracy and symmetry throughout the questionnaire,
• The use of guidelines regarding question numbering
• Use of the phrase "START HERE" in capital and bold letters before the first question,
• Use of a larger space between questions such as between the sub-questions,
• Use of vertical alignment of the sub-questions
• On the title page there is a simple but distinct black-and-white image, the research title and the address on which the completed questionnaire should be returned.

In the last week of August 2011, the questionnaire was sent by mail to 4000 directors of companies in Slovenia with more than 4 employees. Ten days later, an e-mail was sent to participants acknowledging their participation in the study. At the same time, in order to ensure maximum responsiveness, this e-mail served as a reminder, and also offered a link to the on-line questionnaire.

Results

536 filled questionnaires were received, 407 by mail and 129 on-line. 33 of the returned questionnaires were eliminated from further analysis, since they contained more than 20% unanswered questions. The final number analysed questionnaires is therefore 503.

Companies from manufacturing as well as from service industries were included in our sample. Among the few companies which explicitly refused their cooperation claiming to be unable to answer the questions, since design is not relevant for their industry, there were exclusively service companies. This demonstrates a lack of awareness of the importance and use of design among some service companies, and also the underdevelopment of service design in Slovenia.

The survey results show that almost half of the surveyed companies (49%) compete mostly on local or regional markets, and another third (30.5%) mostly on the national market. One third of the companies still mostly compete on price (33.3%). There are also few companies which trademarks are recognisable on Western-European or US market.

Table 1 and Table 2 show the investments of the surveyed companies in design. For the vast majority of companies (85%), design presents less than a 5% share - in selling price or in development resources. For only a bit more than 1 % of companies (1.2%), design investments present over 20% of resources, invested development or improvement of products/services. For a bit more than 2% of companies (2.4%), design costs present more than 20% of product/service selling price.
Table 1: Design investments as a share of resources, invested development or improvement of products/services

<table>
<thead>
<tr>
<th>Frequency (n)</th>
<th>Percent (%)</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>112</td>
<td>22,4</td>
</tr>
<tr>
<td>0%-1%</td>
<td>198</td>
<td>39,6</td>
</tr>
<tr>
<td>1%-5%</td>
<td>117</td>
<td>23,4</td>
</tr>
<tr>
<td>5%-10%</td>
<td>46</td>
<td>9,2</td>
</tr>
<tr>
<td>10%-20%</td>
<td>21</td>
<td>4,2</td>
</tr>
<tr>
<td>Over 20%</td>
<td>6</td>
<td>1,2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 2: Design costs as a share of product/service selling price

<table>
<thead>
<tr>
<th>Frequency (n)</th>
<th>Percent (%)</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>130</td>
<td>26,2</td>
</tr>
<tr>
<td>0%-1%</td>
<td>186</td>
<td>37,4</td>
</tr>
<tr>
<td>1%-5%</td>
<td>109</td>
<td>21,9</td>
</tr>
<tr>
<td>5%-10%</td>
<td>43</td>
<td>8,7</td>
</tr>
<tr>
<td>10%-20%</td>
<td>17</td>
<td>3,4</td>
</tr>
<tr>
<td>Over 20%</td>
<td>12</td>
<td>2,4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>497</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The results, presented in Table 3 show that only 11% of companies employ designers, half of the companies (51%), however cooperates with external designers when needed. 62.2% of companies has at least some experience with the use of design.
Table 3: The use of design in companies

<table>
<thead>
<tr>
<th>The use of design</th>
<th>N</th>
<th>No (in %)</th>
<th>Yes (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the company employ designers?</td>
<td>501</td>
<td>89,4%</td>
<td>10,6%</td>
</tr>
<tr>
<td>Did the company in the last 3 years (2008-2010) cooperate with external designers</td>
<td>498</td>
<td>49,0%</td>
<td>51,0%</td>
</tr>
<tr>
<td>Did the company in the last 3 years (2008-2010) use design in any way – product/service design, visual communications, identity, space, process design, etc.?</td>
<td>501</td>
<td>39,5%</td>
<td>60,5%</td>
</tr>
<tr>
<td>Companies that use design (companies that answered confirmative on any of the above questions)</td>
<td>503</td>
<td>37,8%</td>
<td>62,2%</td>
</tr>
</tbody>
</table>

Data on the use of design by main industry (Table 4) show that construction is standing out. In construction, less than 40% of the companies used design in any way in the last 3 years, while. In information and communication industry, on the other hand, almost 90% of companies use design.

