A COMPARATIVE ANALYSIS OF STRATEGIES FOR DESIGN PROMOTION IN DIFFERENT NATIONAL CONTEXTS

within the discipline of Design

Gisele Raulik-Murphy, BDes MA

Director of Studies           Mr. Gavin Cawood
                                Operations Director
                                Design Wales
                                University of Wales Institute, Cardiff

Supervisor                    Professor Alan Lewis
                                Dean of Research
                                University of Wales Institute, Cardiff

Supervisor                    Dr. Povl Larsen
                                Senior Research Officer
                                National Centre for Product Design & Development Research
                                University of Wales Institute, Cardiff

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DECLARATION

This work has not previously been accepted in substance for any degree and is not being currently submitted in candidature for any degree.

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ABSTRACT

Design promotion takes place when there is a need to inform companies, governments or citizens about the benefits design can offer for economic and social development, and how to take full advantage of them. It can take several forms such as design programmes, support services for businesses and design policies. Although design promotion is practised widely in countries around the world, there is little academic research or background theory to support its advancement. Therefore, this thesis developed an approach to understanding design promotion, its rationale, scope, terminologies, practices and its potential development, through three key studies: (1) a historical review of design promotion; (2) a survey of current practices and their interrelation with economic development; and (3) case studies of design promotion practices in India, Brazil, Korea and Finland. This four-subject sample was then explored in a comparative analysis, which addressed the main objective of this research: the investigation of design promotion strategies in countries at different stages of economic development. Through grounded theory, a seven-category framework emerged from data to guide the comparative analysis. In the conclusions drawn by this research, significant differences were identified between advanced economies (represented by Korea and Finland) and developing countries (represented by India and Brazil) in four of the categories: rationale; design policy; national design system; and national context. In the other three categories (design programmes; design education; and professional design sector), differences were identified in the individual countries, but there was no evidence to support any generalisation that would characterise contrasting approaches at different stages of economic development. Following the investigation of the individual categories, this research examined their interrelation, which resulted in the recommendation of avenues for further research in the field of design promotion, such as the investigation of systemic failures in national design systems, and the political and economic factors that affect the implementation of national design policies.
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1 Introduction

There are innumerable statements that assert the value of design. First of all, it is important to state the importance of design in businesses, as a structured creative process that provides a competitive tool for firms in all sectors (DTI, 2005). Design is also fundamental in realising innovation, which gives companies vital differentiation in the market place (Porter, 1998). According to Heskett (2002) design is also a fundamental determinant of the quality of human life, as it affects everyone in their everyday routine. On a larger scale, design can potentially contribute to solutions to societal and economic problems. Farson (2008) refers to design as a force for transforming everything, which can address the needs of all people.

Despite many positive statements about the value of design, how design can contribute to the world’s development is far from clear, insufficiently exploited and often underestimated (Thenint, 2008). At a micro level, there is the problem of helping companies, in particular small and medium-sized enterprises (SMEs), to understand how to find a designer, and commission and manage a design project in order to achieve business improvement. At a macro level, there is a need to demonstrate how to use design and designers for the improvement of a nation’s competitive advantage and its social and economic growth.

Because of this lack of understanding at both levels, many national and regional governments have identified a need for intervention, which happens in a range of forms of design promotion, such as design programmes, support for companies and government policies. Therefore, strategies for design promotion take place to inform citizens, companies and governments about the benefits that design can offer and how to take full advantage of them.
Design promotion has been practised for many decades across the world. Only recently, however, has it become a subject of debate, due to the increase in global market competition which has fostered interest in tools for improving countries' competitive advantage, among them innovation and design. As expected for a new subject of debate, there is little material available to guide or challenge practitioners. Thus, there is a need for research in this area, in order to understand the scope of design promotion, to identify references, to re-examine current practice and to develop new thinking that will help in the advancement of this field.

The aim of this research is to address this shortfall by studying the history of design promotion, investigating past and current practice and exploring avenues for its improvement in the future. The core of this research is a comparison of design promotion in countries at different stages of development, in order to understand how design promotion is influenced and adapted to national contexts.

### 1.1 Background

#### 1.1.1 The evolution of the knowledge economy era and its impact on national industry

Recently, developments in communications technology and improvements in human capital through education and training have originated the rapid creation of new knowledge and the fast global exchange of information. As a consequence, the business environment has been significantly transformed (Forey, 2003). Moreover, the fall of barriers to commerce has resulted in unprecedented market competition (Teece, 1998). These conditions have had a profound impact on national economies and are reflected in the pressure for countries to compete aggressively in the economic and commercial spheres. The fall of communication barriers has also resulted in two challenging consequences for national industries: on one hand, companies have access to alternative means of production and to information about competitors; on the other hand, consumers increase their level of demand for novelty and quality. This means that although companies have more resources, they are now facing a tough fight to sell their products and services.
In the new economic wave, now that information is travelling fast with the aid of internet connections, ideas are continually shared and spread. Therefore, innovative products and services can have a very short lifespan and they may become obsolete almost as soon as they are launched (Cooper, 2001). In this environment, governments need to develop mechanisms to encourage companies to be creative, to exploit knowledge and to be innovative (Riley, 2005).

The classic theory of modern business strategy by Porter (1985) argues that there are three generic strategies for achieving and maintaining competitive advantage: cost leadership, differentiation and focus. The cost leadership strategy emphasises efficiency. Differentiation involves the production of unique products and services which can be obtained with investment in design, brand image, technology, features, dealers, network or customer service. Focus strategy demands the selection of a target market, and typically the use of brand strategies to address this niche market segmentation. Therefore, companies and countries must produce goods and services that are competitive not only on price but also on the basis of differentiation. Failure to do so means that domestic markets are likely to be eroded both by cheaper goods of higher quality and by better-designed products from abroad. According to Roy et al. (1990), if a company is not able to place its product or service in the market for the lowest price, there will be a need to invest in non-price factors (see Table 1). In order to compete successfully, such a company will have to pay close attention to its creative skills and ability to innovate (Porter, 1998). In this scenario, design is one of the key ingredients.

Table 1: Product characteristics influencing customer choice (Roy et al., 1990)

<table>
<thead>
<tr>
<th>PRICE FACTORS</th>
<th>NON-PRICE FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Price (list price; sales price; net price after trade-in allowance etc.)</td>
<td>Non-price ‘technical’ factors</td>
</tr>
<tr>
<td>- Financial or leasing arrangements</td>
<td>- Performance in operation (e.g. speed and quality of operation)</td>
</tr>
<tr>
<td>- Lifecycle costs (whole life cost; breakdown costs; parts costs; depreciation etc.)</td>
<td>- Reliability and durability</td>
</tr>
<tr>
<td>- Safety</td>
<td>- Ease of use and maintenance</td>
</tr>
<tr>
<td>- Appearance, materials and finish</td>
<td>- Flexibility and adaptability in use</td>
</tr>
<tr>
<td>- Packagings and presentation, etc.</td>
<td>- User training facilities, etc.</td>
</tr>
</tbody>
</table>
1.1.2 Companies’ failure to work with design and innovation

Many authors (Lorenz, 1986; Roy, 1994; Walsh et al., 1992) have presented evidence supporting the idea that design is a crucial tool for market competition. Although design is an important source of user-centred innovation and competitiveness for European companies, it is insufficiently used, in particular by SMEs (Thenint, 2008). Many companies still lack the knowledge, skills and resources that would enable them to use design to develop innovative products and services (Bruce et al., 1999; Cawood, 1997; von Stamm, 2004).

This is shown in Table 2, which presents the results of a survey that took place in 2006, when 18,939 members of the Federation of Small Businesses in the UK responded to a poll. The investigation revealed the attitudes and opinions of a very large number of owners of SMEs (Carter et al., 2006). Table 2 presents the methods the SME owners intend to use to achieve their planned growth objectives:

<table>
<thead>
<tr>
<th>Method</th>
<th>COUNT</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve sales &amp; marketing</td>
<td>8552</td>
<td>45.2</td>
</tr>
<tr>
<td>Seek to reduce costs</td>
<td>7337</td>
<td>38.7</td>
</tr>
<tr>
<td>Seek out new types of customer</td>
<td>7330</td>
<td>38.7</td>
</tr>
<tr>
<td>Invest in new equipment/machinery</td>
<td>6184</td>
<td>32.7</td>
</tr>
<tr>
<td>Invest in IT</td>
<td>4923</td>
<td>26.0</td>
</tr>
<tr>
<td>Expansion in range of products/services</td>
<td>4742</td>
<td>25.0</td>
</tr>
<tr>
<td>Move to new premises</td>
<td>3379</td>
<td>17.8</td>
</tr>
<tr>
<td>Increase expenditure on staff training</td>
<td>3320</td>
<td>17.5</td>
</tr>
<tr>
<td>Seek out new geographical markets</td>
<td>2628</td>
<td>13.9</td>
</tr>
<tr>
<td>Greater collaboration with suppliers</td>
<td>2355</td>
<td>12.4</td>
</tr>
<tr>
<td>Reduce environmental impact</td>
<td>1695</td>
<td>8.9</td>
</tr>
<tr>
<td>Open additional branches/premises</td>
<td>1689</td>
<td>8.9</td>
</tr>
<tr>
<td>Increase exporting</td>
<td>1189</td>
<td>6.3</td>
</tr>
<tr>
<td>Focus on narrower range of products/services</td>
<td>1155</td>
<td>6.1</td>
</tr>
<tr>
<td>Increase R&amp;D spending</td>
<td>1014</td>
<td>5.4</td>
</tr>
<tr>
<td>Greater collaboration with competitors</td>
<td>945</td>
<td>5.0</td>
</tr>
<tr>
<td>Start Exporting</td>
<td>528</td>
<td>2.8</td>
</tr>
<tr>
<td>Shift activities to lower cost overseas location</td>
<td>260</td>
<td>1.4</td>
</tr>
<tr>
<td>Shift out of manufacturing and into service</td>
<td>132</td>
<td>.7</td>
</tr>
<tr>
<td>Total Responding</td>
<td>15723</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Methods of Achieving Business Growth Objectives (Carter et al., 2006)
‘Expansion in range of products/services’ and ‘R&D spending’ are the two main areas from the list above where design plays a fundamental role. Only 25% of respondents selected the first option and only 5.4% selected the second option as investments to be undertaken by their companies in order to achieve business growth.

Indeed, a study by the UK Design Council revealed that only 32% of UK companies had introduced a new product or service in the market in a period of three years. The survey also showed that this rate increases in companies where design is an integral part of the business: 67% of UK businesses that use design have launched new products and services within this period (Design Council, 2006).

Evidence of the lack of use of design by UK firms was also provided by the Department of Trade and Industry (DTI) in 2005. It reports that ‘over half of firms say design has no role or only a limited role to play in their business’ (DTI, 2005).

There have been several studies aimed at identifying reasons why companies, particularly SMEs, remain reluctant to invest in innovation and design. The most important reasons are:

- In general, SMEs are not managed through an elaborate structure. Typically, they are managed in a personalised way that directly reflects the knowledge, skills and attitudes of their owners or managers. This characteristic is of vital relevance if this individual lacks awareness of the potential value of design for the business, or has neither the time nor the skills to utilise design adequately, then the integration of design practices in that company will be difficult (Bruce et al., 1999);
- SMEs take the time to investigate the potential benefits of design usually only because of an immediate need (Cawood, 1997);
- SMEs are continually facing crucial issues for their survival and the critical problems remain internal constraints, such as lack of financial resources, insufficiently skilled labour, and lack of management, marketing and sales skills. Moreover, they face problems in responding to customer needs, market needs,
technological changes, competitors and management initiatives (Hugues, 2001);

- SMEs lack information about issues such as potential markets, sources of finance, government regulations and grants (Johnson et al., 1990);

- SMEs are less able than larger companies to absorb the risk and uncertainty that is an inevitable component of important activities such as process innovation and new product development (Johnson et al., 1990);

- Companies tend to foster ‘efficiency, cost-cutting, incremental changes and a focus on day-to-day business. Innovation is not likely to flourish in such a culture’ (von Stamm, 2004);

- There tends to be a lack of belief in the value of, or confidence in the outcome of, hiring creative professionals (Cox, 2005);

- There may also be a lack of knowledge about where to find and how to manage design services or assistance in this matter (Cox, 2005).

SMEs are the companies that are most vulnerable to stiff competition but also the largest employers in a country, and therefore most likely to receive the provision of state aid (European Commission, 2000); hence significant attention is given to this sector. National competitiveness depends on the value of the products and services produced by the country’s industry, the amount that they can command in the open market and the efficiency with which they can be produced (Lopez-Claros et al., 2006). Therefore, ensuring that large companies are innovative and therefore able to compete in international markets is also a concern for national governments. This is described in a report from the UK Department of Trade and Industry:

The ability to generate a diverse set of business options through new ideas is a central feature of innovation in all firms and, as such, is a key driver of economic growth. Design, as a structured creative process, is an important competitive tool for firms in many sectors, although design activities can take many forms across those different sectors. Design can enhance non-price characteristics, improving quality and creating niche markets. Creativity and, in many cases, formal design activities are also important for marketing, company image and brand loyalty. They can also impact production costs and overall firm productivity. (DTI, 2005, p.31)

The success of national industry (both service and manufacturing sectors, both SMEs and large enterprises) is crucial for the development of a country’s economy. The
market failure to use design for competitive advantage has been identified as an underpinning rationale for providing support to industry.

Based on this argument, the need to encourage companies to invest in design should be clear. From national and regional governments’ perspective, stronger assistance in the development of products and services would help companies become more competitive, strengthening the nation’s industries and consequently its economy.

1.1.3 Encouraging industry to use design

Promotion of design is not a new activity: it happens in almost every competitive economy. In some countries it is led by government policy; in others, the professional design sector takes the lead in the absence of government support; and where government is not supportive nor the professional sector organised, individual designers may take the initiative of promoting the advantages that design can bring for businesses.

The implementation of strategies for design promotion or government policies to foster innovation in industry can be traced back to as long ago as the Roman Empire. Obviously, at that time design was not known as a discipline, but policies did exist that can be seen as the first strategies that attempted to build product differentiation or industry excellence for trade advantage (Heskett, 2001b) (see Chapter 4).

The number of design promotion programmes increased rapidly after the end of World War II. The need for reconstructing countries, the demand for new products, the eagerness to improve quality of life, the restoration of the world economy and international trade – these were all factors that channelled attention towards design. As a result, many countries started national design promotion programmes (e.g. the UK, Germany, Norway and Japan).

Attention to design programmes was greater still in the 1990s, when the focus shifted from cultural to industry-led strategies. The need for innovation and competitiveness in industry helped to raise interest in design.
Currently, a range of programmes is in place around the world to help companies use design in order to improve their businesses. As an example, these programmes build 'bridges' between design and industry (Dahlin & Svengren, 1996). More general programmes are known as design promotion. They exist to raise awareness about the benefits of design through activities such as seminars, exhibitions, awards, publications and so on.

Investment in the development of products and services can help companies to become more competitive, strengthening both their industries and the economy as a whole. This is why countries are willing to invest in programmes that will encourage industry to exploit design for their business competitiveness; the commercial success of individual companies, in turn, contributing to the country’s economic advantage.

1.2 The research proposal

1.2.1 Conceptual framework: the author's motivation and background

Design programmes, policies and government schemes for design: this field of practice has been the central topic of interest in my career for over a decade. More recently, it has also become my topic of study. Therefore, this research's conceptual framework has been deeply influenced by the experience and knowledge I have gained from the field, both as a practitioner and as a researcher.

My experience started in the South of Brazil, when I was invited to contribute to the establishment of the first design centre in that region. The remit given by the local government was to assist companies in utilising design to its full potential in order to become more competitive. From this experience I learnt the great difference that the effective use of design can make for companies that are competing in a tough market with only ordinary products. Moreover, there was an indication of the potential use of design for urban improvement, particularly in areas of low development.
After a couple of years of practice, there was a need to improve the programme, to search for better design support models as references and to examine our own practice. It was a moment of government change in the State, and therefore there was an urge to prove that results obtained with our programme were worth the investments made by the government. At this stage I learnt about the shortage of reference material in this field of practice, and the need for research in order to prove the effectiveness of policies/programmes and drive their advancement. Moreover, I experienced how the reality of government instability could affect schemes such as the design centre’s programmes.

This uneasy period led to the beginning of my academic studies on design promotion. With a British Council scholarship I moved to the UK to take a Master’s at Brunel University, where I developed a dissertation about design support for SMEs. One of the lessons from this research project was the understanding that encouraging companies to use design is not a sustainable strategy. This activity (named ‘design support’ in this thesis) is not enough to advance the use of design in a country. There is a need to combine it with design promotion, to support it with design education and to align it with other government policies. Furthermore, the dissertation had the aim of comparing models of design support. I soon learnt about the diversity of such programmes and the difficulty of obtaining accurate information about their results, which consequently became a crucial barrier for comparing different design programmes on a common basis and in an accurate manner.

Parallel to my research I was further developing my career as a practitioner. My first experience in the UK was at the Design Council, working within a design support programme for English companies. Following that, I joined the Design Wales team. In both organisations my role included research in the area of design support. Particularly in Wales, I was looking at models of design promotion and support as well as national design policies. Once again there was a clear shortage of information in this field of knowledge; theory supported by academic research was almost non-existent.
In an attempt to address this shortage and pool practitioners’ know-how to support academic studies, I established a European-funded programme for sharing information about design programmes and policies. The SEEdesign programme, a network of European design organisations, took place from 2005 to 2007, and therefore was a valuable source of information and debate during the development of this thesis. Furthermore, my coordination role in this programme was beneficial for the completion of this research, as it provided me with the favourable position of being in direct contact with other practitioners and researchers in the field of design promotion.

One of the objectives of SEEdesign was evaluation of the impact of the design programmes – a task that I have learnt remains crucial for the advancement of design promotion and policies. In trying to compare programmes from different European countries, the programme faced serious difficulties in obtaining comparable data, despite the commitment of the partners to the project. This was definitive in determining that the research methodology for this thesis had to be designed in a way that would avoid the same hazard.

Furthermore, SEEdesign exposed the diversity in programmes in Europe and elsewhere, as well as the lack of terminology, which appeared to weaken communication and knowledge exchange in this field.

More critically, SEEdesign uncovered the way in which design programmes and policies have been transferred between countries and regions without a diagnosis of their context. In my professional experience I became acquainted with, and even participated in, this transfer of practice. It provided me with a critical viewpoint on the pros and cons of such an approach.

Finally, since 2005 my work with this European network has offered me the opportunity to address policy-makers and inform them about design. Communication with this specific group requires proven methods and appropriate language. Some of
the research methods for this thesis were chosen with this public in mind. This is the case, for example, with the use of quantitative and statistical analysis in Chapter 5.

To summarise the key points of my journey, which have been most influential to this thesis, I can highlight the following:

- Encouraging industry to use design is key in building a competitive economy. However, the work with industry must be combined with promotion and strategies that bring design to the awareness of the larger public and also governments.
- Government instability, political and economic issues are likely to have a direct impact on design promotion programmes.
- Governments and policy-makers value qualitative information, but they also need quantitative data that confirms the effectiveness of design promotion programmes.
- Overall, there are crucial difficulties in obtaining comparable and accurate data about the effectiveness of design promotion programmes.
- The field of design promotion lacks common terminology and theoretical research that could provide references for the improvement of this practice.

No doubt my background has been the inspiration and the motivation for this research. Moreover, my continuous professional experience has influenced the course of the investigation, contributing to the definition of a research strategy, the selection of methods, the completion of the studies, the testing of theories and the delivery of results. A personal challenge of mine is to develop a body of work that could bridge academic theory and practice, in order to advance the field of research and also improve design programmes and policies in practice.

1.2.2 The research problematic

The aim of this study is to lay foundations for improved practice as well as further systematic research in the field of promotion programmes and policies for design. This thesis aims to identify and inform some of the fundamentals of design promotion
and therefore empower practitioners and researchers to challenge current programmes and to develop their own models, without having to rely on the transfer of practices.

As the world economy has developed there is recognition of the importance of there being a systematic approach to innovating and developing new products. Therefore, increased attention has been paid to companies, organisations and individuals who are engaged in innovation to embrace design practice and principles. As a result, there has been progressive development of design promotion as an activity conducted nationally, regionally and locally. Consequently, the need for a systematic approach and a better understanding of the practice of design promotion has become apparent.

Currently, almost every developed country has a design programme, and many developing countries are increasing investment in such practices. The most common approach to initiating design programmes in developing countries is the transfer of practices, i.e. the implementation of programmes mirrored from models already established. These models are usually imported from countries with an advanced economy. However, based on my own observation and professional experience, I question if this transfer has been successful. In particular, I observe that this transfer tends to occur from advanced economies to developing countries with little consideration to the recipient’s socio-economic context. Given the obvious socio-economic differences between advanced and developing economies it is logical to question the potential for success in such transfers. This issue is the foundation of this thesis’ main research question:

- **What is the relevance of the social, political and economic context in the development of strategies for design promotion?**

In this context, it is crucial to appreciate the differences between the various countries and how these differences influence the practice of design promotion. Furthermore, different countries are in different stages of engagement with design promotion practice. This could be due to long history of investments in the practice, or due to an already strong tradition in design, or even due to a particular government’s
enthusiasm for the topic. The matter is that this level of engagement with design promotion does not necessarily reflect the country’s stage of economic development. In this case, this research programme proposes to investigate what the relations between socio-economic development and design promotion are; if there are any to be accounted for. This issue gives rise to the formulation of my second research question:

- Is it possible to identify factors that are particularly relevant to the efficacy of design promotion in these countries? Do these factors suggest differences between advanced economies and developing countries in terms of their approaches to design promotion?

If practices have been transferred based on aspirational models, it is likely to happen due to the lacunae of references, theories and concepts that would otherwise guide practitioners on the development of their strategies for design promotion. I have experienced such shortage of suitable reference material in my professional practice, which is further confirmed through a systematic review of the literature. Despite the fact that design promotion practice has a long tradition, design promotion as a research topic is a new phenomenon. Without empirical investigation, the development of design promotion relies on a sequence of ‘trial and error’ procedures, where experiences are transferred, but not necessarily filtered or systematically improved. Furthermore, in learning by example, there is little advancement in new models, in particular for countries that are starting in the practice – which are likely to be developing countries.