Table 4: Use of design by main industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>The use of design</th>
<th>N</th>
<th>No (in %)</th>
<th>Yes (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C - Manufacturing</td>
<td></td>
<td>154</td>
<td>42,9%</td>
<td>57,1%</td>
</tr>
<tr>
<td>F - Construction</td>
<td></td>
<td>40</td>
<td>62,5%</td>
<td>37,5%</td>
</tr>
<tr>
<td>G - Wholesale and retail trade; repair of motor vehicles and motorcycles</td>
<td></td>
<td>98</td>
<td>34,7%</td>
<td>65,3%</td>
</tr>
<tr>
<td>H - Transporting and storage</td>
<td></td>
<td>17</td>
<td>52,9%</td>
<td>47,1%</td>
</tr>
<tr>
<td>I - Accommodation and food service activities</td>
<td></td>
<td>21</td>
<td>42,9%</td>
<td>57,1%</td>
</tr>
<tr>
<td>J - Information and communication</td>
<td></td>
<td>25</td>
<td>12,0%</td>
<td>88,0%</td>
</tr>
<tr>
<td>M - Professional, scientific and technical activities</td>
<td></td>
<td>73</td>
<td>30,1%</td>
<td>69,9%</td>
</tr>
<tr>
<td>Other industries (industries with less than 15 respondents)</td>
<td></td>
<td>75</td>
<td>29,3%</td>
<td>70,7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>503</strong></td>
<td><strong>37,8%</strong></td>
<td><strong>62,2%</strong></td>
</tr>
</tbody>
</table>
With the next set of survey questions, presented in Tables 5-8 we investigated the experience with the design use in companies. In accordance with the results presented below, design presents a strategic function in only 7% of companies. In 13% of companies design manager or team lead and direct the entire development process of new products/services. In 39% of the surveyed companies, designers are not included in the development process, and in 41% of companies, designers are included only at a certain stage of products/services development. Almost 40% of companies, however, are not using design in the process of new product/service development.

Table 5: How is design used for the development of new products/services

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
<th>Cum.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Professional design (designers) is not included in the process.</td>
<td>193</td>
<td>39,1</td>
<td>39,1</td>
</tr>
<tr>
<td>Design (designers) is included in specific points of development.</td>
<td>204</td>
<td>41,4</td>
<td>80,5</td>
</tr>
<tr>
<td>A design manager or a design team leads the whole process of development.</td>
<td>62</td>
<td>12,6</td>
<td>93,1</td>
</tr>
<tr>
<td>Design has a strategic function in the company.</td>
<td>34</td>
<td>6,9</td>
<td>100,0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>493</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

In Table 6 we can see that top management/owner usually works with designers in almost 40% of companies, which seems as a good result on the first sight. However, we must take into account that most of the companies are very small, therefore the owners are very involved in practically everything, so this fact does not necessarily reflect the importance of design for a certain company.

Table 6: Who usually works with designers on design projects in your company?

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
<th>Cum.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>We do not work with designers.</td>
<td>147</td>
<td>31,6</td>
<td>31,6</td>
</tr>
<tr>
<td>Top management/owner</td>
<td>181</td>
<td>38,9</td>
<td>70,5</td>
</tr>
<tr>
<td>Project management</td>
<td>77</td>
<td>16,6</td>
<td>87,1</td>
</tr>
<tr>
<td>Marketing department</td>
<td>48</td>
<td>10,3</td>
<td>97,4</td>
</tr>
<tr>
<td>Others</td>
<td>12</td>
<td>2,6</td>
<td>100,0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>465</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Tables 7 and 8 present results with regard to return of design investments. While Table 7 shows that the vast majority of the companies which invested in design, estimate the return of the development project to be expected, Table 8 on the other hand shows that only 7.7% of all companies formally measure the return on design. Based on this, it can be assumed that investments in design are not considered to be very important.

Table 7: What was the return of the last development project, which included design investments, like

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
<th>Cum.</th>
</tr>
</thead>
<tbody>
<tr>
<td>We did not invest in design</td>
<td>194</td>
<td>38,8</td>
<td>38,8</td>
</tr>
<tr>
<td>Far below expectations</td>
<td>27</td>
<td>5,4</td>
<td>44,2</td>
</tr>
<tr>
<td>A bit below expectations</td>
<td>49</td>
<td>9,8</td>
<td>54,0</td>
</tr>
<tr>
<td>Expected</td>
<td>204</td>
<td>40,8</td>
<td>94,8</td>
</tr>
<tr>
<td>A bit above expectations</td>
<td>20</td>
<td>4,0</td>
<td>98,8</td>
</tr>
<tr>
<td>Far above expectations</td>
<td>6</td>
<td>1,2</td>
<td>100,0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>500</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 8: Do you formally measure return on design