1.2.3 Outline of the thesis

This thesis consists of nine chapters. A brief summary of each chapter is provided below:

- Chapter 1 introduces this research and its conceptual framework.
- Chapter 2 reviews the research literature available in design promotion and some analogous fields of national and regional policy promotion. The chapter presents the main findings from previous studies that are relevant for the
development of design promotion, highlights the research gap that this thesis addresses, and defines the aims and objectives of this research.

- Chapter 3 describes and justifies the application of grounded theory in the development of this research. It also explains the three separate studies that were conducted and the methods employed in each of them.
- Chapter 4 presents the first study, which provides a historical review of the practice of design promotion.
- Chapter 5 presents the second study, into how design promotion is related to national competitiveness. Based on a structured survey, it identifies where design promotion programmes and policies are practised around the world.
- Chapter 6 presents the third study, which includes four case studies. The subjects, selected on the basis of the survey outlined in Chapter 5, represent nations at contrasting stages of economic development. The case studies review the history of design promotion strategies and the current design system in each subject country.
- Chapter 7 provides a comparative analysis of design promotion in countries at contrasting stages of economic development. It is based on the four case studies and a framework of seven categories: design programmes, design education, professional design sector, rationale, design policy, national design system and national context.
- Chapter 8 discusses the interrelationship between the categories mentioned above, in order to propose theories that can guide future research in the field of design promotion.
- Chapter 9 presents the conclusions by reviewing the research questions and the outputs as original contribution to knowledge.
2 Review of literature

2.1 Overview

This chapter reviews the literature published in the field of strategies for design promotion. The objective is to investigate available studies and theoretical ideas, and to identify gaps in knowledge in the area of design promotion. In order to provide an overview of contrasting perspectives, this chapter is presented in a thematic format under three main headings: existing studies on design promotion, the rationale for design promotion, and the evaluation of this practice.

The first topic, review of existing studies, aims to provide an understanding of how design promotion strategies have been investigated to date and which are the most relevant issues in this field.

The second topic, rationale for design promotion, is pertinent to this research as it seeks to identify how different authors justify the use of design promotion strategies.

Finally, the survey of evaluation examines previous work that has attempted to measure and compare design promotion strategies. The objective of this investigation is to obtain parameters for the investigative methods that will be employed in this thesis.

Due to the nature of the field of design promotion strategies, this review was not restricted to academic publications but also considered documents published or commissioned by governments and design organisations. Moreover, in looking for further theoretical references, this literature review includes studies about analogous fields of government policy, such as innovation, research and development (R&D) and quality promotion. Emphasis is given to the investigation of National Innovation Systems (NIS).
2.2 The study of design promotion

Although the practice of deploying design policies and strategies for design promotion is widespread, this subject has received little attention from academics.

The first academic event to focus on this field was the Design Policy Conference organised by the Royal College of Art in London in July 1982. Despite its title, the event presented a very broad context for design policies: 'the conference provides scope for anyone who wishes to talk about design in relation to almost anything else'. Among more than 100 papers, only two presented national approaches on design promotion (cases from France and Austria). In the conference report, Bell (1982) expresses his reaction to the papers: 'one wonders whether politicians will be prepared to listen, when those concerned with design question basic political ideologies and present radical views on the nature of society and the role of design with it'. Despite the attention dedicated to design policy at this conference in 1982, a review of literature shows that this was an isolated event, with no other significant academic event in this field of research taking place during that decade.

In the 1990s, the discussion of design promotion became part of the design management agenda. The Design Management Institute (DMI) published two special Issues of the Design Management Journal in 1993 and 1996 (Er, 2002). Although these publications were important for raising discussion about how different countries approach design promotion, the papers were mainly speculative, written by practitioners, with little research methodology and presenting little in the way of reliable data.

Very often papers about design promotion strategies present the development of this practice in one specific country, rather than a comparison of practices. In such cases, papers are usually descriptive, unfolding the development process of a programme and its results. There is usually limited discussion of the approach and achievements from a critical point of view, probably due to the fact that papers are normally written by the programme's deliverer, and their main objective is not academic research.
analysis but the positive promotion of the programme in operation. The long-term impact of the programmes – vital information for policy-making purposes – is often neglected, since papers tend to be published shortly after the end of the implementation, or even during the process.

The increasing interest in design promotion inspired practitioners to organise meetings and seminars. In September 2002, the Korea Institute of Design Promotion (KIDP) promoted a ‘Design Policy and Global Network’ in partnership with the International Council of Societies of Industrial Design (ICSID). This meeting presented perspectives on the development of design policies in a number of countries from different parts of the world. The diversity of the presentations showed how the topic was developed in contrasting ways by the different countries. The meeting ended with a proposal from ICSID for the development of the World Design Report, an attempt to gather together data about the design system and resources in the countries around the world. It aimed to create, over time, the opportunity to establish some form of loosely comparative overview between national contexts (Thomson, 2002). This project is further analysed later in this chapter.

In January 2004, the French Agency for the Promotion of Industrial Creation (APCI) hosted ‘Challenges of Design Promotion in Europe’. This conference was an opportunity to present the results of a survey that analysed design promotion structures in different countries, their challenges, objectives, methods, resources and connections with other similar organisations, on request of the Ministère de l’Économie, de l’Industrie et de l’Emploi (the French department dealing with trade and industry). This was the first of a series of annual meetings in Paris and presented the results of the benchmarking. In 2005, the theme was ‘Economy, Innovation and National Design Policies’. A series of relevant presentations introduced examples of design programmes developed in Europe, data on the evaluation of design impact and the links between design and innovation. In 2006, the most important topic of discussion was the evaluation of design, its impact within businesses and the way companies perceive it. In 2007, the conference had the title ‘Designing Design Support’, discussing issues related to stakeholders, objectives and means for design
and innovation support. In 2008, the meeting was strongly focused on ‘Design Management’, as an emerging topic on the European agenda. The meetings in Paris were mainly attended by European design practitioners seeking to learn about practical issues for the implementation of design programmes and centres (APCI, 2009).

In the same year the first of these meetings took place in Paris, 2004, similar circumstances occurred in Wales. The regional government, sponsor of the national design organisation, Design Wales, requested information about how other countries were providing support to local industry in design matters. This request was the main reason for the organisation of the first International Workshop on Design Support (IWDS), which took place in Cardiff in May 2004. The IWDS subsequently became a biennial event.

In 2008, a conference solely dedicated to government design policies took place in Turin under the auspices of the Torino World Design Capital 2008. ‘Shaping the Global Design Agenda’ presented the state of the art in design policies in a range of countries: the UK, China, Costa Rica, Qatar, Finland and Italy. Three discussion panels – design and economy, design and society, design and complexity – complemented the presentations. Important issues debated during this meeting were:

- the transferability of design policies (e.g. how to avoid mistakes that have happened in the past when policies were transferred from developed into developing countries);
- the role of design policies (e.g. how design policies can be influential in creating better infrastructures (healthcare, services, education...); how design can promote non-technological, user-centred innovation);
- the definition of design policies;
- what constitutes a good design policy;
- and who the design policy makers are. (Vanderbeeken, 2008)

Soon after the Turin meeting, two other international events were dedicated to the discussion of regional and national design policies. The Design Management Europe
(DME) Workshop took place in Barcelona and covered issues relevant to a European design policy, with some emphasis on the challenges in measuring the impact of design on economic development.

All the above events have been organised by practitioners aiming to provide an opportunity for discussion of practice, exchange of information and networking. Academic outputs (e.g. research papers and proceedings) are not usually produced. Only APCI 2005 published proceedings and IWDS 2004 was reported in the DMI Journal (Cawood et al., 2004).

Although academic research in the field of public design strategies has expanded recently, there is a need for further studies in this field. The requirement for academic studies and research about design promotion, their methods and impact is evident particularly due to the demand from practitioners to be able to prove their results and argue their case within government and with policy makers (Er, 1997; Friedman, 2009). In 2006, the keywords ‘design policy’ appeared on the list for the Design Research Society Conference for the first time.

2.2.1 National approaches to design promotion

This review of the existing literature in the field of design promotion strategies reveals that practice pursues very similar strategies across the world. Authors from different countries describe similar drivers and challenges. Moreover, the activities described follow a pattern of common practice: design awards, exhibitions, publications and assistance to industry.

Vokrouhlicky (2001) describes a design competition and a support programme as the main activities developed at the Czech Design Centrum, aiming to improve the quality of Czech products for market competition. His paper is descriptive and presents only the early results of the programme’s impacts: ‘growth of Czech industrial production and rates of export’.
Similar to the Czech case study, the UK and Sweden also focus their services on small and medium businesses (SMEs). Many authors (Cawood, 1997; Cox, 2005; Dahlin & Svengren, 1996) have stressed the reasons:

- Typically SMEs represent more than 95% of the number of businesses in a country and they lack the knowledge and resources to invest in design;
- SMEs lack awareness of the role that creativity can play in their businesses;
- SMEs are more flexible and are therefore more likely to take innovative steps in product development.

For design support programmes in these three countries (Czech Republic, Sweden and the UK), it was seen as crucial to facilitate SMEs’ access to good designers.

Wood et al. (2004) also describe two design support programmes, Glasgow Collection and Parana Creation, which are focused on encouraging companies to use design. However, these programmes are not restricted to SMEs, since they also assist large companies. Glasgow Collection and Parana Creation are described by the authors as journeys of convincing companies to use design for the development of innovative products and to produce prototypes that will be shown in an exhibition by the end of the programme. They are based on the ‘power of example’, so the engagement of visionary companies, including large ones, is used as motivation for ‘timid companies’.

Practical demonstration and the actual experience of the use of design for business advantage is a key element of design support programmes according to Wood et al. (2004). This idea is in line with Cox’s statement: ‘Experience shows that smaller companies do not respond well to generalised awareness programmes. ... SMEs need to be reached on a local basis, with active support and a practical demonstration of the benefits on offer’ (Cox, 2005).

The examples above are all funded by public sources, mainly from regional or national government. As reported by Cawood et al. (2004), the availability of funding is crucial in shaping a country’s design support service. In the absence of public funds, programmes are usually limited to promotional activities. This is demonstrated in
practice by Design Alabama, an independent non-profit organisation in the USA. Setzer (1996) describes the difficulties of surviving and prospering as a self-funded design promoter. Two funding strategies were proposed: the increase of membership income and corporate sponsorship for individual programmes (according to the author, experience shows that private companies are more likely to sponsor specific programmes with well-defined objectives and accomplishments). In addition, Setzer explains that publications will remain an important activity, as they promote the organisation and therefore reach potential new members.

Adaptation was a topic discussed by Dumas (1996) at the UK Design Council’s 50th anniversary. Her critical comment of the key lesson learnt from the half century of operation was that ‘preaching good design is not enough’. For this reason, the Design Council proposes a different model that values new knowledge and connections to help organisations develop new products and services to meet the demands of the global market. Dumas also highlights the UK Design Council’s position as a model for design centres around the world. In contrast, this is questioned in the 30th anniversary report of the South African Institute of Design (SABS Design Institute, 1999). The publication analyses the history of the Institute, which was established in the 1960s according to the British Design Council model. The report highlights five errors made at the implementation of the Institute:

- Imitation without the necessary adaptation of a model of design promotion from a foreign culture not suitable for local circumstances;
- Lack of sensitivity to local needs, partly because few local people were employed;
- Lack of a clear strategy and of a focus on what was to be achieved;
- Direct competition with designers in private practice;
- Little interaction with industry and professional designers.

The transfer of practices between different countries is also discussed by Wood et al. (2004). In this article, the transfer of a design support programme happens between Scotland and the Brazilian state of Parana. According to the authors, this successful experience proves that it is possible to adapt the same methodology to different
political and economic situations. The characteristics of the original model (Glasgow Collection) that were transferable to the second programme (Criacao Parana) were:

- Minimal bureaucracy in the process;
- Efficient access to funds by participant companies;
- Continuous supervision of all projects;
- A simple programme structure for easy communication;
- The use of prototypes and exhibitions to demonstrate the programme's success.

Achievements were measured in comparison to the initial programme goals (the number of prototypes). However, the authors agree that real benefits for companies should be evaluated in the long term.

In contrast to other programmes, the Glasgow Collection and the Criacao Parana included products from large companies in their collections. The controversial idea of promoting design to large companies rather than SMEs is presented by Ramlau and Melander (2004) as the current approach to design support in Denmark. The authors explain that in 2001 the Danish government declared that 'public money should not be spent on promoting the development of individual private industries that should be left to the free market'. As a result, the Danish Design Centre repositioned itself to continue promoting design, but now focuses on companies that already have experience in design projects – rather than SMEs – and on the use of design at a strategic level – rather than on an introduction to the benefits of design. The paper presents the framework of the Design Ladder, developed to measure the level of design activity adopted by a company in four stages:

1. No use of design;
2. Design as styling;
3. Design as process;
4. Design as strategy.

This ladder was used in a national survey that evaluated the use of design by 1,500 Danish companies. Some of the findings were:
• Danish companies that invest in design have registered a total increase in their gross revenue;
• The higher the company is placed on the Design Ladder, the better its gross performance;
• There is a positive correlation between design and employment, because job creation is higher in companies that employ design compared with companies with no design activity.

This survey was repeated in 2006, making it possible to compare the results and present conclusive statistics to prove the positive impact of DDC’s work (Danish Design Centre, 2007).

The Danish Design Ladder (also called the Design Staircase) is probably the most exported design support/promotion tool. It has been included in studies and surveys in Sweden (Swedish Industrial Design Foundation, 2004), Austria (Departure Gmbh, 2006) and Switzerland (Acklin & Hugentobler, 2008).

Besides the incentive to industry, some countries also invest in design as a tool in establishing a national image, which also represents an element of competitive advantage. As described by Dunne (1997), ‘national reputation can be an important factor in promoting consumer products’, hence countries use design for international promotion in two ways:

• Improving the quality of products for international trade, e.g. Taiwan (Blaich & Blaich, 1993);
• Or developing the country’s brand based on its values, e.g. Canada (Way, 1993) and Ireland (Dunne 1997, 2004).

Rather than being a brand project, associating a country’s image with the quality of its industries’ production is a matter of government policy and demands integration between various stakeholders. This strategy was developed in Taiwan, aiming to upgrade the image of Taiwanese products from cheap copies to high-technology products and thereby to obtain credibility among foreign consumers. The policy was developed in three stages over three years from 1988: improvement of the quality of
Taiwanese manufacturing, enhancement of design education and upgrade of the image of 'Made in Taiwan' products. Blaich and Blaich's article (1993) describes the policy as successful, although firm evidence is not provided.

Dunne presents interesting research which analyses the development of a brand for Ireland. In his first article, from 1997, Dunne argues that national reputation can be an important factor in promoting consumer products and discusses the need to differentiate Ireland’s image from that of other countries. In the 2004 paper, the author evaluates the 'Brand Ireland' initiative and its impact. He reports that the national brand of Ireland and Irish private brands became more visible and recognised, but that this must be seen also as result of the country’s economic success and the brands’ individual promotion. The analysis showed a positive development, but the need to invest in the improvement of design capability and R&D is emphasised, in addition to ensuring the engagement of national promotional bodies and industry in the process (Dunne, 1997, 2004).

The importance of engaging stakeholders in a balanced and comprehensive design infrastructure is the topic discussed by Love (2005). He states, 'the characteristics of a nation's design infrastructure directly influence the quality and volume of design activity and the subsequent economic and social outcomes'. His analysis points out weaknesses in the Australian infrastructure, such as the absence of Design Research Centres and Design Centres, and the mistaken emphasis of international promotion on image rather than products, among others. He also listed factors that may have led to these weaknesses: the period as a British colony with limited development of design, technology and overall research; economic dependence on selling resources; a large territory and population; and technological underdevelopment. The paper also presents recommendations for the improvement of the Australian design infrastructure. Love used systems dynamics method to represent key elements of design infrastructure and their relationships (Love, 2007b).

2.2.2 Design promotion in developing countries
An important line of discussion concerns design promotion in developing countries. Two important authors set the foundations for this debate in the 1970s: Victor Papanek and Gui Bonsiepe. Papanek’s important book *Design for the Real World* (1972) has a strong emphasis on social and ecological issues, in a critique to consumerism. Bonsiepe’s work focus on industrial design as a tool for the development of the less advanced countries. Both authors share the idea of a ‘developmentalist’ role for industrial design (Er, 1997).

An important milestone in the debate about design promotion in developing countries was the publication of the Ahmedabad Declaration in 1979, as a result of the Meeting for the Promotion of Design in Developing Countries (National Institute of Design, 1979). The meeting took place in Ahmedabad, India, under the auspices of the United Nations Industrial Development Organisation (UNIDO) and the International Council of Societies of Industrial Design (ICSID). The Declaration featured a wide range of recommendations, from the transfer of craft skills to the demonstration of the economic advantage of design, as well as the integration of contemporary technology. Margolin (2007) comments on the partnership between ICSID and UNIDO, which was fundamental in setting design as ‘part of the process of industrial development rather than a partner in the humanitarian effort to alleviate poverty’. As a result, design for development became associated primarily with low-technology projects developed within small communities, rather than national economic development plans.

According to Margolin, Bonsiepe was the only author to embrace the Ahmedabad recommendations when he published a five-stage model that offered a range of opportunities for design intervention in different sectors of the economy in developing countries (Bonsiepe, 1991).

Er (1997, p.296) presents a strong argument for industrial design as a tool for a competitive economy, in contrast with the ethical approach suggested by Papanek and Bonsiepe:

*Both Papanek and Bonsiepe ignored the fact that design had to function in a given economic, social, and political system, yet they expected industrial design to satisfy ‘basic needs’, to reduce ‘technological and financial dependency’, to transform ‘craft industries’, to create a ‘cultural identity’, and to improve the living conditions of the poor masses, thus playing a ‘developmentalist’ role in the Third World.*
In his paper, Er diagnoses how export-oriented economies are a favourable environment for industrial design to develop; and how the underdevelopment of industrial design in domestic-oriented economies or countries has meant that they lack incentives for export. In this context, government policies are crucial in determining market orientation, industry and trade policies, incentives for technology and improvement of industrial sectors. This will define the environment in which firms will operate and therefore how they will demand design; this is not greatly different to the scenario in developed countries.

A more recent publication from the same author highlights a characteristic of the development of design in developing countries: it is ‘more related to the extent that government are prepared to absorb design as an integral part of their long term development strategies rather than to the extent that they give direct support to the design institutions and promotion’ (Er, 2002).

Amir (2004) also questions whether the ‘mainstream design policy’ – based on design as a strategic tool for industrial competitiveness and economic growth – is suitable for developing countries. He stresses the point that design policies in these countries should adopt an ethical approach and focus on society, rather than solely on industry. He proposes a user-centred approach for policies, where the formulation of strategies should aim to fulfil people’s basic needs and even alleviate poverty. For the implementation of this type of policy, Amir recommends three principles:

1. policy developed as a social and cultural tool to create a better life for the population;
2. design used for other means than only the production of artefacts;
3. besides the government’s leading role, the involvement of other stakeholders, e.g. designers, academia, the community, is also important.

Amir’s ideas are reinforced by Margolin (2007), who suggests that design policies in developing countries need to ‘broaden in brief from an emphasis on poverty alleviation to include the strategic creation of products for export’. Policies in such countries must target the strengthening of their national economies in order to become sustainable and allow these nations to compete in the global market.
While design policy is a relatively new subject area for research, innovation policy has long been debated and embraces an extensive literature. Research in the field of innovation policies also addresses the debate about policies tailored for developing countries.

In developing countries technology and innovation policies were originally introduced in the context of industrialisation and development programmes, as formal R&D systems, allocation of resources and incentives for technological development (Bartzokas & Teubal, 2002). However, these policies were highly reliant on the technical knowledge available and imported technology, and were without a strategic plan for assimilating and developing expertise. Indeed, Bartzokas and Teubal highlight that one of the main shortfalls of innovation policy in developing countries compared to advanced economies is the low ability to assimilate new technologies and knowledge that could be translated into programmes, priorities and policies suitable to the country's context. The capacity to absorb knowledge is a major issue for these countries and their industries, one that has to be addressed in policy until they are able to develop their own innovation and technology knowledge and outputs (Gok, 2008; Hadjimanolis & Dickson, 2001).

With the need to address the gap in knowledge, and facing changes in the world’s economic environment, developing countries have had to re-orientate their policies for technology and innovation in order to achieve competitive standards. Bartzokas and Teubal (2002) emphasise the need for developing countries to ‘move beyond the imitation of policy recipes imported from advanced countries’ and recommend:

- Broadening of the definition of innovation and technology policy, including aspects of industrial and science policy, as well as non-technology factors;
- Considering interactions of innovation policy issues and the political and economic environment, e.g. taxation, market regulation and particular issues such as privatisation;
- Interaction with the country’s infrastructure for innovation, including education, training and facilities;
- Considering social issues and how they relate to innovation policy.
The national context (including the political and economic environment) and the national systems (network of actors, knowledge institutions and stakeholders) are key issues for policy-making in developing countries (Johnson et al., 2003). This includes major problems such as government failure (e.g. red tape, corruption, inefficient regulatory systems) as well as inefficient and poorly established institutions (Hadjimanolitis & Dickson, 2001). These problems, although not directly linked to innovation, are pointed out as major constraints for the development and implementation of technology and innovation policies in these countries.

Mani (1999) describes another particular aspect of the policy context in developing countries: governments have engaged in trying to reduce public intervention in the country’s economic activity, and have become less likely to invest in policies that would encourage industry towards innovation and R&D. Mani criticises this positioning, asserting that policies for innovation do not necessarily intervene in market activities. Instead, such public strategies work to encourage research and develop core strengths in science and technology (Mani, 1999 citing World Bank). According to Gok (2008) public policies are also responsible for creating a sound infrastructure for the delivery of innovation, science and technology strategies, instead of a direct intervention in the market.