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
<th>Cum.</th>
</tr>
</thead>
<tbody>
<tr>
<td>We did not invest in design</td>
<td>157</td>
<td>31,8</td>
<td>31,8</td>
</tr>
<tr>
<td>No</td>
<td>285</td>
<td>57,8</td>
<td>89,7</td>
</tr>
<tr>
<td>Yes</td>
<td>38</td>
<td>7,7</td>
<td>97,4</td>
</tr>
<tr>
<td>I do not know</td>
<td>13</td>
<td>2,6</td>
<td>100,0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>493</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Most of the results which are based on facts about investments in design and are presented in Tables above, show that in general, companies do not perceive design to be of strategic importance and do not put enough effort into design. On the other hand, the subjective estimations of directors about the importance of design show a different picture, as the results in the following Tables demonstrate.

In Table 9 the average results of two questions are presented. The results show, that on average, firms believe that design has almost as important role in the development processes in their company, as it does in the companies of their competitors of comparable size. While comparing themselves with the leading foreign companies in the relevant field, the average is
just slightly lower. In fact, more than half of the surveyed directors believe that design has a comparable or even more important role in the development processes as it does in the leading foreign companies in their field.

Table 9: Comparison with competition

<table>
<thead>
<tr>
<th>How important role does design have in the process of product/service development in your company, compared to your competitors of comparable size?</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Avrg.</th>
<th>Std. dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>502</td>
<td>1</td>
<td>5</td>
<td>2.98</td>
<td>1.17</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How important role does design have in the process of product/service development in your company, compared to the leading foreign companies in your field?</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Avrg.</th>
<th>Std. dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>502</td>
<td>1</td>
<td>5</td>
<td>2.59</td>
<td>1.11</td>
<td></td>
</tr>
</tbody>
</table>

1 – Far less important, 2 – Less important, 3 – Not less not more important, 4 – More important, 5 – Far more important

Some other results which further show the directors’ perception about the importance of design are the following. More than 30% of the surveyed directors mostly or strongly agree with the statement that design presents an important factor in the development of new products/services and that it is understood as an investment. Also, more than 30% of the directors claim (chose mark 6 or 7 on a 7-level scale of agreement) that the importance of design is declared in the company’s vision, mission statement or in other strategic documents, and that design is part of the organisational culture.

These survey results are somehow in discordance with data about investments in design. Therefore, we assumed that in many companies they do not understand the role of design very well, and as a consequence they also do not fully exploit its potentials. The data, which are based on directors’ self-evaluation therefore paint a better picture then “hard” data, presented in Table 1 and Table 2.

Our assumption was further supported by some of the following survey results, dealing with understanding of design. According to our results presented in figures below, companies understand design as the physical appearance of product/service above all.
Figure 3: How companies understand design

In our company, we understand design as...

...an integral factor for new products/services development

...physical appearance of a product/service

...product/service performance in the terms of meeting consumer needs

...one of the factors for boosting company's creativity

...a mean for prolonging the product's/service's lifecycle

...principles for company's performance improvement
For statistical purpose, we have split the companies into two groups – those, which understand design, and those, which do not understand design. We assumed that companies, which understand design, would at least slightly agree with all of the aspects of design, presented above in Figure 3. Firstly, we checked the understanding of design in different industries. We discovered that similarly as in the case of design use (Table 4), the understanding of design is the best in information and communication industry, followed by accommodation and food service activities industry and manufacturing. We further analysed how the understanding of design is connected to its use in companies. In the table below we present our results, which clearly demonstrate that those companies which are better informed and therefore understand design also use it in a greater share.

Table 10: Understanding and use of design (contingency table)

<table>
<thead>
<tr>
<th>The company uses design</th>
<th>The company understands design</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>% by use of design</td>
</tr>
<tr>
<td></td>
<td>% by understanding design</td>
</tr>
<tr>
<td>Yes</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>% by use of design</td>
</tr>
<tr>
<td></td>
<td>% by understanding design</td>
</tr>
<tr>
<td>Total</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>% by use of design</td>
</tr>
<tr>
<td></td>
<td>% by understanding design</td>
</tr>
</tbody>
</table>

The data dealing with the inclusion of designers in different processes or product/service development stages in company revealed, that probably the most unused potential presents the inclusion of designers into procedures/processes planning. Almost two thirds (62%) of companies never or rarely include designers into this process. Besides that, more than half companies never or rarely include designers in preparation of project frameworks (54%) and preparations for production (production technology) (54%). Most often, designers are included into the idea generation phase.