2.2.3 Design policies

Design promotion and design policy represent different levels of intervention. While the first concentrates on improving the awareness of design through activities such as seminars, exhibitions, publications and so on, the second is part of strategic government planning. Design promotion is, then, only one of the parts of a design policy (Raulik et al., 2008a). However, often design promotion is misunderstood as design policy, by both practitioners and theoreticians (Er, 2002). As described in this chapter, there is no shortage of examples of design promotion or support programmes for industry. In contrast, there are very few examples of national or regional design policies. Er (2002) explains that one of the reasons may be the history of design
promotion, rooted in European Arts and Crafts Associations from the 19th and early 20th centuries, associated with the lack of references or theoretical frameworks to identify better practices. As explained by Er, design promotion can be delivered by independent, non-governmental organisations. However, policies 'require a coordinating power or at least the open support of government to be implemented'.

Design policy is defined by Er (2002) as 'systematic government efforts aiming to develop national design resources and to encourage the effective use of these resources by firms for increasing national economic advantage in international markets'. Heskett (2002) defines policy in general: 'a set of principles, purposes, and procedures about government intentions on a particular topic'. As expressed by these definitions, policy implies a relationship with government. However, the rapport between design stakeholders and policy makers varies radically from country to country.

A recent study diagnoses the lack of communication between the design sector, government and Parliament in Britain as a gap between designers and policy makers (Shaw, 2008). As a result, many opportunities for business and design integration are not exploited. The study also indicates that the diverse nature of design somehow jeopardises its use in government policies: 'almost without exception, MPs appreciate the importance of good design but, given the demands on their time and their influence, they need design to be related to a specific issue to be able to take action’. Shaw advises that design practitioners are often unprepared to communicate with policy makers. In this context, it is important to question the format of current design policies, which are often published as inspirational documents rather than guidance for action.

Very few countries have been able to implement a dedicated policy for design (Raulik et al., 2008a). This does not have to be considered a failure, as long as design is successfully introduced into other, wider government policies such as trade, industry, technology, innovation and SME development. However, the common scenario in most countries is a failure to relate design to any government policies. Er attributes the weak presence of design in public policies to the ‘nature of mainstream design establishment, which tends to distance itself from political issues and government’.
Moreover, the effectiveness of the existing design policies and the influence of design in wider economic development are poorly assessed, which prevents further development (Heskett as cited by Er, 2002).

In his 2002 article Er also describes the history of design policy initiatives. As he explains, the establishment of design centres has been the peak or main manifestation of design policies in many countries, starting with Britain and the opening of the British Design Council in 1944. However, many design policies have failed to connect to the wider policy context, which has had a profound impact on their contribution to economic development. Heskett analyses the British case: ‘British design policy was neither closely linked to economic policy, nor actively developed in cooperation with businesses. Design organisations promoted design in a power vacuum’ (as cited by Er, 2002).

Heskett (2001a) has proposed a matrix of dominant types of design policy, ‘depending on whether the government owns the organisations in which design is being practised, or not; and on whether the control of policy implementation is directly or indirectly controlled by government’ (Figure 1).

![Figure 1: Dominant types of government design policy (Heskett, 2001a)](image-url)
Table 3 shows how this framework has been interpreted by Giard (1996) and Er (2002) in comparison with the interpretation given by Heskett. Heskett recommends a combination of the centrist and devolved models as the most successful type of design policy, where the centrist model evolves from a tight government-controlled stage to a more market-friendly stage, and the devolved model evolves from a centrally to a regionally organised stage (as cited by Er, 2002).

<table>
<thead>
<tr>
<th>Table 3: Dominant types of government design policy – Comparative table</th>
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<tr>
<td><strong>STATIST</strong></td>
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<tr>
<td>Typical of communist regimes in the 20th Century where both the government organisations promoting design and the means of production are directly owned and administered by the government.</td>
</tr>
<tr>
<td><strong>CENTRIST</strong></td>
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<tr>
<td>Organisations promoting design are directly controlled by government as part of their administrative structure, but the means of production are not owned. e.g. Japan, Korea, Taiwan and Singapore</td>
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<tr>
<td><strong>DIRIGISTE</strong></td>
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<tr>
<td>There may be ownership of the means of production by government, but indirect control over how design policy is implemented e.g. France</td>
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<tr>
<td><strong>DEVOLVED</strong></td>
</tr>
<tr>
<td>Government policy is exercised through a body not directly controlled as part of a governmental administration, and with the means of production also out of the hands of the government. e.g. Britain, Germany and Denmark</td>
</tr>
</tbody>
</table>
Government has no design policy in any specific sense. e.g. United States However, although there is no policy structure for design, this does not mean that governmental decisions have no effect on design. Legislation such as that on product liability, standardisation, or the Americans with Disabilities Act has a profound effect on design practice in very specific terms, but without this being considered as an integral part of framing the legislation.

The government implements laws, rules and regulations for the benefit of the general public. Design, like any other sector, must be responsible for its own survival. e.g. USA and Germany to a certain extent

(Indirect) (also called Hybrid) involves the utilisation of centrist and devolved models together in varying degrees. (…) Hybrid models do not appear to be a real policy option for governments planning their first design policy initiative, but rather to be a transitory phase of either centrist or devolved design policies already implemented for a while.

Recently emerging since the mid-1990s, design policy is integrated with one or more other macro policies such as innovation policy or SME development policy. Governments pursuing hybrid policies may also shift to this new option in which they can utilise their design policy instruments more efficiently. This model also offers opportunities to initiate design policy for countries that do not have their own design policies yet, but are already implementing innovation or SME development policies. e.g. Finland (design is integrated into the national system of innovation)

Study of this model shows how different countries – or different national contexts – tend to adopt different strategies for design and how the relationship with government is determinant in this matter. The importance of evaluating the national context for the development of new policies on design is stressed by Giard (1996): ‘any government contemplating a future national policy must reflect the context of the state – economic, political, and cultural. Not to do so will most likely jeopardise the potential effectiveness of the policy.’ In his paper, Giard advocates that the use of the centrist model in Canada would not work due to the country’s devolved/indirect environment.
Research in the field of innovation and technology policy also emphasises that policy is ‘context specific’ and consequently that the country’s culture, business conventions, production systems, regulations and public administration have a direct effect on innovation (Gok, 2008; Teubal, 2002 citing Lipsey & Carlaw). Teubal (2002) states that understanding the policy environment is critical in the transition from imitation to original approaches in innovation and technology policies in a particular country, as well as in influencing the set of actions established for achieving policy goals.

The careless transfer of policies between countries is also discussed by Amir (2002), illustrated by the development of industrial design in Indonesia that was based on approaches imported from developed countries that ignore the Indonesian reality. Amir lists factors that have jeopardised industrial design in the country: the strong association with arts, which left design with a marginal role in the industrial process; the use of imported technology rather than encouraging local research and industrial design; no laws established for legal protection of industrial design, leaving room for plagiarism. Amir also reports on the history of design in Indonesia, highlighting the fall of oil prices in the mid-1980s, which forced the government to promote an open market and export policy, resulting in an environment in which design could develop.

The Finnish model is described in the framework above as ‘Integrated’ – an example of a policy that has succeeded in association with wider economic policies (in this case, the innovation system). The Finnish design policy, Design 2005!, was developed after an extensive survey and consultation with experts and professionals, obtained government financial support and engaged many stakeholders in the implementation. Valtonen (2005) presents its history and also evaluates its impact on the Finnish economy. She questions whether ‘aligning design with the national agenda’ worked in practice, explaining that design received prominence on the national agenda when government was aiming for a national innovation system. Finnish designers developed their argument from promoting their existence to communicating their input to industrial competitiveness. According to Valtonen, this shift made many stakeholders understand how to benefit from design and then incorporate it in the innovation system. A design system came as a consequence of this achievement. The paper
presents the early results of the policy implementation – which are all positive – but recognises the research limitations: the impact should be measured over the long term and it is difficult to differentiate between the factors that are a result of the policy implementation and the factors that are just a natural development of the sector. As clear positive outputs Valtonen lists the generation of funds for design research and the increased importance of design on the national agenda.

Er (2002) reviews the history of industrial policies in Turkey and the links with design. He criticises the lack of vision of the Turkish government in using design for enhancing competitiveness. As described, trade policies were not based on the production of added-value products, but on competitive prices. Design promotion only found a rationale in open export markets, where differentiation became key to commerce. He adds that historically Turkish government priorities have been focused on social and cultural issues, which may justify in part the lack of vision and effort on policies for the trade market.

Chung (1993) presents the successful case of the Korean automobile industry to advocate the development of national design policies with long-term implementation and achievements, in a niche sector. The policy was developed over 30 years, through six five-year plans (FYP) (see Table 4). Chung describes each phase and its achievements, which have led to the Korean motor industry being updated from assemblers to automakers. The Korean government’s military dictatorship style at the time, with almost total power over the country’s economy (including protective tariffs, preferential loans, interest rates and labour control), was one of the factors the author points out in the successful implementation of the policy. Other crucial factors were the commitment of the industry to improve the sector and the support of the population in purchasing Korean models. Chung recognises, however, that this approach may not be possible in countries with less structured economies and less stable governments.
Table 4: Major policies for the motor industry in each five-year plan (FYP) (Chung, 1993)

<table>
<thead>
<tr>
<th>FYP DURATION</th>
<th>GOVERNMENT INTENT DURING EACH FYP</th>
<th>KEY ACTIONS BY THE MOTOR INDUSTRY</th>
<th>MAJOR POLICIES FOR THE MOTOR INDUSTRY</th>
</tr>
</thead>
</table>
• Motor Industry Protection Act ('62) |
| 2nd FYP (1967-1971) | Focus on Light Industries – Textiles, Footwear, Wigs, Plywood | Production of parts and assemblies | • Machinery Industry Promotion Act ('67)  
• A Basic Plan for the Motor Industry ('69) |
| 3rd FYP (1972-1976) | Focus on Heavy and Chemical Industries | Establishment of major automobile plants | • High Protective Tariff on Foreign Cars ('73)  
• A Long-Term Plan for the Motor Industry ('74) |
• The Motor Industry Rationalization Measure ('81) |
| 5th FYP (1982-1986) | Focus on Industries with Competitiveness Advantages | Achievement of a basis for large-scale export of domestic cars | • KAICA* Established ('85)  
• Startup of New Businesses in the Market Sector (Passenger Car, Minibus, Light Truck) Prohibited for Three Years ('86) |
• Freedom to Import Foreign Cars ('88)  
• KAMA** Established ('88)  
• Atmospheric Contamination Protection Measure ('91) |

* Korea Auto Industries Cooperative Association  
** Korea Automobile Manufacturers Association

Cho (2004) describes the policy that has been adopted by Korea, associating design directly with industry policy. He explains one of the lessons for achieving successful results: ‘aggressive policies by the government to promote design, inspired initiatives by companies to improve the standards of design on goods and services, and untiring efforts by designers for the globalisation of Korean design’. Cho proposes a framework of ‘Four Stages of Design Revolution’ in order to achieve a sustainable progressive development of design in the country (see Table 5). The framework aims at ‘quantitative growth, quality upgrade and external expansion’.

Er (1997) proposes a model of the history of industrial design in the developing world based on the model proposed by Bonsiepe in 1990. Government design policy is one of the categories, described as ‘actions taken to integrate industrial design within
industrial development strategy, promotion programmes, and in the finance of design events' (see Table 6).

Table 5: Four stages of the design revolution (Cho, 2004)

<table>
<thead>
<tr>
<th>Revolution 1</th>
<th>Revolution 2</th>
<th>Revolution 3</th>
<th>Revolution 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESIGN CONNECTION</td>
<td>DESIGN EXPANSION</td>
<td>DESIGN APPLICATION</td>
<td>DESIGN INTEGRATION</td>
</tr>
<tr>
<td>Connection among conventional design industries</td>
<td>Expansion of design domain</td>
<td>Application of design principles of new fields</td>
<td>Integration of multiple design ideas</td>
</tr>
<tr>
<td>Industrial design</td>
<td>Design through sight</td>
<td>Application in neighboring fields</td>
<td>Integration of 1st &amp; 2nd phases of Design Revolution</td>
</tr>
<tr>
<td>Visual design</td>
<td>Design through hearing</td>
<td>Application in politics</td>
<td>Integration of 1st &amp; 3rd phases</td>
</tr>
<tr>
<td>Craft works</td>
<td>Design through taste</td>
<td>Application in economics</td>
<td>Integration of 2nd &amp; 3rd phases</td>
</tr>
<tr>
<td>Interior/architecture</td>
<td>Design through smell</td>
<td>Application in social system</td>
<td>Integration of 1st, 2nd &amp; 3rd phases</td>
</tr>
<tr>
<td>Fashion design</td>
<td>Design through touch</td>
<td>Application in value</td>
<td></td>
</tr>
<tr>
<td>Digital contents design</td>
<td>Design through senses</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6: Development Stages of Industrial Design in NICs (Er, 1997)

<table>
<thead>
<tr>
<th>DEVELOPMENT STRATEGY</th>
<th>GOVERNMENT DESIGN POLICY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 Proto-Design Phase</strong></td>
<td>Primary specialisation in Raw Material Export. Pre-Industrial Growth (all NlCs)</td>
</tr>
<tr>
<td><strong>2 Embryonic Phase</strong></td>
<td>Import Substitution I (Asian NICs late 1950s and early 1960s; Latin American NICs, India and Turkey 1950s and 1960s)</td>
</tr>
<tr>
<td><strong>3 Emergence Phase</strong></td>
<td>Import Substitution II (Latin American NICs, India and Turkey 1960s and 1970s). Export Promotion I (All Asian NICs 1960s and 1970s)</td>
</tr>
<tr>
<td><strong>4 Development Phase I</strong></td>
<td>Export Promotion II (Asian NICs, Malaysia early 1980s) Liberal Trade Policies (India, Latin American NICs and Turkey)</td>
</tr>
<tr>
<td><strong>5 Development Phase II</strong></td>
<td>Export Promotion III [deepening] (Asian NICs 1980s)</td>
</tr>
<tr>
<td><strong>6 Take-off Phase</strong></td>
<td>Global Strategy (Korea..? since the early 1990s?)</td>
</tr>
<tr>
<td><strong>7 Maturity Phase</strong></td>
<td>...?</td>
</tr>
</tbody>
</table>
2.3 The rationale for design promotion

In order to discuss the advancement of design promotion, it is important to identify the rationale for this practice. Several authors have written about this and the most important conclusions are:

- Overall, authors agree that competitive advantage for the national industry is the main rationale for design promotion schemes (Cawood, 1997; Dahlin & Svengren, 1996; Dumas, 1996; Vokrouhlicky, 2001; Wood et al., 2004), even though very little evidence of its impact is provided.

- The demand for design is greater in open-market countries, where companies are encouraged to compete with quality products and services, and in particular in export-oriented economies. The competitive environment builds a favourable scenario for design to flourish. Consequently, design promotion is most common in these countries (Amir, 2002; Er, 2002; Teperman & Leal, 1996). The competition generated by export-oriented policies is crucial for increasing the demand for design, even in the crafts sector (Kasturi, 2005).

- Government intervention through design support and promotion programmes is justified in market failure – where the allocation of goods and services by the free market is not efficient and not beneficial to society (Tether, 2006) and ‘where there is reason to believe that Government intervention can generate more economic benefits than the market alone would provide’ (DTI, 2005). In particular, SMEs are subject to market failure, justifying design support programmes in many countries. Their impact is company survival, economic growth and job creation (Amir, 2002; Cox, 2005; DTI, 2005).

- Innovation, as the successful exploitation of new ideas, is crucial for business success in a free market. It therefore improves companies’ chances of survival, business growth and jobs. Design is an element of innovation and therefore should be addressed as part of government innovation policies (Er, 2002; Walsh et al., 1992).

- Industries need appropriate environmental conditions to operate. In order for companies to excel, a government needs to ensure a free and competitive
market, through an appropriate regulatory framework, intellectual property rights and a facilitating network (DTI, 2005; Er, 1997).

- ‘Government also has a role to play as a purchaser and consumer of goods and services’ (DTI, 2005).

However, as shown in previous examples, governments’ adoption of strategies for design promotion is uneven across the world. It varies from country to country according to their economic and political models. Tether (2007, p.3) presents contrasting perspectives on the use of design strategies by governments:

*Free market liberals argue that design should be treated as any other investments in intangibles made by the firm, such as advertising or R&D. Firms should make their decisions about whether to invest in design, just as they decide to invest in advertising or R&D, whilst it is up to designers and design agencies to promote their services to potential clients. Opponents argue that design, like R&D, is likely to suffer from ‘market failure’, particularly due to asymmetric information, and consequently firms are likely to under-invest in design. Others argue that design should be supported because it plays an important role in cultural expression.*

A study undertaken by the New Zealand Institute of Economic Research attempted to prove a correlation between a country’s competitiveness and design, through a quantitative analysis of indicators published by the World Economic Forum’s The Global Competitiveness Report 2001–2002 (NZ Institute of Economic Research, 2003). The study isolated the indicators related to the application of design (extent of branding; capacity for innovation; uniqueness of product designs; production process sophistication; and extent of marketing), generating a ‘design ranking’. This ranking was compared to the position of each country on the overall Global Competitiveness Index (Figure 2). The result proves a correlation between overall competitiveness and the use of design (Design Taskforce, 2003).

While this study proves that design is relevant to a country’s competitiveness, it also demonstrates that it is not possible to establish a correlation between the type of design policy adopted in the country and its competitiveness. Indeed, the UK, the USA, Germany and Finland feature closely at the top of the ranking but present very different approaches to design promotion (considering the approaches listed in Table 3).
The shaded area in the chart shows the common area for which both the overall competitiveness index ranking and the design index ranking are 25 or better. It is worth observing that, with the sole exception of Korea, there are no countries ranked in the top 25 in terms of design that are not also ranked in the top 25 in terms of overall competitiveness. Conversely, there are no countries that are ranked in the top 25 in terms of overall competitiveness that are not also ranked in the top 25 in terms of design.

Figure 2: Correlation between competitiveness and design rankings, The Global Competitiveness Report 2001–2002 (Design Taskforce, 2003)

Looking for references from analogous policy fields, competitiveness is also identified as a rationale in the history of policies for the promotion of quality standards, which developed in the 1980s and 1990s. The European Union was then looking at expanding its policies, after good results in securing the Single Market, infrastructure and legislation. The aim was to focus on increasing the competitiveness of European industry (Julin, 1998), which became a rationale for quality promotion policy. Interestingly, it is possible to identify similarities between the objectives of quality promotion and design promotion. The common objective is to raise awareness among an organisation’s top hierarchy, in such a way that understanding of the issue (quality or design) becomes part of the company’s management and, therefore, becomes a strategic issue. Figure 3 shows the representation of this concept in quality promotion.
The important elements in quality promotion policy were standardisation, accreditation, testing and certification, metrology and quality management. Bonato and Quartieri (1999) also point to the importance of training and consultancy, an issue that is demonstrated by Zink et al. (1998) in his study of American ‘excellence centers’. These centres ‘strived to introduce the concepts of total quality management into their regions, thus making a contribution to the regional development’. They aimed at encouraging networking between organisations from the private and public sectors, between small and large companies, academia and industry, in order to share knowledge and skills in Total Quality Management. Zink et al. describe the initiative as successful, in particular in promoting quality awareness.

Although economic advantage and industry competitiveness are the main justifications for design programmes, the discussion about broadening the rationale of design promotion is gaining increasing attention. As already shown, Er (1997), Amir (2004) and Heskett (2002) have discussed the role of design in improving not only the economy but also social factors in developing countries. Recently, the potential to have a positive impact on the quality of life of the population was established as a requirement for national design policies (Bitard & Basset, 2008; Thenint, 2008).
Another analogous policy field from which it is possible to obtain theoretical references is technology and innovation policy. In this field, the rationale for government intervention was also traditionally based primarily on market failure. However, recent studies have challenged this rationale. Some substitute concepts for the rationale for technology and innovation policy are provided by Teubal (2002):

- **System Failures**: companies interact and rely on external organisations for supporting their innovation-related activities, which demands a well-functioning network of actors. It is based on the investigation of National Innovation Systems (OECD, 1997).

- **Program Portfolio Profile (PPP)**: programmes and policies do not operate in isolation. Rather, they are part of a network, and their success or failure will depend on the existence or non-existence of other programmes and policies, as well as other indirect components and actors.

- **Technology Policy Cycle and Policy Process**: the notions of ‘programme sequencing’ and ‘policy learning’, where the achievements or failures of an original programme create new opportunities for the successful implementation of new programmes. A scenario applied to technology policy is presented in Table 7.

Table 7: Technology policy cycle: dynamics of learning and market failure; and implications for incentives (infant and mature phases) (Teubal, 2002)

<table>
<thead>
<tr>
<th>Stylised situation at the beginning of the infant phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pervasive learning externalities (‘everybody learns from everybody’)</td>
</tr>
<tr>
<td>2. Ignorance of policy makers (about location of most important market failures)</td>
</tr>
</tbody>
</table>

*Implication*: Neutrality of incentives

<table>
<thead>
<tr>
<th>Dynamic/learning effects and their impact during the mature phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Exhaustion of some types of learning (and associated externalities)—those associated with the emergence of a class of ‘routine’ projects</td>
</tr>
<tr>
<td>2. New opportunities for ‘complex projects’ and for programs promoting other technological activities e.g. generic, co-operative R&amp;D</td>
</tr>
<tr>
<td>3. Enhanced knowledge of policy makers</td>
</tr>
</tbody>
</table>

*Implication*: Greater selectivity in incentives; and desirability of implementing new programs, either horizontal, or targeted or both.

The system failure approach cited by Teubal is based on a network of actors, so is different from the market-failure approach, which is based on companies and consumers. While not denying the importance of well-functioning market dynamics,
the relevance of the systemic-failure approach is its acknowledgement of the interaction of the system's actors as generators of knowledge transfer, and of cooperation as well as competition. This approach has also been explored in the analysis of policies for design (Love, 2007a; Moultrie et al., 2008).

This shift in the innovation policy paradigm exists furthermore in the field of policies for environment and sustainability. O’Rafferty et al. (2009) propose a systems failure framework as a rationale for ecodesign intervention (Table 8), based on previous work by Woolthuis.

A systems failure approach demands that governments take a central role in ensuring the operation and effective interaction of the system’s actors (O’Rafferty et al., 2009). In doing so, governments will be ensuring appropriate conditions for industry to operate, including regulations, intellectual property rights and the competitive environment. In the field of eco-innovation policy, governments may also encourage advancement through financial research incentives in targeted areas, as well as being a prime consumer of R&D via public procurement (Johnstone & Hascic, 2008; O’Rafferty et al., 2009).

The role of government intervention is also addressed by Teubal (2002), who highlights the importance of directing the public policy focus to coordinating the growth of supply and demand. This author explains that policies for innovation have been inclined to provide incentives on the supply side (e.g. subsidising R&D costs in order to make it affordable to companies). However, policy should also be directed to creating demand, which will consequently encourage innovation. Traditionally, the government’s role in stimulating under-developed fields, such as innovation, R&D and design, was concentrated in providing tax incentives and subsidies. However, the positive impact of this policy on industry growth is debatable (Leyden & Link, 1992).
Table 8: Systems Failure Framework (O’Rafferty et al., 2009)

<table>
<thead>
<tr>
<th>Category</th>
<th>Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>Low representation of ecodesign in government R&amp;D programs</td>
</tr>
<tr>
<td>Institutions</td>
<td>Actors can not or will not act due to uncertainty and poor appropriability</td>
</tr>
<tr>
<td>Interaction and networks</td>
<td>Little structured co-ordination of public-private partnerships or triple helix networks</td>
</tr>
<tr>
<td>SME capability</td>
<td>Fragmented product development process in SMEs</td>
</tr>
<tr>
<td>Culture</td>
<td>Lack of top management commitment</td>
</tr>
</tbody>
</table>

2.4 The evaluation of the impact of design promotion strategies

Impact evaluation is a critical activity for policy making. Information about the impact of a programme should be crucial for its future implementation, as well as influencing decisions about continuing or ceasing activities, even though evaluation is a practice still very poorly performed by design practitioners.

There are two types of evaluation that must be differentiated in the context of this research: the evaluation of design impact on business performance and the evaluation of the effectiveness of design programmes themselves. The first is the most common type of research.
The design impact on business performance has been studied by many authors, who overall agree about the positive results (Design Council, 2006; Roy, 1994; Roy & Potter, 1993; Smith, 2008). However, the same researchers also agree that design is not enough to make a business successful. Gemser and Winjberg (2003, citing Gemser & Leenders, Jevnaker, Gemser & Wijnberg) stress the fact that the positive effect on a business as a result of investing in design is not unconditional but is dependent on factors such as industry evolution, design practice and the ease with which product design can be imitated. Walsh et al. (1992) list cases of companies that are recognised by their design excellence but are not successful commercially. The authors highlight that 'good design is not alone sufficient to ensure business success' and that the 'most successful firms were those that placed a high priority on multiple (but achievable) objectives in corporate strategy', including design.

Tether (2005a) reports on the difficulty of defining 'design' as a problem that jeopardises the objective evaluation of design impact, hindering 'the collection of consistent and comparable statistics on these investments'. This lack of clarity causes methodological issues, resulting in the unavailability of comparable data, which in turn is an obstacle to policy discussions (Bitard & Basset, 2008; Hollanders & van Cruysen, 2009; Thenint, 2008).

Standards for innovation and R&D, which are now well established, were once considered 'too creative and unstructured to be measured' (Moultrie, 2009) – just as design is currently perceived. Measurement of R&D activities has been articulated from 1963, when the Organisation for Economic Co-operation and Development (OECD) published the Frascati Manual. This publication provided OECD member countries with recommendations for how to collect and use R&D statistics. Following Frascati, the OECD published the Oslo Manual in 1992, establishing guidelines for the measurement of innovation. Both publications became internationally recognised, being frequently applied in the comparative analysis of R&D and innovation data across the world.
As well as R&D and innovation, the field of design research and policy-making could also benefit from the advantages of set definitions and indicators (Tether, 2005b). Indeed, one of the proposals that emerged from an experts’ meeting organised by the European Commission (June 2008) to debate policies for design refers to the issue of definitions and the solution developed in innovation policy: ‘elaborate a “Frascati Manual” for design that underlines the contribution of design to innovation & competitiveness’ (Thenint, 2008).

Despite the issues about definitions and indicators, in order to prove successful results obtained from design promotion, the most frequent approach is the evaluation of design awareness among companies and the population. These studies are used to prove positive results of the implementation of design promotion in the country. As examples:

- The UK Design Council’s National Survey of Firms interviewed 1,500 British companies about how they use and understand design and the impacts on their business performance. Results can be found in the document Design in Britain 2005–06. This survey has been taking place in Britain every year since 2001 (Design Council, 2009);

- The Economic Effects of Design was a survey commissioned by the Danish Design Centre in 2003 and 2007, covering more than 1,000 Danish companies. It compared the performance of companies using the Danish Design Ladder framework, previously explained in this chapter (Danish Design Centre, 2007).

However, two fundamental problems have to be considered:

- Apart from the British and the Danish researches, the results are measured during an isolated period only. Data is collected only once and therefore does not provide a basis on which to compare the results obtained after the implementation of a specific programme;

- None of the evaluations take into consideration the resources invested in the programmes. Therefore, they do not analyse the cost of the investment compared to the results obtained (i.e. no cost–benefit analysis has been undertaken).
Between 2005 and 2007, the EU-funded project SEEdesign attempted to address these issues and proposed a methodology for the evaluation of design support programmes, their investments and achievements. The proposal was to conduct a survey among companies assisted by design programmes in the partner countries. Crucial to the process was the systematic collection of data, before and after the intervention, in order to assess the impact over a representative number of companies. The project was successful in developing the measurement tool and initial results (Tether, 2007). However, problems were encountered on the second objective proposed: to compare data from different countries in order to evaluate the effectiveness of design programmes compared to their costs. The exercise was problematic for a number of reasons:

1. The difficulty of obtaining comparable data;
2. The wide variety of design support mechanisms;
3. The reluctance of design organisations and companies to disclose financial data (Tether, 2006).

Figure 4 is a schematic representation of design support and promotion programmes, comparing implementation costs and level of intervention with the company client.

Figure 4: Schematic representation of design promotion and support (Tether, 2006)
2.4.1 Comparative studies

Isolating design and its impact from other activities and gathering comparable data are also two critical barriers to the evaluation of the effectiveness of design programmes and policies.

Moultrie et al. (2008) describe the research project Design Scoreboard, the long-term aim of which is to compare the UK National Design System against other nations. A ‘National Design System’ is a concept adopted by the authors as a basis for comparative analysis between nations. It is based on the recognised concept of a ‘National Innovation System’, which demonstrates the complex and interrelated network of actors who accumulate knowledge and capabilities in innovation with potential exploitation for economic return. The paper also reports on the first two years of the project and difficulties encountered during the process of comparing data from a range of countries. The main barriers are the difficulty of obtaining data and the significant variation in definitions and the allocation of design-related data in national statistics. Although the project aims to produce a ranking of national design performance, the authors recognise that ‘there is no single measure that will describe the strength of design in a nation’.

As well as in the design research field, the concept of scoreboards has been consistently used at national and European levels for comparative assessment of the innovation, competitiveness and economic performance of countries in Europe. Studies based on this methodology include the European Innovation Scoreboard (developed annually by the European Commission), the UK Government’s R&D Scoreboard and the EU Industrial R&D Investment Scoreboard. The advantage of scoreboards is the opportunity for comparative analysis and, consequently, the provision of data for policy-making, articulation of targets and public strategies. However, scoreboards demand clear definitions and comparable data, both shortages in the field of design research. Recent scoreboard projects in the area of design policy have been jeopardised by the shortage of data and definitions (Hollanders & van Cruysen, 2009; Moultrie et al., 2008).
The European Design Report, a project by the Bureau of European Design Associations (BEDA), also aims to establish a comparison between countries. However, as in the Scoreboard project, difficulties were encountered during data collection, particularly in measuring the size of the design industry in European countries. There were no standard measures and identifying and isolating design in official statistics was also problematic (BEDA, 2006). The project provided good information about the design industry in individual countries. However, comparative analysis was almost impossible, considering that there was no single unified system for the collection of data.

Therefore, based on previous attempts, the comparison of statistical data between countries has to be done with caution, taking into account that the same indicator may be measured in different ways in different contexts.

Aware of the difficulties of obtaining comparable data from a range of countries, and then the risk in drawing conclusions from these indicators, practitioners and researchers have preferred benchmarking studies.

Benchmarking is a ‘continuous, systematic process for evaluating the products, services and work processes of organisations that are recognised as representing best practices for the purpose of organisational improvement’, a process mainly used in management (Spendolini, 1992). Recently this method became popular in the field of design policy research, in particular in response to the demand of national governments interested in learning about practice in competitor countries.

This method has been used by Designium, a research group from Finland, in the World Design Series. A study published in 2003 compared 12 countries among the 25 most competitive nations (World Economic Forum) and Estonia. Findings revealed that the design policies investigated were very similar in nature, which jeopardises the opportunity for national and regional specialisation, an issue of increasing importance for global competitiveness (Hytonen & Heikkinen, 2003).
Designium published an update of this study in 2006, comparing how countries had performed in the ‘Design Competitiveness Ranking’ at two points in time, 2002 and 2005 (Sorvai et al., 2006). This Design Competitiveness Ranking was first proposed by the ‘Success by Design’ report from New Zealand (Design Taskforce, 2003). The concept uses the indicators from The Global Competitiveness Report (World Economic Forum) that are related to design, including company spending on research and development; nature of competitive advantage; value chain presence; capacity for innovation; production process sophistication; extent of marketing; degree of customer orientation; extent of branding; and uniqueness of product designs. The comparison revealed the rise of Denmark and Singapore in the ranking, compared to other countries. The analysis of investments and developments in design support and policy in these two countries confirms their excellent performance in the ranking (e.g. Denmark invested heavily in the visibility of design, promotion of the Danish design brand and co-operation between designers and businesses; Singapore opened a Design Council, aiming to make the country a global design hub). Although one may make the point that not all of these indicators are the direct result of the use of design, this method overcomes the problem of obtaining comparable data for the analysis of design in different countries.

The ‘Benchmark of European Design Centres Study’ was commissioned by the Ministry of Flanders and Design Flanders to study the legal, financial and management structure of foreign design centres or equivalent initiatives, with the purpose of providing an initial approach to develop a ‘design policy’ in Flanders (Ministry of Flanders, 2003). A total of 21 design centres replied to the survey. Among the policy recommendations proposed in this report were: one central and public organisation for the promotion of design in Flanders, working as contact point for all matters of design within the government; and initiatives to establish design collaboration in areas such as culture, education, tourism and sport.

The above two examples use benchmarking studies as the main source for developing national strategies. However, as already described, this kind of method ignores the
political, economic, social and cultural aspects of the country that the information is gathered from.

2.5 Other relevant research

A recent Japanese study attempted to map the environment, operation and network in which design support organisations are operating (Ikeda et al., 2007). Data was collected from a survey (104 responses) and interviews. The ‘operational environment framework’ is relevant to this research. It provides an overview of new issues that may concern design organisations today (Figure 5). It reveals that competitiveness is not the only issue on their agenda. Advances in technology, human resource shortages, traditional industries and social responsibility are examples of relevant issues.

**Operation Environment Framework**

Another model for design promotion has been proposed by Sung et al. (2007); see Figure 6. In their paper, the authors compare design promotion activities in the leading design countries of the UK, Germany, Japan and Korea. The paper aims to develop a theoretical framework for an effective design promotion system. However, there is no accurate analysis of the effectiveness of the promotional activities. The paper is a comparative study based on interviews and desk research. Findings highlight:

- ‘Existence of regional offices was one of the key factors affecting effectiveness in a country’s implementation of design promotion.’ The argument is supported
by anecdotal evidence but fails to consider the cost of the maintenance of a regional office (Chung, 1998), one of the main obstacles to establishing a large infrastructure of offices;

- There is increasing pressure for design organisations to become self-sustaining;
- Design support programmes are more likely to occur in countries where government provides financial aid;
- Design promotion must expand its agenda to include issues such as services, environment, public design and creative industries.

Figure 6: Theoretical model of an effective design promotion system (Sung et al., 2007)

Chung (1998) presents a model based on the relationship between a government promotion organisation and professional associations, which he describes as a partnership, rather than a competition. According to Chung, Korea is a classic example of the ‘government pull civilian push model’ in design promotion: national government initially took a strong role in the first stages of design promotion in the country; nowadays, professional associations have increased their presence and activity as design promotion has accelerated over time. Chung also applies the model to developing countries, where government starts the process of design promotion, followed by a number of civilian initiatives. Although conceptual, and supported by very little evidence, the model presents an important principle, which is the decreasing role of government involvement through time. This factor should be a natural
consequence of the successful implementation of design promotion and support programmes.

2.6 The study of national innovation systems through complexity theory

In reviewing analogous fields of research such as policies for R&D, quality, technology and innovation, the most relevant research topic that emerged was the study of National Innovation Systems (NIS). NIS is a framework for the analysis of the innovation and technological advances that occur in a country, how it is supported by infrastructure or institutions, its dynamics and how it impacts on economic development. NIS are examples of complex systems (Katz, 2006). The investigation of such complex systems has progressed with the application of complexity theory. Complexity theory applied to networks and systems is explored in the social sciences, mathematics and natural sciences. In this literature review most of the examples are drawn from the field of social sciences, but some studies from mathematics and statistics are also appreciated in order to further understand NIS.

Most importantly, the idea of NISs has advanced the debate about the rationale for innovation and technology government policies, proposing that policies should address systemic failures, rather than only focus on fixing market failures. It proposes that innovation and technological development results from a complex network of learning and exchange between various stakeholders (e.g. companies, universities, research institutions, government programmes). The NIS concept was developed in the late 1980s by the researchers C. Freeman, R. Nelson and B. Lundvall, and consolidated in practice by the Organisation for Economic Co-Operation and Development (OECD). As a concept, it has matured through the publication of extended and established research over the past three decades.

NIS is a social and dynamic system characterised by learning, reproduction of knowledge of individuals or collective agents (Lundvall, 1995). This concept recognises
that companies are the central elements in realising innovation, but they do not act alone. Innovation is a complex activity that involves investments and high risk. For this reason, companies need to associate to other institutions (other companies, government departments or research institutions) in order to commit to innovation (OECD, 1999).

Lundvall’s book ‘National Systems for Innovation’ is a fundamental reference for any discussion about NIS. It argues that a NIS’s technological capability is rooted in interactive learning, which are shaped by the economic and institutional structure. In this context, Lundvall argues that the national education, the training system and education policies are of central importance for the NIS. According to Lundvall, innovation is an activity that evolves through interactive learning and collective entrepreneurship. These two fundamental aspects of the process justify the existence and importance of NISs. Highly susceptible to the national context, a variety of factors influence their functioning, including the economic system, national ideologies, government’s standards and regulations, historical experience, language, culture, institutional set-up, geography, the way how the market is organised; together these features form a national context that shapes NISs and make them unique from one country to another.

Governments play a complex role in NISs by creating, maintaining and developing the national systems (Gregersen, 1995). In this context, the government’s role is twofold: user (due to its purchasing power) and regulator of innovation. Regulation is overall seen as a means of technical control that affects the potential innovative outcomes from industry – but one that may be positive if it encourages the private sector to invest in innovation, and if it is coordinated with stakeholders and experts from both private and public sector. As an example, Gregersen provides the case of regulative initiatives on chlorofluorocarbon (CFC) in Denmark. In this case, the government coordinated the deadline of the use of CFC with tax incentives to foster R&D in the development of CFC-free products and processes by Danish companies. Building on the role of governments in NISs, Christensen (1995) highlights the government’s position as finance provider, in particular its relevance in the early stages of the innovation
process, when risk is sometimes too high and unaffordable for private companies. However, in this scenario, government can act indirectly, as a regulator of financial markets (e.g. market oriented system and credit based systems operated by financial institutions and banks). In definitive, Dalum et al. (1995) claim that government’s responsibility for the coherence, cohesion and harmony of NISs is a crucial role; and that government intervention should be focused into shaping and facilitating the system’s operation, in a way to reduce the need for government’s direct intervention in the market economy.

2.6.1 Different approaches to the study of NIS

Several approaches for the analysis of NISs have been proposed by different authors and research groups. First of all, the discussion of boundaries of NIS has been challenged even by the original concept developers, Freeman (1995) and Lundvall (1995). They recognise that innovation networks do not necessarily respect the national limits, but they can expand over the borders into neighbour regions or even connect with more distant institutions taking advantage of the globalisation trend.

In the 1990s, the notion of national systems was downscaled to regional level, when the concept of Regional Innovation Systems (RIS) was introduced by Cooke (1992), finding great acceptance among policy-makers. RIS, as well as NIS, emphasises the interaction between the system’s elements (e.g. among companies; between companies and research institutions; between industry and universities; etc). The rationale for regionalisation of the systems is the value that location-specific knowledge can accumulate in comparison to globalised innovation. Regionalisation would allow for processes and capabilities to be concentrated in a region and therefore specific policies and government initiatives could address the strengthening of this system (Nuur et al., 2009).

Subnational Innovation Systems (SIS) was also an approach looking into sublevels of NIS, explored by the United Nations (ESCAP, 2006). In this study, the difference of scale allows a larger emphasis on SMEs and their competitiveness, not necessarily limited in
a region. Taking this into consideration, the network itself and the interaction among stakeholders become more important than the individual stakeholders’ capabilities. Moreover, SIS focuses local-specific characteristics that would be overlooked by NISs, in particular, the conditions available for SMEs to operate developing technology and innovation (e.g. availability of good research institutions, universities, R&D credit). The ESCAP analysis of SISs compares four countries: Thailand, Singapore, Malaysia and Indonesia. The methodology combined literature review and a ‘fact find mission’ to the investigated countries. The report does not propose nor compare any common indicators between the four subjects.

OECD (1999) proposes a framework based on three complementary levels of analysis:

- **Micro Level**: focuses on companies’ internal capabilities. It investigates the links and knowledge relationships between companies and between companies and other institutions in the NIS.
- **Meso Level**: examines the links between companies with common characteristics (e.g. sectoral, spatial or functional).
- **Macro Level**: investigates the interrelation of companies from various sectors (macro-clusters) and the network of companies and institutions interacting for knowledge exchange (functional analysis). Functional analysis measures five types of ‘knowledge flows’: 1. among enterprises; 2. among enterprises, universities and public research institutes; 3. institutional interactions, e.g. funding, technical training; 4. technology diffusion; and 5. personnel mobility.

Lundvall (1995) differentiates the narrow from broad notion of NISs. The first is focused on the institutions directly active in research, development and dissemination of innovation. The second, broader approach, includes all other stakeholders in the economic and institutional context (e.g. banks, sponsors, commercial stakeholders) who affect the innovation network, as well as the institutions that are directly responsible for it.

Systems engineer theory has long been explored in the analysis of economic and technological change. In this field of research, systems are defined as ‘a set of
interrelated components working towards a common objective' (Carlsson et al., 2002, p.234). Systems are made up of operating parts – the components (e.g. actors, organisations, firms, banks, universities, research institutes etc) – that are interdependent and linked by relationships. ‘Because of this interdependence, the components cannot be divided into independent subsets; the system is more than the sum of its parts’ (citing Blanchard and Fabrycky, 1990, p.2). This concept justifies the value of systems, in comparison to the relevance of the individual stakeholders.

Carlsson et al. (2002) presents a comprehensive review of various systems engineer approaches, which is summarised below:

- ‘input/output analysis’ (Leontief, 1941): it analyses the flow of goods and services among industry sectors in a determined point in time, as a static perspective.
- ‘development blocs’ (Dahmén 1950, 1989): analyses dynamic systems, that changes over time in size, character and content. The various forces that lead to changes tends to provide a balanced situation.
- ‘technological systems’ (Carlsson, 1995, 1997): similar to the dynamic ‘development blocs’ considering that one country may have several different systems that evolve over time, are interrelated and do not respect geographic boundaries. This approach considers three types of network: buyer-supplier relationships, problem-solving networks, and informal networks.
- ‘competence blocks’ (Eliasson and Eliasson, 1997): in this approach the system is defined by the demand (product or market) that forces a cluster of supplying firms and organisations.
- ‘diamond’ (Michael Porter, 1990): a diamond shaped framework presents four sides that are determinant for national and region’s competitive advantage: factor condition, demand conditions; related and supporting industries; and firm strategies, structure, and rivalry. In this context, the role of government is to act as ‘catalyst and challenger’, supporting and encouraging industries to competition and innovation.
- ‘sectoral innovation systems’ (Breschi and Malerba, 1997): similar to Porter’s approach in considering sectors and specific industries, but with more
specificity – each sector’s system has a different behaviour and network, and the interdependence between sectors is not focused in this approach.

- ‘local industrial systems’ (Saxenian 1994): the system is defined mainly by its geographic position and the study is oriented by the analysis of culture and competition.

2.6.2 The evaluation of NIS

‘National Systems for Innovation’ (Lundvall, 1995) is set to mainly provide theoretical discussion of NIS and its context. Comparative analysis is employed in specific chapters, but only to illustrate the discussion of the chapter’s topic. The methods for comparison vary from quantitative data analysis (e.g. OECD’s Trade by Commodities statistics illustrates the discussion of structural competitiveness of NISs) to historical analytical approach (in the analysis of foreign direct investments and their impact in NISs), and emphasises the national specificities of each subject. According to Lundvall, the national characteristics are instrumental in a country’s capacity to acquire, adopt and use technology. In placing emphasis on the national characteristics, Lundvall demonstrates appreciation for the differences between the countries, but this also means that the case studies become more individual and therefore less comparable.