Similar results were obtained with the data about the role of design in companies. The role of design with improvement of company’s public image is considered to be the most important (88% of companies consider this role to be important) followed closely by brand image improvement (87%) and product/service physical appearance improvement (84%). On the other hand, only about a quarter of companies recognise the role of design with decreasing production costs (24%) and reducing the number of product/service components (25%) as important. In the figure below, the mean values for importance of specific roles of design with
improving different aspects in company are shown. The managers evaluated the importance of specific roles on a scale from 1 to 5, whereas 1 means that the role is not important at all, and 5 means that the role is very important.

*Figure 4: Mean values of specific roles of design importance estimation*

The analysed reasons which influenced the decision to employ design in companies, show a similar picture. By far the most important reason seems to be the need to improve the brand
image. The mean values for analysed reasons are presented in the table below. The managers evaluated the importance of specific reasons on a scale from 1 to 5, whereas 1 means that the reason is not important at all, and 5 means that the reason is very important.

Figure 5: The reasons for design employment

![Bar chart showing reasons for design employment](image)

In the figures below, the results about the managers perception of the Slovene designers’ quality is presented. The majority of managers more or less agree that the quality of Slovene designers is internationally comparable.
Figure 6: Slovene designers’ quality

Confirming the results from the previous figure, the results in the figure below demonstrate, that the majority of managers are also satisfied with the attitude and cooperation of external designers.

Figure 7: Satisfaction with external designers
According to our results, price is almost of the same importance when choosing a designer as are their references. While 67% of managers more or less agree that they choose designers based on their references (previous projects, awards,…), 58% of the managers more or less agree that they choose designers based on price.

In the Figure 8, the mean values of different obstacles for a greater use of external designers are presented. The managers evaluated the importance of specific reasons on a scale from 1 to 5, whereas 1 means that the reason is not important at all, and 5 means that the reason is very important. As it is seen in the figure below, the most important of analysed obstacles are the costs and supply untransparency.

*Figure 8: Obstacles for use of external designers*
Discussion and conclusion

A superficial look at the results of the survey among managers reveals relatively high awareness and use of design services. For example more than one third of managers claim that design presents an important factor in the product/service development, that they understand design as an investment, that importance of design is declared in company’s strategic documents and that design is even part of the organisational culture.

However, these results are based on the self-evaluation of the managers. Further analysis, on the other hand, reveals that in most of the firms, design does not really play a strategic role. In most cases, industrial design is perceived as a physical appearance of a product and as a factor supporting the brand image. Only about 5 percent of firms invest more than 10 percent of the total product/service development resources in design. Similarly, in only about 5 percent of firms the cost of design presents more than 10 percent of the product’s/service’s sales price.

The industry analysis reveals that construction is standing out as the lowest user of design services. On the other hand, design is most commonly used in information and communication industry. In this industry the understanding of design is the highest as well. The results also demonstrate a clear connection of the awareness (understanding of design) and its use. An interesting story tells also the fact that among the companies which refused the cooperation in the survey, there were exclusively service companies, claiming that design is not relevant for their industry. This demonstrates a lack of awareness and also underdevelopment of service design in Slovenia.

Among the companies, which have experience with the use of design, the satisfaction with the quality and cooperation of external designers is rather high. This supports the Slovene designers’ self-evaluation in the supply side study (Murovec, Kavaš, 2014) and confirms that the major problem is not in the supply side. According to our study, the major problem presents the unawareness of the managers about the potential of design and the role that design should play in a company.

Besides the companies, there is however another important aspect of the problem. In Slovenia, the understanding of the role of design for economic development and for society as a whole is still incomplete. In terms of design policy, Slovenia is lagging at least 10-15 years behind developed European and Asian countries. Slovenian design policy should be one of the foundations of the future development of the country, since the efficient use of design presents a powerful tool for restructuring of firms and traditional industries into globally competitive firms and industries. Furthermore, it enables an upgrade of R&D projects into innovative products and services with high added value. Following the example of the most
developed countries, the use of design in the public sector can also lead towards improved quality and lower costs of public services.

Based on the analysis of design in Slovenia, good practices and design policies in other countries, interviews and workshops with representatives of the project's financers, designers and firms, a set of measures for Slovenian design policy was prepared. The proposed measures present an expert groundwork for further work on preparation of the Slovenian design policy. The full report is available in Slovenian here:


Up to this point, however, the proposed action plan has not been implemented. For Slovenia, a national design policy is of great importance, since it would present a systematic approach, which would result at least in: promotion of design, stimulation of the use of design in private and public sector, connection of designers, scientific institutions and firms, international promotion, increase of the design quality and also increase of (private/public) investments in design.
References

PUBLISHED PAPERS IN THE SERIES