‘National specificity’ is also reinforced by Patel and Pavitt (1994 cited in OECD, 1999). The types of activities, programmes and policies vary from country to country, depending on their institutions, history, industry, policy priorities. Possibly this is the reason why comparative analysis is so limited in these studies. Nelson (1993) presents the most important attempt to compare NISs. His book presents a range of 14 national systems. Each country is described and analysed in detail in a separate chapter, which are written by different authors. There is no common structure between the chapters. The comprehensive case studies, despite reflecting the complexity and richness of the national systems, did not allow for a systematic comparison due to the lack of common indicators (Lundvall, 1995). Nelson recognises this limitation, but reinforce that his comparative analysis aimed at providing increased understanding of similarities and differences across the various national systems described in his book.
According to Lundvall (1995), in measuring the effectiveness of NISs, emphasis is placed on reflecting the efficiency and effectiveness in producing, diffusing and financially exploiting knowledge and innovation. As classic indicators, the author lists R&D expenditure and proportion of GDP (both present problems as they reflect only the input effort); numbers of patents and high-tech exports (these indicators do not take into account the diffusion of knowledge); economic growth indicators, such as national income and consumption per capita (useful for comparative analysis when the argument for public investment lies in the national economic growth).

Besides the objective evaluation through economic indicators, the analysis of NISs also discusses patterns of individual countries in technological specialisation, exports, productivity growth, the institutions’ structure, and the flow of knowledge exchange between the stakeholders (OECD, 1999). The cooperation between companies and knowledge institutions is crucial for a successful NIS.

Schmoch et al. (2006) present a project on the analysis of technological performance in Germany that endeavours to present a sound methodology and a set of key indicators in the analysis of the German NIS. This project is guided by five principles:

1. Technological performance is presented by a set of indicators in four groups: education and human capital, knowledge generation, implementation of knowledge and market success/diffusion.
2. Sector-specific analysis in order to identify strengths, weaknesses and dynamics between sectors.
3. Analysis of current and long-term trends.
4. International benchmarking (whether common indicators are available)
5. Analysis (through the indicators) of critical factors for the NIS performance (e.g. industry-science interaction, finance availability, legal framework, related government policies).

For the set of indicators, Schmoch et al. employ data from official sources: OECD (R&D expenditure and personnel), Science Citation Index, Patents registrations (available in
each country). However, despite aiming for an international benchmark of various indicators, Schmoch et al. recognise the methodology’s limitations:

'Some attempts have been made to look at the linkages between these different elements in more detail, as a basic assumption of the NSI [NIS] concept is the co-evolution of the various elements depicted in Fig.1. This project proved to be extremely complex, as the indicators on different aspects of innovation systems are classified in different ways ... and are often linked, but indirectly... Some relationships found for some countries do not apply to others. So a satisfactory ‘final’ solution has not been achieved yet.’ (Schmoch et al., 2006, p.4)

Again, in addressing the difficulties in conducting comparative analysis of Innovation Systems Doloreux and Parto (2004, p.29) emphasise:

‘...the diverse variety of regional innovation system types creates a significant degree of ‘definition confusion’ and empirical validation issues... The approach thus suffers from the absence of a unified conceptual framework from which a universal, albeit very broad, model may emerge to guide research and policy.’

While the concept of NISs is well established and has proven successful in the analysis of individual countries, research in this field so far has not provided a satisfactory method for comparison of this phenomena in a range of countries. In spite of this challenge, authors have tried to develop the NIS concept further, proposing new frameworks that derive from the idea of systemic development, in particular complexity theory and complex adaptive systems (see Allen, 2001; Lansing, 2003; Levin, 2002). The study of complex and adaptive systems investigates problems where the causes and effects are not directly related. As it happens in Innovation Systems (and therefore also likely to happen in design systems), the various elements of the network suffer indirect effects and the cycle is often unpredictable. Both Lansing and Levin have applied mathematical models to improve the understanding on non-linear systems. These studies show the potential application of maths and physics in the study of NIS, but something that would demand skills beyond this thesis’ scope. Multidisciplinary collaboration would be needed for further research.

Finally, a study by Bergek et al. (2008) presents empirical analysis of technological innovation systems (TIS) proposing how TIS theory can be exploited in policy-making. A scheme of analysis composed of six functions is proposed in order to assist the identification of system failures. The paper makes it clear that a systems approach to innovation and technology is the way forward in policy-making, which is definitively
replacing the old market failure approach. However, the paper emphasise in the concluding remarks that TIS is still in early stages to be fully understandable, and the research process has raised many uncertainties, in particular on the assessment of the system's functionality and taxonomy.

2.7 Summary

This chapter provides an overview of work that has been published in the field of strategies for design promotion, as well as some analogous fields of government promotion policies. It has shown that research in policies and programmes for design promotion is a recent activity, despite the fact that practice has been developing for more than a century. As a result, knowledge in this field is largely based on practitioners' know-how.

The review confirmed the lack of well-founded academic theories on issues related to design promotion, in particular on the effectiveness of these programmes and policies. In contrast, there is a large number of non-peer-reviewed papers published by practitioners, which have been used to support generalisations by writers in the field. Unfortunately, many of these papers do not employ academic methods of investigation and usually aim at promoting the process used in individual, local or national programmes. For these reasons, some papers may present results in a positive light, ignoring a more thorough analysis of the investment made in the process's implementation, difficulties encountered and failures.

The review has shown the concern of some authors to present quantitative analyses in support of the design promotion debate and assess the impact of design in the national industry and economy. However, these same studies highlight the problems of obtaining comparable and accurate data, partly due to the lack of definitions and common indicators in this field, and partly due to the difficulty of isolating the results of design from the overall context.
Most authors, both practitioners and academics, agree about the rationale for national strategies and policies for design: the enhancement of the national industry’s competitive advantage, product differentiation for exports or economic development. Overall, there is consensus that government intervention is justified in the case of market failure. However, some authors question the single focus on industry and the economic benefits of design. There is a concern that design policies should be better exploited for the benefit of society, including infrastructure, healthcare, education and institutions. Although this debate has recently gained in importance among developed countries, particularly in Europe, the broadening of the rationale was previously exploited by researchers with a focus on design for developing countries in the late 1970s, as well as some analogous policy fields (technology, R&D and innovation).

In this domain, the references taken from analogous fields of research, in particular innovation policy, is of great relevance. The review of literature on National Innovation Systems reveals the paradigm change on the innovation policy drivers, notably from the address of market failures, to the emphasis of systemic networks. It is understood that the network of stakeholders and their interrelations is key to the development of innovation in a country, region, or cluster. This concept is already established and widely recognised in the field of policies for innovation and technology, and its application on the design policy domain seems sensible. Therefore it should be taken into account in this study. This literature review has revealed several different approaches to the study of NIS. However, none of them presented a satisfactory method for comparative analysis across a range of countries. Therefore, no single approach has emerged as a clear choice to be employed in this thesis.

Several authors reinforce the role that design should play in the development of less advanced economies. Here, the issues that drive design promotion and policy should not focus solely on economic development through the improvement of industry. Instead, there are other crucial issues also to be addressed, such as health and social development. The need for a customised approach to design promotion in developing countries stresses the importance of considering the national context when planning design promotion strategies. Studies of design policies also reinforce this principle. For
instance, Heskett’s model proposes specific design policy approaches for different types of nations according to their political and economic models (Giard, 1996); while Chung’s, Cho’s and Er’s models propose particular approaches for different stages of development in a single country (Cho, 2004; Chung, 1998; Er, 1997).

Although some authors highlight particular features of design promotion programmes in developing countries, comparative studies to date that have aimed to evaluate the effectiveness of design promotion have tended to analyse design programmes detached from their context.

This Literature Review confirms the absence of both formal theoretical rationales and empirical academic studies, which are fundamental for building a robust field of research. Therefore, the need for identifying key parameters in the field of design promotion is crucial before any rigorous theories and models of practice can be developed.
3 The research methodology

3.1 Overview

The aim of this research is to lay foundations for improved practice as well as further systematic research in the field of promotion. It intends to identify and to inform some of the fundamentals of this field of practice addressing the absence of both theoretical rationales and empirical studies, as identified in the Literature Review. This chapter examines the research approach and methods used in order to achieve these objectives. It justifies the choice of research methods and describes how these methods were applied in the context of the investigation.

3.2 The research approach based on grounded theory

The review of the published literature revealed that design promotion is an established practice, but research in this field is a recent activity. Consequently, most of the knowledge is based on practitioners' expertise. Overall, design promotion unfolds in a complex context, with confusing terminology and a lack of definitions of actors and their roles. Most of the studies in this area are descriptions (as opposed to critical evaluations) of national programmes and their achievements, and they frequently lack a robust research methodology.

The review also demonstrated evidence of the limitations on measuring the success of design promotion programmes and policies. As shown in Chapter 2, previous studies that attempted to evaluate and compare the effectiveness of design promotion programmes between countries have reported crucial problems in obtaining data. In order to avoid this problem, this research concentrated its analysis on the process of design promotion and not on the results.
The shortage of investigative research into design promotion and the subsequent limited background reference work reduced the possibility of producing a challenging and strong research question from the Literature Review. For the researcher, appointing a research question at this stage would direct the study towards the search for answers, and would jeopardise the opportunity for a more exploratory investigation. Instead, considering the limited research available in the field of design promotion, this thesis could be an opportunity to provide grounds for this field of research, allowing a more mature advancement of research and practice. With this challenge in mind, the next step was the search for research methods that would provide a systematic approach to the exploratory research.

The search for appropriate research methods focused on the field of social sciences, from which Grounded Theory (GT) emerged. Well known for its approach of theory-building rather than theory-testing, GT seemed appropriate for the researcher’s aforementioned objectives. In the absence of both formal theoretical rationales and empirical academic studies, which are fundamental for building a robust field of research, any use of hypothesis testing would be jeopardised. In contrast, GT would allow for a theory-building approach in which it would be possible to identify key parameters in the field of design promotion, a crucial task before any rigorous theories and models of practice can be developed.

GT, published by Barney Glaser and Anselm Strauss in 1967, is the generation of theory from systematic research. This approach allows the researcher to begin the investigation by exploring an area of study, rather than addressing a preconceived theory or hypothesis (Strauss & Corbin, 1998). Theory will then be generated from data, systematically gathered and analysed through the research process. GT is particularly useful in capturing complexity, gaining understanding about practice, supporting the theorising of ‘new’ areas and bringing new perspectives to existing theoretical frameworks (Locke, 2001).

GT is more commonly applied in qualitative analysis. However, it can be used with either qualitative or quantitative data (Glaser, 2008). Strauss and Corbin (1998)
emphasise that both forms of data must interplay, with one directing the other, and both providing feedback into the investigation process: ‘the idea behind varying methods is to carry out the most parsimonious and advantageous means for arriving at theory’. The fact that GT would allow the combination of various types of data was particularly appropriate for this research project. This was because the data about design promotion was likely to be obtained from a diverse range of sources and the researcher had a particular interest in combining qualitative and quantitative information – a point described in the project’s conceptual framework in Chapter 1.

Although largely applied in social sciences, the application of GT in design research is recent. In this field, GT has often been adapted to meet the researchers’ objectives and it is not rare to find hybrid forms associated with several other methods. An example is given by Lopes (2008), whose doctoral thesis examines interdisciplinary collaboration in design activity, combining GT with ethnography as well as actor-network theory, discourse analysis and ethnomethodology. Another example of the adaptation of GT in design research is provided by Sevaldson’s doctoral thesis (2005), a study of design techniques and design computing. Sevaldson argues that the prescribed GT methodology was too rigid, citing the risk of a ‘heavy resource consuming method’ disrupting the flow of the investigation.

Adaptation is encouraged by Glaser and Strauss (1999): ‘our principal aim is to stimulate other theorists to codify and publish their own methods for generating theory’. No doubt, GT’s adaptability has contributed to making this approach popular among researchers and practitioners from a variety of fields, including more recently design researchers. Its adaptability is not restricted to the design of the research strategy at the beginning of the process; it continues throughout the research project. In GT, data gathering should continually guide further data collection (Glaser & Strauss, 1999). For instance, in applying GT as a research framework, Sevaldson (2005) created a feedback and heuristic spiral approach, where ‘the research feeds back into itself through accumulated experience gained from practical exercises’.

Combined, the reasons that made GT an appropriate approach for this study were:

- GT is a theory-building rather than a theory-testing approach;
• GT provides the possibility of improving the process as it progresses (adaptability);
• GT is a systematic approach for handling data, in particular the combination of qualitative and quantitative data;
• GT is appropriate for comparative analysis.

Above all, GT was recognised as the most suitable approach for this thesis due to the opportunity to build grounds for the advancement of research and practice in the field of design promotion. Lopes (2008) stresses that GT ‘makes its greatest contributions in areas in which little research has been done’. Likewise, in exploiting GT, Sevaldson describes the aim of his research project as to inspire and to provide grounds for further research. In this context, the potential contribution of GT is to generate theory that can be used as a foundation for further investigation of the phenomenon and related issues.

3.3 The research strategy, sampling and methods

In line with GT principles, at the start of the project only the area of research was defined: design promotion. Influenced by her own background and by previous research, including this thesis’s literature review, the researcher was determined to combine qualitative research (due to the very nature of design research as part of the social sciences) and quantitative analysis (which was regarded as a deficiency of this field of research). Three key studies were defined, in order to meet this goal:
• Study One: Historical review of the development and implementation of design promotion;
• Study Two: Survey of current strategies for design promotion around the world;
• Study Three: Review of design promotion in four subject countries (case studies and interviews).

The first two studies provided a better understanding of the topic, terminology and identification of actors. The third study provided in-depth knowledge about design promotion in selected countries. The combination of the three studies was crucial in building GT. Details of the methods employed in each of the three studies are described below.
3.3.1 Study One: Historical review of the development and implementation of design promotion

This study examined design promotion strategies through a historical review. It investigated how their development and implementation evolved in both a temporal and a geographic sense. The objective was to provide an understanding of issues that have been influential in the advancement of design promotion strategies.

The study was developed through an extensive review of publications on design policy and programmes for the support and promotion of design. Research papers, non-peer-reviewed publications, proceedings of seminars, articles published by practitioners and government documents were fundamental sources of data for this study.

While the Literature Review provided an analysis of theory published to date, Study One examined the history of practice in this field. Combined, these two chapters provided the author with a full understanding of the theory and practice of design promotion, which was fundamental in designing the following study.

3.3.2 Study Two: Survey of current strategies for design promotion around the world

After researching the history of design promotion and theories in this field, the next stage was to map where this practice takes place around the world and to investigate the relationship between the national competitiveness of different countries and whether it reflected the practice of design promotion, support or policy.

The method chosen for this investigation was a structured survey distributed to design support organisations and agencies around the world. The survey’s target sample selected professionals involved directly or indirectly in the development, establishment and delivery of design programmes and policies. Respondents had to meet at least one of the two eligibility criteria: evidence of knowledge and experience in the field. In order to meet the first criterion (evidence of knowledge), respondents were expected to demonstrate previous academic research on the topic of design promotion and policies; or to be part of the development of a strategic plan or public
policy for industry and economic development. In order to meet the second criterion (experience in the field of design programmes), respondents were expected to hold a position within a regional or national design organisation, design programme team or relevant government department; or to have participated in the planning, management or delivery of design promotion programmes.

The sampling aimed to obtain the largest number of countries possible, with at least one response from each of the six world macro regions, as defined in World Macro Regions and Components (United Nations, 2000): North America, Latin America, Europe, Africa, Asia and Oceania; and at least 16 responses from the subgroups of European and Non-European countries. Collection of data started in December 2006. A questionnaire (see Table 9) was first distributed by email to a selected mailing list and then circulated on the PhD online discussion list phd-design@jiscmail.ac.uk. In order to obtain at least two responses from each continent, further actions were taken to get feedback from certain regions, in particular Asia and Africa. Snowball sampling controlled by the criteria was used, requesting participants to forward the survey to eligible personal contacts. Delegates at the 4th Conference on the Challenges of Design Promotion in Europe (Paris, January 2007) were also asked to complete the questionnaire.

The questionnaire was intended to be short and objective, with five closed questions and one open enquiry. Participants were asked to answer the questionnaire in relation to their own country.

- **Question 1** aimed to collect data about the design infrastructure in place in the country (e.g. design programmes, centres, museums, tax incentives). This question had the additional objective of identifying countries where design support programmes have been taking place.
- **Question 2** sought to identify how the activities of design promotion in the various countries were supported financially.
- **Question 3** sought to identify those responsible for running design support and promotion activities (e.g. government, industry, academic institutions, professionals or non-profit organisations).
• Question 4 enquired as to which department of the national government was in charge of the design agenda in the country.
• Question 5 identified countries where design policies have already been developed and the progress of this development.
• Question 6 was an open question, seeking more general information about design programmes in the various countries.

Table 9: Survey Questionnaire (Study Two)

Your country of expertise: 
Your e-mail address (optional): 

1) Please tick the option(s) below that reflect what currently takes place in your country:
   - design promotion programme(s) for raising the awareness of design
   - design support programme(s) for helping companies to make better use of design
   - design centre (with space for events and/or exhibitions)
   - design museum
   - tax incentives for the use of design
   - credit/financial support for the use of design by businesses
   - other – please specify: 

2) Who financially supports the activities in design promotion? (Please tick one or more options as appropriate)
   - government
   - industry
   - academic (universities and design schools)
   - design community (professionals or professional associations)
   - non-profit organisations
   - other – please specify: 

3) Who is responsible for running the activities of design support and promotion? (Please tick one or more options as appropriate)
   - government
   - industry
   - academic (universities and design schools)
   - design community (professionals or professional associations)
   - non-profit organisations
   - other – please specify: 

4) In your country, which ministry or government department is responsible for developing design-related policy for economic development? (please tick one or more options as appropriate)
   - economy
   - education
   - culture
   - trade and industry
   - other – please specify: 

5) Is there a policy for design in your country? (Please tick one correct answer)
   - yes
   - no
   - it is being developed
   - there is a policy written but it is not practised
   - there is no specific policy, but design is part of other development policies (e.g. innovation policy)
   - I don’t know

6) Can you name the main programme(s) of design support and/or design promotion in your country?
In total, 83 responses were collected from 44 countries, as shown in Table 10.

Table 10: Number of responses to the questionnaire, per World Macro Region and Country

<table>
<thead>
<tr>
<th>MACRO REGION</th>
<th>NO. RESPONSES P/MACRO REGION</th>
<th>COUNTRY</th>
<th>NO. RESPONSES P/COUNTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>3</td>
<td>South Africa</td>
<td>3</td>
</tr>
<tr>
<td>Asia</td>
<td>11</td>
<td>China</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>India</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Japan</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Malaysia</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Singapore</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Korea</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Taiwan</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thailand</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turkey</td>
<td>2</td>
</tr>
<tr>
<td>Europe</td>
<td>52</td>
<td>Belgium</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Croatia</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Czech Republic</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Denmark</td>
<td>2</td>
</tr>
<tr>
<td></td>
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<td>Estonia</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Finland</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>France</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Germany</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Greece</td>
<td>1</td>
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<td>Hungary</td>
<td>1</td>
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<tr>
<td></td>
<td></td>
<td>Iceland</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ireland</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Italy</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Latvia</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Luxembourg</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Netherlands</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Norway</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poland</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Portugal</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Slovakia</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Slovenia</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spain</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sweden</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switzerland</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UK</td>
<td>4</td>
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<tr>
<td>Latin America</td>
<td>8</td>
<td>Argentina</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brazil</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Colombia</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico</td>
<td>1</td>
</tr>
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<td>North America</td>
<td>7</td>
<td>Canada</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>USA</td>
<td>4</td>
</tr>
<tr>
<td>Oceania</td>
<td>2</td>
<td>New Zealand</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Australia</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>83</td>
<td>TOTAL</td>
<td>83</td>
</tr>
</tbody>
</table>
Occasionally, one country had contrasting answers to the same question from different respondents. In these cases, the answers were double-checked in informal consultation with other design practitioners from the same country or through direct information collected from reliable sources such as the country’s government authority for design.

Data were then compiled for the analysis of the design promotion practices in different countries, regions and economic development areas. Statistical analysis was employed to compare a country’s profile and its position based on different rankings published in The Global Competitiveness Report 2006–2007 (Lopez-Claro et al., 2006), in particular the country’s stage of development and general ranking on the global competitiveness index.

3.3.3 Study Three: Review of design promotion in four subject countries (case studies)

The Literature Review and Study One provided an understanding of the theory and practice of design promotion. Study Two facilitated the identification of design promotion strategies across the world and provided evidence of the relationship between their use and national competitiveness. The next step was to examine the approach to design promotion in specific countries in more detail. A case study approach was the selected method for this purpose, because it is a qualitative research method and it consists of the detailed examination of a subject with the general objective of developing as full an understanding of the subject as possible (Punch cited in Silverman, 2006). Yin (2003) explains that the case study method may be chosen when the author wants to cover contextual conditions, believing that they might be highly significant to the study.

Even though case studies are widely exploited in qualitative research, many authors highlight problems that may be encountered with the method. In particular, the analysis of a small number of cases is questioned when used in the generalisation of findings (Silverman, 2006; Voss et al., 2002; Yin, 2003). Nevertheless, Voss et al. (2002)
explain that compared to questionnaires and other constrained methods, case studies are more likely to lead to creative insights and new theories.

In order to minimise any problems with generalisation, attention had to be concentrated on the sample selection.

Data collected in Study Two formed the foundation for the criteria chosen for selecting the case study subjects. For this study, a purposive sampling was the most appropriate in order to select a group of subject countries on the basis of their relevance to the research (Mason cited in Silverman, 2006). In purposive sampling, subjects can be selected because they illustrate some feature that is important for the study. However, being in charge of this selection obliges the researcher to be careful about the parameters that will be used to select the sample (Silverman, 2006).

In line with this notion, a framework was carefully set up for purposive sampling. It was established that this research aimed at investigating:

- countries where design promotion activities are in place and preferably also design policy (Criterion 1);
- at contrasting stages of economic development (Criterion 2);
- located in different global regions and therefore likely to present contrasting national contexts (i.e. social, economic and political environment) (Criterion 3)

The first stage of the selection combined criterion 1 (countries where design promotion activities were identified, according to Study Two’s survey) and criterion 2 (countries distributed among the five stages of economic development, according to the World Economic Forum’s Global Competitiveness Index). Countries with no design promotion activities are crossed out on Table 11.
### Table 11: Selection of case studies (Criteria 1 and 2)

<table>
<thead>
<tr>
<th>Stage 1 (GDP p.c.&lt;US$2,000)</th>
<th>Transition from 1 to 2 (GDP p.c. US$2,000–US$3,000)</th>
<th>Stage 2 (GDP p.c. US$3,000–US$9,000)</th>
<th>Transition from 2 to 3 (GDP p.c. US$9,000–US$17,000)</th>
<th>Stage 3 (GDP p.c. &gt;US$17,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armenia</td>
<td>Madagascar</td>
<td>Albania</td>
<td>Algeria</td>
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<td>Azerbaijan</td>
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<td>Argentina</td>
<td>Barbados</td>
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<td>Mali</td>
<td>Colombia</td>
<td>Botswana</td>
<td>Czech Rep.</td>
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<td>Burkina</td>
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<td>Jordan</td>
<td>Chile</td>
<td>Korea</td>
</tr>
<tr>
<td>Burundi</td>
<td>Morocco</td>
<td>Macedonia, FYR</td>
<td>Costa-Rica</td>
<td>Malta</td>
</tr>
<tr>
<td>Cambodia</td>
<td>Mozambique</td>
<td>Namibia</td>
<td>Croatia</td>
<td>Taiwan, China</td>
</tr>
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<td>Cameroon</td>
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<td>Kazakhstan</td>
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<td>Lithuania</td>
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<td>Georgia</td>
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<td>Mauritius</td>
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<td>El Salvador</td>
<td>Mexico</td>
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<td>Guyana</td>
<td>Tanzania</td>
<td>Jordan</td>
<td>Guatemala</td>
<td></td>
</tr>
<tr>
<td>Honduras</td>
<td>Timor-Leste</td>
<td>Macedonia, FYR</td>
<td>Panama</td>
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<td>India</td>
<td>Uganda</td>
<td>Peru</td>
<td>Poland</td>
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<td>Indonesia</td>
<td>Ukraine</td>
<td>Namibia</td>
<td>Romania</td>
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<td>Kenya</td>
<td>Vietnam</td>
<td>Nepal</td>
<td>Russian Federation</td>
<td></td>
</tr>
<tr>
<td>Kyrgyz-Rep</td>
<td>Zambia</td>
<td>Namibia</td>
<td>Serbia and Montenegro</td>
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<td>Lesotho</td>
<td>Zimbabwe</td>
<td>Thailand</td>
<td>Slovak Republic</td>
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<td></td>
<td></td>
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<td>South Africa</td>
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<td>Turkey</td>
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</tr>
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<td></td>
<td>Uruguay</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Venezuela</td>
<td></td>
</tr>
</tbody>
</table>

Key: • national design policy in place
○ national design policy in development

Name countries meet criteria 1 and 2
Name countries do not meet criteria 1 and 2

The second stage was to identify the macro region where the countries remaining in the table were located (see Table 12).
Table 12: Selection of case studies (Criterion 3)

<table>
<thead>
<tr>
<th>WORLD MACRO REGION (United Nations, 2000)</th>
<th>Stage 1</th>
<th>Transition from 1 to 2</th>
<th>Stage 2</th>
<th>Transition from 2 to 3</th>
<th>Stage 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFRICA</td>
<td></td>
<td>South Africa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LATIN AMERICA</td>
<td></td>
<td>Argentina</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brazil o</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico o</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NORTHERN AMERICA</td>
<td></td>
<td></td>
<td></td>
<td>United States Canada</td>
<td></td>
</tr>
<tr>
<td>ASIA</td>
<td>China o</td>
<td>Thailand</td>
<td>Malaysia o</td>
<td></td>
<td>Singapore o</td>
</tr>
<tr>
<td></td>
<td>India o</td>
<td></td>
<td>Turkey</td>
<td>Korea o</td>
<td>Japan o</td>
</tr>
<tr>
<td>EUROPE</td>
<td></td>
<td>Croatia o</td>
<td></td>
<td>Estonia o</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poland o</td>
<td></td>
<td>Czech Rep. o</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Slovak Rep.</td>
<td></td>
<td>Hungary</td>
<td></td>
</tr>
<tr>
<td>OCEANIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key:  
- national design policy in place
- national design policy in development

Finally, four countries were selected taking into consideration the aforementioned criteria:

1. India was the only country at Stage 1 of economic development where design promotion and policy are practised.
2. Finland had the highest index in the Competitiveness Rank, and also had recently implemented a national design policy. Thus, this country was the best research subject representing Europe and Stage 3 of economic development.
3. None of the countries in Stage 2 had a national design policy in implementation. However, Brazil, Mexico and Poland had policies in
development. Brazil was selected due to the author’s previous professional experience in this country and consequent network of contacts, which facilitated access to information and understanding of the national context.

4. Korea and the Czech Republic were the only countries in transition from Stage 2 to 3 where national design policy could be investigated. Korea was selected due to this country’s experience in implementing national design policies.

Once the sample was selected, each case study was developed separately. Each investigation started with a review of the literature and a document analysis on the history of design promotion in the subject country. This was followed by the identification of the main stakeholders of the respective national design policy.

At this stage, attention had to be drawn to the sample to be selected for the interviews, which would constitute the primary source of data, and provide material for the application of comparative analysis and theory building. In GT, theoretical sampling is essential. It gives the researcher the opportunity to pursue the investigation into categories or theories that seem to be emerging during the process (Charmaz, 2006). In practice, theoretical sampling allows the researcher to expand on the investigation, to choose new participants, to modify the interview protocols, and to add data sources as the study progresses (Strauss & Corbin, 1998). It is deliberately designed to verify the categories and concepts and to fill in any gaps in the investigation. This is in line with constant comparative analysis, a characteristic of GT.

Following theoretical sampling, the first interviews were conducted in Finland. The original sampling selected eight individuals, who were identified as representatives of the institutions responsible for the conception and implementation of design promotion strategies in this country.

For this original sample, the interview protocol covered three units of analysis, in line with Yin (2003), as described:

- Country’s profile: includes brief historical review, aiming for a parallel between the country’s recent history and design promotion.
• Design system: Aiming to identify the main design programmes, in particular the ones targeted at SMEs. Two or three programmes would be selected for micro case studies.

• Design strategy: Aiming at understanding the national design policy or the proposition/studies for the implementation of a policy.

The analysis of the first round of interviews revealed that the examination of individual design programmes for SMEs was not contributing to the research objectives. It became clear that one individual programme could not be used to generalise the characteristics of design programmes in a particular country. On the other hand, political, economic and cultural matters grew in importance in the context of the investigation. For this reason, in line with GT, the interview protocol and the sample were revised for the second round of interviews, which took place in Brazil:

• Country’s profile: historical review examining the country’s history of design promotion and policies;

• Design system: understanding of the various stakeholders and network of programmes and policies in the country, including their rationale and operation;

• Design policy: the national design policy or the proposition/studies for the implementation of a policy.

This protocol was then maintained for the third and fourth round of interviews (Korea and India), as it proved suitable for the research objectives. (See Appendix for list of questions and example of interview transcripts.)

The sample selection (interviewees) was equally altered throughout the process. In Finland and Brazil it included persons responsible for specific design programmes, a profile that was dismissed in the other countries. Moreover, some emerging issues were further pursued in the late interviews. For example, in India it was important to include interviewees from a professional association, as the ‘professional design sector’ was emerging as an important stakeholder in the context of design promotion.
Table 13 provides the full list of interviewees, the interview dates and the codes used to quote the individual interviewees in this thesis. In the selection of interviewees, the researcher aimed at the organisations with highest authority in design in each of the subject countries. These organisations are easily recognised as they are national authorities, either directly linked or funded by the national government:

- Finland: Design Forum Finland
- Korea: KIDP Korea Institute of Design Promotion
- Brazil: Brazilian Design Programme
- India: National Institute of Design

The author was able to contact individuals in all the four organisations above by exploiting previous professional networks. This was the starting point for the selection of informants.

The individuals selected at the national design organisations had sufficient experience and knowledge about the national design system within the four subject countries and therefore were able to recommend other sources of information that would meet the interviewer’s objectives.

Moreover, desk research (internet, government publications, academic material), combined with information obtained through networking with design promotion practitioners, provided useful leads towards the identification of knowledgeable individuals who could contribute to the research. Undoubtedly, the researcher’s position as coordinator of a European-funded network of design promotion centres, the SEEdesign project, was extremely useful in this identification. Furthermore, being employed by Design Wales allowed the researcher to participate in the activities of the Bureau of European Design Associations (BEDA) and the International Council of Societies of Industrial Design (ICSID), which provided valuable contacts with members of these two international network organisations.
Table 13: List of interviewees (Study Three – case studies)

<table>
<thead>
<tr>
<th>NAME / POSITION (at the time of the interview)</th>
<th>ORGANISATION</th>
<th>Place, Date and Duration of the Interview</th>
<th>CODE (as referred to in the thesis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kristina Noor</td>
<td>Design Forum Finland</td>
<td>Helsinki, 18/06/2007 Approx. 1h30min</td>
<td>F1</td>
</tr>
<tr>
<td>Anna-Liisa Levonen</td>
<td>Ministry of Trade and Industry – Industries Department</td>
<td>Helsinki, 19/06/2007 Approx. 1h30min</td>
<td>F2</td>
</tr>
<tr>
<td>Pirjo Uusitupa</td>
<td>Ministry of Trade and Industry – Industries Department</td>
<td>Helsinki, 19/06/2007 Approx. 1h30min</td>
<td>F3</td>
</tr>
<tr>
<td>Jua Valtanen</td>
<td>Idus Oy</td>
<td>Helsinki, 19/06/2007 Approx. 1h30min</td>
<td>F4</td>
</tr>
<tr>
<td>Jaana Hytönen</td>
<td>Designium, University of Art and Design Helsinki</td>
<td>Helsinki, 19/06/2007 Approx. 1h</td>
<td>F5</td>
</tr>
<tr>
<td>Janne Viemerö</td>
<td>Finnish Funding for Technology and Innovation (TEKES)</td>
<td>Helsinki, 19/06/2007 Approx. 1h</td>
<td>F6</td>
</tr>
<tr>
<td>Pekka Ylä-Anttila</td>
<td>The Research Institute of the Finnish Economy (ETLA)</td>
<td>Helsinki, 20/06/2007 Approx. 1h</td>
<td>F7</td>
</tr>
<tr>
<td>Krister Ahlstrom</td>
<td>Creative Finland and Design Round Table</td>
<td>By e-mail</td>
<td>F8</td>
</tr>
<tr>
<td>Ana Prata Girao</td>
<td>Brazilian Programme of Design (PBD)</td>
<td>Brasilia, 18/12/2007 Approx. 1h30min</td>
<td>B1</td>
</tr>
<tr>
<td>Marco Otavio Bezerra Prates</td>
<td>Ministry of Development Industry and Foreign Trade</td>
<td>Brasilia, 18/12/2007 Approx. 40min</td>
<td>B2</td>
</tr>
<tr>
<td>Paulo Alvim</td>
<td>Brazilian Service of Support for Micro and Small Enterprises (SEBRAE)</td>
<td>Brasilia, 18/12/2007 Approx. 1h</td>
<td>B3</td>
</tr>
<tr>
<td>Geraldo Pougy</td>
<td>Centro de Design Parana</td>
<td>By e-mail</td>
<td>B4</td>
</tr>
<tr>
<td>Professor Dong-Sung CHO</td>
<td>Graduate School of Business, Seoul National University</td>
<td>Seoul, 14/02/2008 Approx. 40min</td>
<td>K1</td>
</tr>
<tr>
<td>Taewan KIM</td>
<td>Korea Institute of Design Promotion (KIDP)</td>
<td>Seoul, 14/02/2008 Approx. 30min + e-mail</td>
<td>K2</td>
</tr>
<tr>
<td>Eunjoo MAING</td>
<td>Korea Institute of Design Promotion (KIDP)</td>
<td>Seoul, 14/02/2008 Approx. 30min + e-mail</td>
<td>K3</td>
</tr>
<tr>
<td>Joon-Kyung YANG</td>
<td>Korea Institute of Design Promotion (KIDP)</td>
<td>By letter</td>
<td>K4</td>
</tr>
<tr>
<td>Young Jin JANG</td>
<td>Ministry of Commerce, Industry &amp; Energy</td>
<td>Seoul, 14/02/2008 Approx. 30min</td>
<td>K5</td>
</tr>
<tr>
<td>Seema Gupta, Deput Director - Technology &amp; IPR Division</td>
<td>Confederation of Indian Industry (CII)</td>
<td>Gurgaon, 20/03/2008 Approx. 1h</td>
<td>I1</td>
</tr>
<tr>
<td>Vinay Jha</td>
<td>Genesis Burson-Marsteller</td>
<td>Gurgaon, 20/03/2008 Approx. 2h</td>
<td>I2</td>
</tr>
<tr>
<td>Professor M P Ranjan Lecturer</td>
<td>National Institute of Design (NID)</td>
<td>Ahmedabad, 26/03/2008 Approx. 2h</td>
<td>I3</td>
</tr>
<tr>
<td>Neelam Chibber Treasurer</td>
<td>Association of Indian Design Industries (AIDI)</td>
<td>Bangalore, 28/03/2008 Approx. 40min</td>
<td>I4</td>
</tr>
<tr>
<td>Poonam Bir Kasturi Designer</td>
<td>Association of Indian Design Industries (AIDI)</td>
<td>Bangalore, 28/03/2008 Approx. 40min</td>
<td>I5</td>
</tr>
<tr>
<td>Sneha Koshi Co-ordinator</td>
<td>Association of Indian Design Industries (AIDI)</td>
<td>Bangalore, 28/03/2008 Approx. 40min</td>
<td>I6</td>
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In selecting the group of interviewees in each country, the researcher was looking for individuals who could provide:

- Information about the current national design system (e.g. stakeholders, actors, their roles, the interrelationship between them). This type of information could be provided by the national authority for design in the country (e.g. individuals F1, B1, K2, I3);

- Information about the history of design programmes and policies in the country. This knowledge could be only obtained from individuals with experience in the field (e.g. individuals F8, B4, K1, I2, I3, I5);

- Information about specific design programmes for SMEs (this was part of the original plan, but abandoned later in the process). This could be provided by persons in charge of the specific programmes (e.g. individuals F2, F3, F4, B3, B4);

- Information about particular characteristics of the country (which could influence design promotion), important design programmes or organisations in the country, or individuals highly recommended due to their knowledge, role or position. These individuals were selected in line with GT’s theoretical sampling. By interviewing them the researcher was particularly looking at testing emerging categories as well as looking for new ones that could emerge due to the subject’s uniqueness (e.g. individuals F5, F6, F7, B2, K3, K5, I4, I5, I6).

Figure 7: The author interviews Professor M P Ranjan at the National Institute of Design, Ahmedabad, India (April 2008)
Face-to-face, semi-structured interviews provided an understanding of the current design system, as well as offering the opportunity to enquire about gaps in the historical review previously conducted. All the data collection took place between June 2007 and March 2008. Interviews were tape recorded and transcribed for analysis within one month of the interview taking place.

### 3.3.4 Visual elicitation and graphic representation

During the investigation process, the element that evolved the most was the use of graphic elicitation. The original interview protocol included investigation of the relationship of government and the various stakeholders in the context of design programmes and policies in the subject countries. During the first round of interviews in Finland, the researcher experimented with the exploitation of diagrams and sketches in order to facilitate communication with the interviewees and collect accurate data about the national systems.

Meyer (1991) states that ‘people possess more complex, subtle, and useful cognitive maps of their organizations than they can verbalize’. Indeed, in this particular project the use of visual representation was an important tool in facilitating knowledge exchange between persons of different languages.

Visual elicitation is a method that can be exploited by researchers to obtain data and understanding from an interviewee, when the traditional verbal exchange is not sufficient (Varga-Atkins & O’Brien, 2009). Several authors (e.g. Banks, 2001; Varga-Atkins & O’Brien, 2009) have pointed out advantages of the use of such visual aids in interviews:

- Reducing the risk of potential bias or misunderstanding;
- Stimulus for the interviewee to focus on the discussion topic;
- The material can become a source of elaboration and questioning, in particular drawings and diagrams;
- The use of photographs, drawings and diagrams can become a record of the discussion.
The objective of using diagrams during the round of interviews was to identify the actors and to elicit the range and type of formal and informal relationships among them. In line with Varga-Atkins & O’Brien (2009), interviewees were asked to contribute to the sketching of their National Systems, to identify stakeholders, and to describe the interrelation between them. In ‘translating’ their explanation into drawings, the researcher was able to confirm the information given, and to encourage the interviewee to rethink the information and therefore provide more accurate data. Having obtained a diagram from the first interviewee, the subsequent interviews were opportunities to probe and improve the original model.

Figure 8: Example of diagram developed during the interviews through visual elicitation

Combining visual and verbal information, the researcher was able to perceive potential weak points in the systems, power forces and strategic alliances that may be key to the efficiency or failure of design policies in the subject countries. Encouraged by the GT approach, these points could be further explored during the interviews and data collection. In such a case, diagrams and graphic elicitation were most suitable proving advantageous in clarifying complex topics by the process of abstraction (Crilly et al.,
2006). The use of this method provided a full understanding of the number of stakeholders and the complexity of the network operating in each subject country.

As encouraged by GT, the application of this method evolved during the research process. After achieving the objectives of the first stage (i.e. to obtain accurate and comprehensive information about the national design systems), the second stage was the presentation of the information collected. The drawings and sketches were initially intended to be used in the collection of data only. However, the feedback and reaction to the diagrams that represented the national systems during the interviews and the presentation of preliminary results were above the researcher’s original expectations. For this reason, the use of diagrams was considered for the presentation of this material, hence they are incorporated into the case studies.

The presentation of data through visual graphics, diagrams and tables has been widely explored by the field of information studies and visual architecture. The visual representation of information, data or knowledge in quick and clear communication is the subject of information graphics or ‘infographics’. ‘By giving shape to data we not only provide access and insight to hidden patterns of meaning it could reveal; we also give shape to the potential for creative collaboration between individuals’ (Klanten et al., 2008, p.6). According to Klanten et al., graphic design can be used to clarify, inspire and reinforce data, when combining visual metaphors and intent in the representation of data.

3.3.5 Constant Comparative Method, Coding and Categories

In GT, the development of the study is a constant comparative method. In essence, it is a ‘continuously growing process’, in which ‘each stage provides continuous development to its successive stage until the analysis is terminated’ (Glaser & Strauss, 1999). As seen previously in this chapter, the case studies followed this principle, with the interview protocol evolving during the process.
As GT encourages adaptation during the process of investigation, a prescribed method is crucial in order to ensure the research's validity. In GT's constant comparative analysis, open coding is the key method for scrutinising data and for generating theory. It consists of identifying, labelling and collating the different phenomena present in each line or paragraph of the data collected. The careful scrutiny of data enables the uncovering of events, acts, outcomes and relationships and the systematic development of meaningful categories for this research (Strauss & Corbin, 1998).

In conducting the interviews and in analysing the interview transcripts, the researcher became aware of words and phrases relating to incidents that highlight issues of importance or interest to the research. Each of these is labelled with a code and then its repetition is observed and noted. During this process, the researcher must be careful to avoid forcing the data by looking for evidence that supports preconceived ideas (Glaser & Strauss, 1999). Once codes start to emerge from data, the researcher can direct future data collection to verify or further investigate the topic. This is the principle of GT's constant comparative method.

<table>
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<tr>
<th>INTERVIEW TRANSCRIPT (EXTRACT)</th>
<th>CODING (LABELS)</th>
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<tr>
<td>...now the policy has really helped bringing design on the national agenda. The companies will be sensitized. And as part of the policy hopefully we will have more funds to support the design products. That the policy should help. The negative point will be the implementation. All the policies I understand have been great but implementation has to be seen. It takes time to do anything on the government system so the first suggestion is that we have been having is that the Design Council and the Chartered Society of Design has to be out of the government system, either somebody like the CIs or the secretariat only through bodies like the CIs. So when that happens hopefully it should be fine but to reach that level it takes a lot of time. Bureaucracy? Yes, takes a lot of time. If you talk about design houses... we have a lot more clients from overseas than in India. But when the policy is there and through another programme like the design clinics and SMEs are subsidised, and large companies already are going to UK and Italy, but there are also Indian designers and few activities, when the whole industry is subsidised at the process. So then in new design houses will be less to cope with the demand. So the opportunity is huge, and that gap between the service providers and the demand, we are also proposing design education programmes. Government has announced maybe 3 or 4 more NIDs. We are also working with the All India Council for Technical Education. We are also proposing a design module in the engineering programme in each technical institute. So engineers will come out with at least a basic orientation on design. So we are trying to fill up this gap. Is the quality of designers a problem in India? No, quantity is the problem. I mean industrial designers 300 per year...</td>
<td>Design policy</td>
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<td>Finance sources</td>
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<td>Design policy process</td>
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<td>Country's features</td>
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<td>Design System</td>
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<td></td>
<td>Design System</td>
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<td>Barriers / Country's features</td>
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<td></td>
<td>Professional sector</td>
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<td>Design support</td>
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<td>Opportunities</td>
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<td>Design education</td>
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<td>Design education / Design system / Design education</td>
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<td>Design education</td>
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<td>Professional sector / Barrier</td>
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<td>Professional sector</td>
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In this research, the initial list of codes included design promotion, design support, design policy, design policy process, evaluation, government perception, finance sources, country's characteristics, barriers and opportunities, among other labels. Table 14 shows an example of how coding was applied to an interview transcript.

The codes are then analysed and grouped together, if related by a common theme. By comparing the codes and the data applicable to each one, the researcher was able to draw a list of categories. In this study, the relevance of each code was tested during the sequence of interviews, through asking interviewees about the topics. The result of this process in this current research was seven categories of data:

- Design programmes;
- Design education;
- Professional design sector;
- Rationale;
- Design policy;
- National design system;
- National context.

For this research, this list of categories has two important roles:

1. Having emerged from data, it is an important research output. It represents issues that must be considered in research and practice in the field of design promotion.

2. Having discovered this list of important issues, the seven categories were used as a framework for the comparative analysis of design promotion in India, Brazil, Korea and Finland.

In GT, theory emerges from the constant comparative method, where categories are generated from the data; and then data is used again to illustrate the discussion of categories. The categories generated from the application of the systematic analysis (coding) become more important than the actual data. Glaser and Strauss (1999) explain that categories and concepts may not 'be accurate beyond a doubt, but the concept is undoubtedly a relevant theoretical abstraction about what is happening in the field of study'.
The interview transcripts were the main source for the coding analysis and, therefore, for the development of the categories. Once the list of categories was consolidated, and after the completion of the four rounds of interviews in Finland, Brazil, Korea and India, the transcripts were scrutinised once again, this time the search was for information provided by the interviewees that would support the discussion of the individual categories. This data is presented on Tables 19, 20, 21, 24, 26, 27, 29 and 30 in Chapter 7 and is supported by evidence gathered from further desk research.

As well as the conceptual categories generated through open coding, according to Strauss and Corbin (1998) GT also entails the examination of interrelationships between these categories. This exercise seemed most appropriate to the research, as several links between the categories had been noticed during data collection. For this reason, the author decided to exploit the interrelations at the final stage of the research. However, it is important to highlight that axial coding, the method prescribed in GT by Strauss and Corbin (1998), was not employed. At that stage of the project, due to limited time and resources, it was not possible to return to coding in order to follow the strict GT approach. Instead, the author embraced the principle of interlinking categories in order to obtain a more complete understanding of the research subject (Strauss & Corbin, 1998). The objective was to generate theories from the investigation that can guide future research in the field of design promotion and policies.

3.4 Summary

In this chapter the choice of methods and approaches applied in this research has been explained, particularly the use of grounded theory (GT).

GT is a method that allows theories to emerge from the data that were systematically collected and analysed through a coding process. The choice of this approach allowed the author to investigate the field of design promotion research in an exploratory
manner, pursuing the idea of building grounds for the advancement of research and practice in the field of design promotion.

Importantly for this research, GT allows the combination of qualitative and quantitative methods in order to obtain a fuller understanding of the field of design promotion. For this purpose, the investigation was conducted through three studies:

- Study One provided a historical review of the practice of strategies for design promotion, in order to provide an understanding of issues that have been influential in the development of this activity.
- Study Two was a structured survey of current design promotion strategies around the world. The objective was to map this practice and to investigate its correlation with national competitiveness.
- Study Three developed a detailed review of design promotion in four subject countries – Finland, Korea, Brazil and India – which represent four different stages of economic development.

Two important sampling selections were determined for this study: subject countries and interviewees. While the first one was preselected, in order to establish a sample that would be representative of diverse stages of economic development and geographic regions, the second group was developed through theoretical sampling during the research process, in line with GT.

Also in line with GT, coding was the method applied to analyse the interview transcripts from Study Three’s case studies. Seven categories emerged from this process, which were used as a framework for the comparative analysis of design promotion in contrasting national contexts.

The full process is illustrated in Figure 9:
Comparative analysis of design promotion in different national contexts

**RESEARCH PROCESS**

**Literature Review**
- Secondary research
- Review of published material

**Study One**
- Historical review of the practice of design promotion

**Study Two**
- Survey of design promotion around the world
- Selection criteria
- Mapping exercise
- Semi-structured questionnaire
- Quantitative analysis

**Study Three**
- Case studies - review of design promotion in four subject countries
- Face-to-face interviews
- Review of published material and archival records
- Visual elicitation
- Graphic representation

**Comparative analysis of design promotion by categories**
- Open coding
- Comparative analysis
- Spider diagram
- Graphic representation

**Analysis of the relationship between categories**
- Visual representation
  - (recommendation for further research)

**Conclusion**

**PUBLISHED OUTPUTS AND PRESENTATIONS:**
- The Design Journal, Berg Publishers
  - Peer review on methodology and quality of findings
- 2008 Undisciplined! The 2008 Design Research Society Conference (UK)
  - Feedback on case studies content and comparative analysis in development
- P&D Design 2008 (Brazil)
  - Feedback on the case study content
- Innovation Policy Workshop - Design as a tool for Innovation
  - European Commission (France)
  - Feedback on the comparative analysis and findings in development
- Shaping the Global Design Agenda
  - An International Conference on Design Policy (Italy)
  - Feedback on theories in development
- DME Barcelona Congress (Spain)
  - Feedback on theories and generic models proposed

Figure 9: The research strategy
4 Study One: Historical review of the development and implementation of design promotion

4.1 Overview

This chapter provides a historical review of the development and implementation of design promotion. It was developed through a review of publications on design policy and programmes for the support and promotion of design, including research papers, non-peer-reviewed publications, seminar proceedings, articles published by practitioners and government documents.

The objective of this study is to provide fundamental knowledge about design promotion that will inform the development of this research, rather than developing a critical review of the history of design promotion. It seeks to identify issues that have been influential in the advancement of this practice.

4.2 19th Century: the beginning of design promotion

Government intervention in design is not a solely contemporary practice. For centuries government decisions have influenced the development of design, creativity and innovation in both positive and negative ways.

In the author’s view, the first events for the promotion of national industry took place in the 19th Century: the great exhibitions for industrial promotion. The pioneer event was held in Paris in 1798 to encourage improvements in progressive agriculture and technology in France. The exhibition proved so beneficial to French industry that the event was repeated, increasing in size each time, in 1839, 1844 and 1849.
At the time the initiative was copied around Europe: Berne and Madrid (1845); Brussels (1847); Bordeaux (1847); St Peters burg (1848); and Lisbon (1849).

...the experience of foreign countries has proved that great national advantages have been derived from the stimulus given to industrial skill by bringing the manufacturers of different establishments into competition with each other, and by presenting Honorary rewards... cheapness of production and excellence of material, both in execution and durability, being assumed as the criteria of superiority. (Declaration Council of the UK Society of Arts, May 1845 cited by Hobhouse, 2004, p.4)

In response to this competition, the rival British nation responded with the ‘Great Exhibition of the Works of Industry of all Nations, 1851’. Although this was not the first event of this type, it was the largest and the first to invite contributions from all over the world, confident that British manufacturers could stand up well to competition. There were 100,000 exhibits from all across the world. The objective was to encourage art and science together in order to stimulate industrial design. The ‘Great Exhibition’ was a celebration of contemporary industrial technology and design (Gibbs-Smith, 1964).

The Great Exhibition of 1851 and the modernisation it exemplified impressed Napoleon III, during his exile in London. Back in France, he set the objective of modernising Paris and launched an exhibition in 1855 to celebrate the consolidation of his empire. Thirty-four nations exhibited in a specially built Palais de L'Industrie in the Champs Elysées, covering 168,000 square metres. Technical novelties included aluminium sheets and Goodyear waterproofs (British Library, 2008).

Unfortunately, the French exhibition had a negative financial result, as the amount invested could not be recovered. In contrast, the British exhibition was extremely profitable. The Royal Commission for the Exhibition of 1851 was responsible for managing its revenue under the duty of ‘increasing the means of industrial education and extending the influence of science and art upon productive industry’. Eighty-six acres of land were purchased in London, where a unique cultural hub was built including three museums, one theatre and some of the most important educational institutions, including Imperial College and the Royal Colleges of Art and Music. After this implementation, the Royal Commission set up, in 1891, an educational trust to give fellowships and grants for research that supports the development of science and
technology for the benefit of the British industry. Annual charitable disbursements in 2007 were reported to exceed £1.6m (The Royal Commission for the Exhibition of 1851, n.d.).

Besides the promotion of industry, design also found promotional channels through its association with the arts. At the end of the 19th Century, two important institutions were founded in Scandinavia: the Swedish Society for Crafts and Design (1845) and the Finnish Society of Crafts and Design (1875). Both societies were created with the same objective — to encourage crafts skills in industries that were gradually ‘progressing’ towards cheap manufacturing production — and had the same core activity — supporting a Sunday school for teaching manual skills. Both developed into promotional activities in the organisation of international exhibitions and publications, and the establishment of museums and support programmes for industry and academics. The Sunday schools evolved into important contemporary educational institutions: the University College of Arts, Crafts and Design (Konstfack) and the University of Art & Design Helsinki. The societies themselves became important national design promotion organisations: the Svensk Form and the Design Forum Finland (Design Forum Finland, 2006; Stenros, 2007; Svensk Form, 2005).

At the beginning of the 20th Century the demand for products, the availability of machinery and the rise of mass production encouraged the establishment of the design profession. In 1913 the title ‘industrial designer’ was first registered at the US Patent Office, used as a synonym for the then-current term ‘art in industry’, and the American Union of Decorative Artists and Craftsmen (AUDAC) was founded with the objective of organising a legal framework for design patenting and protection (Gantz, 2008).

4.3 Post-war period: the foundation of national design programmes

Design promotion and government strategies for the support of design in industry flourished after World War II, stimulated by the demand for consumer products and opportunities for export and trade. In this post-war era design and architecture were
playing a major role in the reconstruction of countries and the improvement of citizens' quality of life around the globe. As a result, many design events were taking place in individual countries as well as on the international scene:

- The founding of national promotional bodies: the Design Council in the UK (1944); the German Design Council (1953); the G-Mark Award in Japan (1957); the Norwegian Design Council (1963); the Design Institute in South Africa (1965); and the Japan Industrial Design Promotion Organisation, JIDPO (1969);
- Biennial exhibitions of design at the Museum of Modern Art in the USA (from 1950 to 1955);
- The establishment of international design promotion associations: International Council of Societies of Industrial Design, ICSID (1954); International Federation of Interior Design, IFI (1961) and International Council of Graphic Design Associations, ICOGRADA (1963);
- The publication of the first 'modern' design policy in 1958: the 'India Report', also known as the 'Eames Report' (Eames & Eames, 1958). This document set up the foundations for a design education institution in India, which culminated in the opening of the National Institute of Design in 1961.

From the 1950s the link between design, style and industry started to be recognised as an asset for commercial advantage and exports. With this idea in mind, many governments invested in the establishment of industrial design organisations.

4.4 1990s: Asia and Eastern Europe launch design promotion initiatives

During the 1980s and 1990s two important 'groups' of design promotion organisations emerged: the Far East Asian countries (e.g. Japan, Korea, Taiwan, Hong Kong) and the Eastern European countries (e.g. Estonia, Slovenia, Hungary, Slovakia).

The Far East engaged in design promotion with the challenge of changing the perception of cheap products, which copied others' designs, to those reflecting excellence in design, innovation and use of technology. With this clear goal aligned with exports and economic development, East Asian governments were keen to make large investments in the promotion of design. Besides specific programmes for
industry, competitions and seminars, their investments also included the opening of Design Centres. Usually these investments followed well-planned policies, normally revised after a period of five years, as with the five-year plans in Korea and Taiwan (Blaich & Blaich, 1993; Cho, 2004). The scale of investments, the size and number of centres, the ability to develop policies successfully and the results accomplished became characteristics of design promotion in the Far East.

Eastern Europe faced important political reforms in the 1980s, with the fall of the communism, the dissolution of the Soviet Union and the consequent opening up of markets. This change was directly reflected in the use of design by industry, which faced international competition and a need to export goods. Interestingly, the impact on the implementation of design programmes is debatable. This testimonial describes the situation in the Czech Republic (then Czechoslovakia) and Hungary:

...at this time (before 1989) of total planning, the design was planned as well. Companies had to apply design to production and in many there were even so-called 'creative committees' that were in charge of assessing the aesthetic quality of the production. ... The first years after 1989 caused problems in the world of design. Many producers considered design redundant, regarding it as something that made products more expensive and caused only more trouble. (Interview - Z.Vokrouhlicky, 2007, p.12)

Contrary to expectations, designers have not all benefited from the market economy. Product design is an example. During the Communist era, social programmes, such as housing development, and large, centralised industrial enterprises provided good employment for industrial designers. Following the political and economic changes, the previous large, centralised industrial conglomerates were broken up into smaller companies, which were sold or closed. The in-house design teams were thus disbanded. (Interview - J.Varhelyi, 2007, p.5)

To face these problems, design promotion has been emerging strongly within these countries, although government support is not always present. In its absence, European funding has been used to finance the implementation of some programmes. Another characteristic of this group is the strong network and mutual support between countries, which stimulates the flow of information and benefits the implementation of design promotion activities.

4.5 21st Century: broadening the design agenda
At the beginning of the 21st Century, design was starting to be recognised as a strategic tool and not only as a stylish asset. This was reflected in design programmes and their approach to companies. The Danish Design Centre was at the forefront of this idea, launching the Danish Design Ladder (see Literature Review - topic 2.2.1), a framework used as a method to measure the level of design activity adopted by a company. The framework consisted of four stages: no use of design; design as styling; design as process; and design as strategy (Ramlau & Melander, 2004). The Design Ladder presented a clear framework for its application to companies in practice. Besides providing an easy explanation of the design process, the Ladder also allowed design support programmes to measure the impact of their intervention. For these reasons, the approach was also adopted by other countries in Europe (Sweden, Austria, the UK).

In the first decade of the 21st Century, Asian countries were also continuing their high level of investment in design promotion, in particular in international campaigns targeting Western countries. Korea had the most prominent policy. The Third Comprehensive Plan for Industrial Design Promotion, running from 2003 to 2007, included the construction of regional design centres in the country, in addition to the Korea Design Centre in Seoul, which was opened in 2001. Another strategy for promotion adopted by the Far East was the organisation of international events, such as biennial conferences and International Council meetings (ICSID and ICOGRADA).

As design became strategic, design promotion and support programmes evolved. The need for better planning also became apparent. In consequence, design policies grew in importance. Besides the examples of Korea and Taiwan, which had the practice of following five-year plans, other countries published policy documents: Finland (Design 2005!) in 2000; the UK (The Cox Review) in 2005; Denmark (Design Denmark) and India (National Design Policy) in 2007.

Moreover, the scope of design promotion strategies tends to broaden as the design discipline also evolves. The use of design solely for industrial and economic benefits has been questioned by an increasing recognition of the potential of design promotion strategies for the improvement of people’s quality of life, government services and
countries’ infrastructures. This concept follows the principles presented in programmes such as Design of the Times (DOTT, UK) and Design for All Europe (EIDD). It has been recently emphasised in the debate over a European design policy (Thenint, 2008) and also the North American design policy (e.g. Thorpe, 2009).

4.6 Summary

It is difficult to define when the practice of promoting design started, but it is possible to study its roots in government intervention and the promotion of national industry.

This review suggests that the great exhibitions of the 19th Century were the first important series of events for the promotion of industry and industrial design. With large government investments, these events aimed at encouraging competition among industry and therefore its improvement.

In Scandinavia towards the end of the 19th Century the first design organisations were established based on design associated with arts and crafts. Svensk Form and Design Forum Finland are two of these organisations, which are still in operation.

The next important time for the establishment of design centres was the post-war period, when the design sector was playing an important role along with architecture in the reconstruction of countries and the improvement of citizens’ quality of life around the globe. It was a time when industry benefited from the combination of optimism, consumerism and demand for products. Many national design programmes were established in this period.

In the past two decades, the fall of physical and communication barriers has also encouraged design programmes. Eastern Europe and Asian countries became important markets, not only as consumers but also as providers of competitive products. These countries invested in their own design programmes, aiming to enhance the competitive advantage of their products in the worldwide market.
This evolution was marked by design programmes aiming at economic development and market competition. In this context, design policy evolved from industrial policy and government intervention was justified in cases of the market failure of opportunities for exports.

However, more recently this focus has been questioned. The broadening of the use of design, the better understanding of design’s strategic role, and the example of successful government policies for design in Asian countries has had an impact on the perception of design strategies. There is an increasing interest in government policies for design as opposed to isolated design programmes. Moreover, the industrial focus tends to shift towards the use of design for the improvement of national infrastructures, services and systems.

This chapter examined the history of design promotion. The most important conclusion from this study was the interrelation between historical facts and the evolution of design programmes. It is indicative that some key events (e.g. the Industrial Revolution, the Post-War period, the recent fall of communication barriers) have generated a demand for design, which, in turn, stimulated the implementation of design programmes and policies across the globe. This understanding is relevant for this research in two aspects: in confirming the relevance of the national context for the development of design programmes and policies, topic addressed in the first research question presented in Chapter 1; and in developing the ability of interpreting economic and social context in order to drive the advancement of design promotion strategies.
5 Study Two: Survey of current strategies for design promotion around the world

5.1 Overview

After researching the history of design promotion, the next stage was to map where and how this practice takes place around the world, in particular observing contrasting countries in aspects of socio-economic development. This was the objective of the study described in this chapter.

Study Two presents the findings of a survey that identified where design programmes, support schemes and national design policies have been adopted. It also investigates the association between economic competitiveness and the existence of strategies for the promotion of design in individual countries. Conclusions are drawn comparing the map of strategies for design promotion with the corresponding countries’ stage of economic development and geographical position.

As already described in Chapter 3, this study was developed through a structured survey distributed to design promotion organisations and agencies throughout the world. The sampling aimed to obtain the largest possible number of countries, with at least one response from each of the six world macro regions (United Nations, 2000). In total, 83 responses were collected from 44 countries: 8 from North America, 7 from Latin America, 52 from Europe, 3 from Africa, 11 from Asia and 2 from Oceania (see Table 10).

Statistical analysis methods were employed to compare a country’s profile and its position based on different rankings published in The Global Competitiveness Report 2006–2007 (Lopez-Claros et al., 2006), in particular in relation to a country’s stage of development and general ranking of global competitiveness. To assist with the
mapping exercise, definitions were developed to differentiate design support, promotion, education and policy.

5.2 Mapping design promotion strategies around the world

Design support and promotion programmes are schemes implemented to assist businesses in using design in order to improve their businesses (Raulik, 2004; Sung et al., 2007). Support programmes differ from design promotion schemes, which are more likely to attract other funding sources or even sponsorship and generate some income. A support programme is usually incapable of generating income and therefore largely reliant on government funds. While support programmes are specifically focused on businesses, promotion campaigns are often targeted at the wider public, usually with the objective of raising awareness of the benefits of design through many different ways (such as exhibitions, awards, conferences, seminars and publications). Design support programmes usually have specific and more tangible outcomes than promotion schemes and work closely with businesses to achieve their objectives. As an example, these programmes build ‘bridges’ between design and industry (Dahlin & Svengren, 1996).

Support and promotion schemes are two ways to encourage the use of design. However, to gain maximum advantage, the implementation of these schemes should be determined by strategic plans or policies. Design policy is getting increasing recognition from countries and indeed regions as they begin to understand the need for a long-term plan that will co-ordinate and maximise the benefits of programmes and actions in design. Figure 10 illustrates all these levels of strategy (promotion, support, education and policy) in a diagram that represents a national design system.
DESIGN PROMOTION schemes are usually targeted at the wider public with the objective of raising awareness of the benefits of design through many different ways (e.g. exhibitions, awards, conferences, seminars and publications).

DESIGN SUPPORT programmes are implemented to assist companies in using design for their business advantage. As an example, these programmes build 'bridges' between designers and industry.

DESIGN EDUCATION includes the traditional education (degrees and post graduate courses) as well as professional training for designers.

DESIGN POLICY can be defined as the process by which governments translate their political vision into programmes and activities in order to develop national design resources and encourage their effective use in the country.

This survey collected information from 44 countries. Tertiary education in design was available in all the participant countries. Design support was identified in 27 of these countries and design promotion programmes in 41. Eight countries had design policies on a national level (see Table 15 and Figure 11).

Table 15: Presence of design education, promotion, support and policies in the survey participating countries
Design promotion is widely practised, while design support and policies do not have the same presence. This phenomenon may be explained by the fact that the implementation of promotion programmes is easier than support programmes. It demands less training of personnel and lower investment in terms of time and finance. Design promotion programmes also tend to be more attractive initiatives as they can reach a larger number of individuals, even though in a more superficial intervention (Tether, 2006).

The only countries that maintain four levels of design strategies (promotion, support, education and policy) are Finland, Singapore, Japan, the Netherlands, New Zealand, Korea and the Czech Republic. Moreover, eight countries have declared that policies for design are in development in their countries.

It is important to note that in the context of this research, design policies were considered to be only in countries where proposed policies were actually adopted at government level by the end of the survey. There are a number of countries where plans have been developed towards national policies for design. Estonia, Latvia and the UK have published design policies, but have not been included in the survey as their policies are not fully adopted by the national government. For instance, in the UK the
Cox Review (Cox, 2005), commissioned by the British government in 2005, highlights the need for an efficient design support programme. This was one of the Cox report's five key recommendations. It remains a direction for action, but has been only partially implemented.

Moreover, countries have implemented their policies in different ways. For instance, in the Czech Republic the government implements its actions on design through a single national organisation, the Design Centrum of Czech Republic (DCCR). The mission and objectives set for DCCR form the national strategy for design. In contrast, the Finnish Design Policy coordinates actions from various organisations in the country towards common objectives for national economic development (Valtonen, 2005). Korea is a country that stands out because of its capacity for planning in direct cooperation with the national government. The Korea Institute of Design Promotion (KIDP) works directly with the Design and Brand Policy Division in the Ministry of Commerce, Industry and Energy (MOCIE) on the preparation of annual and five-year plans (Interview - T.Kim, 2006; Choi et al., 2007), which are released annually at the National Convention on Design Industry Promotion.

5.3 The correlation between design and national competitiveness

The research undertaken aimed to analyse the results of the survey in comparison with each country's competitiveness potential. For this purpose, the Competitiveness Rank by the World Economic Forum was an appropriate source and therefore was used as a reference for comparison. This biennial ranking is published in The Global Competitiveness Report (Lopez-Claros et al., 2006). It uses a combination of indicators (e.g. total GDP, population, GDP per capita, inflation, government debt, imports, utility patents etc.) to calculate the general index. The 2006–2007 edition also lists the 125 most competitive economies and classifies them into stages of development according to GDP per capita:

- Stage 1 (GDP p.c.<US$2,000): factor-driven stage;
- Transition from 1 to 2 (GDP p.c. US$2,000–US$3,000);
- Stage 2 (GDP p.c. US$3,000–US$9,000): efficiency-driven stage;
- Transition from 2 to 3 (GDP p.c. US$9,000–US$17,000);
- Stage 3 (GDP p.c. >US$17,000): innovation-driven stage.

The stages above are relevant for this research as they indicate the specific economic context within which policies are developed. According to the level of development, economies need to prioritise different aspects. For example, advanced economies do not need to address problems such as the basic infrastructure, health system or corruption, which nations at the lower levels do need to take into consideration as matter of priority.

Policies in factor-driven stage countries (first level) should be focusing on building a stable system for the economy to operate, which includes improving public and private institutions, infrastructure, education, health and the macro economy. Typically, companies in these countries compete mainly on the basis of price and sell basic products or commodities.

At the second level of development, the efficiency-driven stage, policies can address processes and products more directly, focusing on improving their efficiency and quality. This can be achieved by targeting better exploitation of higher education resources and available technology in order to improve competitiveness.

The third level is the innovation-driven stage. With higher costs for production, these countries cannot afford to compete on price alone. In order to remain competitive, they must focus on innovative products of the highest level of technology or design. Indeed, the survey results show that countries at Stage 3 of development are those most likely to include policies for design in their system.

The results of the survey (see questions on Table 9 in Chapter 3), which shows where support, promotion and policies are practised, were compared to the list of countries at each stage of development. This comparison is presented in Figure 12. The evidence clearly demonstrates that countries positioned higher in the stages of development tend also to be those where design policies and programmes are in place:
- Design promotion programmes are present in 77% of the more sophisticated economies (Stage 3) compared to 4% of countries with less developed economies (Stage 1).
- 48% of countries at Stage 3 of development have design support programmes in place compared to only 2% of countries at Stage 1.
- Design policies are present in 16% of countries at Stage 3 compared to 2% at Stage 1.
- Countries in the transition from Stages 2 to 3 perform particularly well in comparison to other stages: 56% of countries run design promotion programmes, 44% run design support schemes and 22% have policies for design. This shows their willingness to increase their performance and to make consequent investments in initiatives that can be relevant in achieving this objective.

Figure 12: The presence of design promotion, support and policy in countries at each stage of development
This evidence suggests that more competitive economies are conscious of the need for innovation and design in order to remain competitive. Whereas countries in the transition stage invest in design programmes in order to enlarge their competitive advantage, countries at the lower stages of development are usually not prepared to use design as part of their economic, cultural or trade programmes, as they have priorities other than industry improvement. It is important to note that design contribution is ignored as a contributor for the improvement of basic systems, such as health infrastructure, crime prevention, education and transport, as previously identified by Bonsiepe (1973 cited by Er, 1997).

Two exceptions are India and South Africa. India has recently published the National Design Policy document, aiming to have a “design enabled Indian industry’ which could have a positive impact on both the national economy and the quality of life (NID, 2007b). South Africa is an example of a developing nation where design is often used to meet the country’s specific needs, such as mining engineering (Interview - A.Viljoen, 2007), water supply and sustainable rural transport (Amir, 2004; SABS Design Institute, 2005).

Using the Global Competitiveness Index, this study has also identified a relationship between the position of countries in this index in comparison to their use of policies and programmes for design. This relationship can be seen in Table 16.

There is a clear presence of policies and design programmes at the top of the table (i.e. closer to index 1), showing that the most competitive countries are those more likely to have design support, promotion and policies in place. Note that no strategies for design (promotion, support, policy) were identified in countries with index positions below 70, and for this reason, they are not included in the table.
Table 16: Global Competitiveness Index 2006 rank and the presence of design strategies

<table>
<thead>
<tr>
<th>INDEX POSITION / COUNTRY</th>
<th>PROMOTION</th>
<th>SUPPORT</th>
<th>POLICY</th>
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<tbody>
<tr>
<td>1 Switzerland</td>
<td>✓</td>
<td></td>
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<tr>
<td>2 Finland</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>3 Sweden</td>
<td>✓</td>
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<tr>
<td>4 Denmark</td>
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<tr>
<td>5 Singapore</td>
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<tr>
<td>6 United States</td>
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<tr>
<td>7 Japan</td>
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<tr>
<td>8 Germany</td>
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<tr>
<td>9 Netherlands</td>
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<tr>
<td>10 United Kingdom</td>
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<tr>
<td>11 Hong Kong SAR</td>
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<tr>
<td>12 Norway</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>13 Taiwan, China</td>
<td>✓</td>
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<td>14 Iceland</td>
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<td>15 Israel</td>
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<td>16 Canada</td>
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<td>18 France</td>
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<td>22 Luxembourg</td>
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<tr>
<td>23 New Zealand</td>
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<td>24 Korea, Rep.</td>
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<td>✓</td>
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<td>25 Estonia</td>
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<td>26 Malaysia</td>
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<td>31 Barbados</td>
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<td>32 United Arab Emirates</td>
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<td>33 Slovenia</td>
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<td>34 Portugal</td>
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<td>35 Thailand</td>
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<td>36 Latvia</td>
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<td>37 Slovak Republic</td>
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<td>38 Qatar</td>
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<td>40 Lithuania</td>
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<td>41 Hungary</td>
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<td>42 Italy</td>
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<td>43 India</td>
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<td>44 Kuwait</td>
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<td>45 South Africa</td>
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<td>46 Cyprus</td>
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<td>47 Greece</td>
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<td>56 Kazakhstan</td>
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<td>58 Mexico</td>
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<td>60 Jamaica</td>
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<td>61 El Salvador</td>
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<td>64 Azerbaijan</td>
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<td>66 Brazil</td>
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<td>67 Trinidad and Tobago</td>
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<td>69 Argentina</td>
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<tr>
<td>70 Morocco</td>
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</table>

5.3.1 Comparing the World Macro Regions

Looking for other patterns, the survey also searched for relevant contrasts between different parts of the world. This part of the research used the United Nations World Macro Regions as a reference (United Nations, 2000). Figure 13 shows the percentage of countries in each Macro Region where design promotion, support and policy are in place, considering that 41 countries have design promotion, 27 countries have support, and eight countries have design policies, among the 44 countries that replied to the survey (see Table 15). Findings revealed that there is a larger concentration of design promotion and support programmes in Europe, followed by Asia. However, Asia
leads the world in the number of design policies. This may have its roots in history: as shown in Chapter 4, design programmes were first implemented in European countries.

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<table>
<thead>
<tr>
<th>DESIGN PROMOTION</th>
<th>DESIGN SUPPORT</th>
<th>DESIGN POLICY</th>
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<tbody>
<tr>
<td>Europe 59%</td>
<td>Europe 59%</td>
<td>Asia 50%</td>
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<tr>
<td>Asia 22%</td>
<td>Asia 22%</td>
<td>Europe 38%</td>
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<tr>
<td>Latin America 7%</td>
<td>Northern America 5%</td>
<td>Oceania 13%</td>
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<tr>
<td>Africa 4%</td>
<td>Africa 4%</td>
<td>Oceania 4%</td>
</tr>
<tr>
<td>Oceania 5%</td>
<td>Latin America 11%</td>
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</tbody>
</table>

Figure 13: Distribution of design strategies among the World Macro Regions

5.4 Summary

This chapter has reported on the findings of the second study of this thesis, a survey that investigated programmes and policies for design in individual countries and their relationship with national competitiveness. It addressed the first research question proposed in this thesis: What is the relevance of the social, political and economic context in the development of strategies for design promotion?

The survey collected data from 44 countries about their design promotion schemes, support programmes and national design policies, and information about sources of funding and stakeholders. The information was analysed using several techniques and compared with data from The Global Competitiveness Report.

The findings suggested that programmes and policies for design are mainly present in the most competitive countries. In a comparison of the use of these strategies with the
stage of a country's development, it was possible to identify a strong willingness to invest in such initiatives among countries in the transition to the highest stage of development. These countries (e.g. Korea) consider design as an integral part of their strategies for the development of their national industry. Besides the creative input that design can bring to the development process of products and services, design is also used strategically as the link between R&D and the market. In other words, design is able to transform ideas generated from research into products that will meet consumers' needs.

Evidence shows that SMEs lack the skills and resources for the development of innovative products, which is often the reason for their market failure. For such reasons, design support programmes are mainly targeted at enhancing the economic advantage of the small business sector and are present in 48% of the most competitive countries. These programmes are an important part of the national design policy.

Design is also considered a strategic element for a country's promotion on the international market, with countries such as Korea and India (NID, 2007b) concerned to promote their country's image internationally through design (KIDP Korea Institute of Design Promotion, n.d.; NID, 2007b).

This study has also shown that the number of countries with design policies in place is much lower than the number of countries delivering design programmes. This is evidence of a lack of forward planning and preparatory studies before the implementation of support and promotion programmes. This is an indication that there may be a need for more coordinated actions, which will maximise the contribution that design promotion can give to economic development.

Furthermore, the survey also demonstrated that countries with less sophisticated economies are less likely to use design policies to address particular issues. With very few exceptions, programmes for design are not considered a tool for economic or social development in developing countries.
Finally, in comparing the strategies for design promotion, support and policy in groups of countries (World Macro Regions and Europe and non-European countries), this research showed that Europe has the largest number of countries running design programmes, both for support and promotion, not only on a national but also on a regional level. It is also in Europe where design is part of the agenda for ministries of economic development. In contrast, it is in Asian countries where policies for design are more often ratified and implemented.

The presence of a comprehensive strategy for the promotion of design cannot be considered a guarantee of economic success. However, this research demonstrates, through comparative methods, that strategies for design appear to play a part in the success of developing economies.

This chapter confirmed two fundamental issues for this research: the existence of a relationship between design promotion strategies and economic development, and, the uneven distribution of design promotion across countries of different stages of economic development. With these findings and the data gathered during the survey, the foundations were set for the criteria and selection of the case studies to be presented in the next chapter.
6 Study Three: Review of design promotion in four subject countries (case studies)

6.1 Overview

This chapter presents four national design promotion case studies: Brazil, Finland, India and Korea. The objective is to provide an understanding of these four different national contexts and their individual approaches to developing design promotion strategies, addressing the research questions proposed in Chapter 1.

The sample represents countries from three different world macro regions (Latin America, Europe and Asia) and four different stages of economic development. The methodology for selecting these subjects is described in Chapter 3.

Each national case study is described in two parts. The first part is a chronological narrative showing the development of design promotion strategies (programmes and policies) along with significant political and economical events which have influenced design promotion in the country. This part intends to examine how the establishment of design programmes, their survival, success and failure are related to aspects of the national context such as government policies, political and economical stability, market dynamics and so on. The second part is an overview of the country’s current design system. It describes the infrastructure for design promotion and policy currently in place in the country.

6.1.1 National design system

As explained in the previous chapters, design support, promotion and education are the main axis for fostering the use of design for competitiveness. Design policy is the fourth element in this context, which should strategically guide the development and implementation of design programmes in a country. This research proposes a model
that considers support, promotion, education and policy, together, are the fundamental activities of a national design system (see Figure 10).

The concept of a National Design System is used in this study to emphasise the complex and dynamic nature of design activity, which involves many stakeholders in an interrelated network. Here, the country’s design system includes organisations that accumulate knowledge and capabilities in design or that are somehow influential in the network due to financial support or political direction. Therefore, besides the agents designated for the implementation of education, promotion and support programmes, the National Design System also includes professional design associations and funding bodies. Figure 14 shows the schematic representation used in this research to illustrate the case studies’ National Design Systems. Each one of the four diagrams below is shown and explained in detail later in this chapter.

As revealed in the Literature Review, Moultrie et al. (2008) also use the notion of a National Design System. However, in their study the National Design System is used to provide a framework for the comparative metrics. In contrast, in this thesis the concept of a National Design System is mainly explored as a tool for identifying the network of current activities in design promotion and their interrelation in each subject country.
As explained in Chapter 3, visual elicitation was applied during the interviews in order to obtain the information needed for the development of the maps. In combining drawings and verbal information, and in improving the map interview after interview (Varga-Atkins & O'Brien, 2009), the researcher was able to develop full understanding of the National Design Systems in Finland, Korea, Brazil and India.

This method was extremely engaging, besides aiding the communication between interviewer and interviewees in a common but second language (English). The author saw the model being gradually enhanced with the contribution offered by each interviewee. Consistent with GT, this method was increasingly explored during the process, as the method was proving successful in obtaining data, as the information was becoming relevant for the study, and as feedback from practitioners and policy-makers was presenting positive reaction to the presentation of preliminary results.

### 6.2 Case study: Finland

#### 6.2.1 Historical review of design promotion in the country

The history of design promotion in Finland started in 1875, when the country was still under the Russian regime. Efforts to start a systematic support for the promotion of industrial crafts and arts resulted in the foundation of the Finnish Society of Crafts and Design, responsible for maintaining an educational institute and also for encouraging manual skills within industry (Stenros, 2007). The School of Arts and Crafts, established by this society, remained strong and became an important educational institute, responsible for training many important Finnish designers. In 1973, the school became the University of Art and Design Helsinki, which is currently one of the most highly rated universities for design in the world (Business Week, 2007).

Finland became independent in 1917, and this started a process of internal reconstruction, bringing an emphasis and identity to architecture and interior design. The ‘Finnish style’ started with strong influences from Russia and Sweden. In the 1930s
Finnish designer and architect Alvar Aalto began selling to the international market, building a positive reputation for Finnish design.

After World War II, the political, economic and social landscape of Finland had changed. The design community was affected and engaged in trying to build a new and modern identity for the country (Stenros, 2007). There was a need for mass production and international trade, but Finland was also concerned about improving its citizens' lives and enhancing the country's international image. This combination led Finnish design to emphasise functionality and standardisation (Designmuseo, n.d.).

The post-war period was also marked by the resurgence of exhibitions. As an initiative of the Finnish Society, Finland was present at the Milan Triennials in the 1950s and 1960s, winning many prizes for its products. This strategy was successful and soon Finland obtained wide international recognition for its design production.

The image of Finnish design developed almost at the same time as the other Nordic countries, creating the image of ‘Scandinavian design’. Together with Sweden and Denmark, Finland developed strategies for international promotion of design such as the ‘Design in Scandinavia’ exhibition. Twenty-four museums in the United States exhibited the collection between 1954 and 1957, reaching more than a million visitors. The success was due first to the efficient public relations of Olof Gummerus – who was a ‘multilingual, fascinating character and expert promoter of Finnish design’, associated with House Beautiful magazine – combined with the political strategy of associating Finland with Denmark, Norway and Sweden (Hawkins et al., 1998). Finally, there was an excitement about the ‘Scandinavian style’: democratic design; use of materials, colours and texture; combining crafts with industrial production, organic forms with everyday functionality and durability with cost (Fiell & Fiell, 2005).

Soon the debate began about the social needs and use of energy and natural resources. Ergonomics and the environment became relevant issues for designers in the 1980s. Wood and metal became important materials again. The decade had to face self-criticism.
Elegant everyday ware had become cultural items sold at art auctions, which artificially heightened the difference between low-cost mass-produced goods and high-quality 'design objects'. (...) Design had won a central role as a competitive advantage for industry and business. (Designmuseo, n.d.)

Moreover, new technologies were emerging during this decade and there was a need to integrate them into industry. Automation and computer technology were also novelties to be exploited (Valtonen, 2005).

At this time, industrial design was starting to receive better recognition in Finland, with more industries and more sectors employing professionals. Designers were starting to play a more significant role in product development and corporate strategy teams.

The Finnish Society of Crafts and Design established Design Forum Finland at the end of the 1980s with a mission focused on promoting design among small and medium-sized enterprises as well as internationally (Design Forum Finland, 2006).

The 1990s was a decade of transformation for Finland. The country's economic situation at the beginning of the decade was one of severe recession characterised by a major banking crisis, rising unemployment rates, accumulation of government debts and inflation, among other factors. Moreover, the collapse of the Soviet Union had a strong negative impact on Finnish industry. The end of convenient Finnish–Russian bilateral trade left companies in Finland with a negative balance on their foreign trade as well as an old-fashioned industry with out-of-date technologies (Dahlman et al., 2006).

The country then started a movement that brought it to the head of the list of competitive countries in the World Economic Forum. A unique aspect of this strategy was investment in measures with long-term impact instead of immediate solutions, as are not infrequently chosen by governments at critical moments. One of the most relevant measures for the context of this research was the ambitious aim of building a knowledge-based country, and the plan carried out in order to achieve this goal which prioritised investments in R&D. As explained by Dahlman et al. (2006), ‘increasing investments in R&D during times of high unemployment required great political wisdom and courage’.
The policy for design was part of this movement. The work started in 1996 when the Finnish National Fund for Research and Development (SITRA) invited a group of representatives of the design community to discuss how design could contribute to innovation, industrial and economic development in Finland. The discussion identified the need for a more formal investigation. As a result, a survey was conducted and in October 1998 a new report (Designed Asset I-II – Design, Industry and International Competitiveness) was published. The establishment of a national system of design to operate with the national system for innovation was an important and visionary recommendation in this report (Valtonen, 2005). It also included a thorough written ‘diagnosis’ of the situation of design in Finland, described the history of Finnish design and discussed its future.

Based on this previous survey, a second important initiative emerged, led by the National Council of Crafts and Design of the Arts Council. The report was published in 1999 and served as the basis for the Finnish design policy Design 2005. Valtonen (2005) explains that the report was to a large part ‘the vision of what the Finnish design system should be in 2005. It clearly defined what impact the policy should have in quantity and quality of Finnish industrial design.’ After a broad consultation, open to comments, the official policy was agreed by the Council of State and published in June 2000. Its three main goals were (1) to improve design quality; (2) to promote the extensive use of the opportunities inherent in design with a view to improving competitiveness and employment; and, (3) to develop the quality of the living environment and promote a distinctive national culture.

Design 2005 was a response to the opportunities and problems identified in the ‘diagnosis’, as explained by INTERVIEWEE F8. The team that developed both publications and also implemented the policy was formed by representatives of Finnish organisations, government, professionals and also volunteers. All these individuals contributed to the process with great motivation, and ‘all embraced the same vision: make design (thinking) part of the Finnish Innovation System – not just an outgrowth
of art and craft. Design 2005!, above all, created a lot of positive excitement and activity in education, in industry, in research and among design consultants.'

The implementation of the Design 2005! policy resulted in several initiatives involving various stakeholders, from academic institutions to government ministries. The ‘Design 2005 – Industrial Design Technology Programme’ by the National Technology Agency of Finland (TEKES) was one of the programmes implemented and had a direct impact on the use of design by companies. In particular, this programme fostered the association of design and innovation.

Valtonen (2005) describes the impact of the programme on the perception of design:

The arguments of the designers had developed from convincing the industry that they existed, to ensuring that their way of working was compatible to that of the industry, to assuring that their input was essential for industry competitiveness. Previously the designers had thus advocated their importance in their own right, and promoted what they could do. When the design policy was aligned to the national research policy, design was not seen as a value as such but as a tool for the industry. The focus was on how the industry and nation could benefit by using design, rather than on the designer’s capabilities.

Another important achievement of the policy implementation, according to this author, was to bring together all the major players in Finnish society and make them focus on a new issue, namely, design.

Thanks to such policies, Finland ended the 20th Century having left an essentially natural resource-based industry to become a competitive knowledge-based economy with the highest investment rate in R&D in Europe – 3.5% of GDP (Dahlman et al., 2006) – and specialised in high-tech industry (important global brands were established in Finland in the 1990s such as Nokia, Suunto, Metsopaper, Ponsse and Polar).

6.2.2 Overview of the country’s current design system

Having been one of the first countries to invest in design programmes, Finland was able to develop foundations for a strong national design system, where the
professional sector, academia, industry and government work in synergy. This is noticeable in the design policy plan delivered between 2000 and 2005, which was able to exploit this system, assigning clear implementation tasks and roles to the many organisations that are part of the system.

Figure 15 shows the national design system in Finland. This flowchart was developed during June and July 2007, in consultation with the interviewees who participated in this research. It provides a snapshot of the actors involved in the delivery of design activities in Finland at that time. This is useful for understanding the dynamics of activities related to design promotion in this country, which is fundamental for the comparative analysis that will be presented in Chapter 7.

- Funding sources:

The first key information shown in the flowchart is the source of funding for design activities. In Finland, most of the funds that sponsor design promotion come from the national government, mainly the Ministries of Trade and Industry and Education. Some
city councils, such as Helsinki, Lahti, Vaasa, Rovaniemi and Turku, fund local design programmes. In the private sector, design activities are financially supported by independent councils (e.g. the Creative Industries Council of the Confederation of Finnish Industries) and foundations (e.g. Alvar Aalto Foundation).

- **Design education:**
  Three universities and eight polytechnics/universities of applied sciences provide design courses in Finland. The IDBM Programme is a multidisciplinary programme between the Helsinki School of Economics (HSE), the University of Art and Design Helsinki (TaiK) and the Helsinki University of Technology (TKK). The University of Art & Design Helsinki (1,700 students) is among the best design schools in Europe (Business Week, 2007).

- **Professional sector:**
  Professionals are organised in two major design associations: Ornamo (product design) and Grafia (graphic design). Moreover, many other small design associations are located outside the capital, Helsinki. Finland has about 2,000 designers, distributed among 796 design consultancies in Finland (BEDA, 2006). Ornamo has approximately 1,150 design members plus 500 artists, and Grafia represents approximately 800 members. Besides representing the interests of the professional design sector, these organisations also act in the promotion of design in Finland.

- **Design support programmes:**
  Many design support programmes take place in Finland, in particular those delivered to specific sectors by the Design Forum Finland. The Ministry of Trade and Industry, benefiting from its network of local business centres around the country, delivers the DesignStart Programme for start-ups and small businesses. The Design 2005 – Industrial Design Technology Programme, run from 2002 to 2005 by the Finnish Funding Agency for Technology and Innovation (TEKES), linked innovation, R&D and design. In parallel, the Academy of Finland ran the programme Design 2005, focused on research for industrial design.
• Design promotion programmes:
The most important national design promotion organisation is the Design Forum Finland. However, other stakeholders are also involved in promotion activities, such as the many design awards that take place in Finland. For example, the Kaj Franck Design Prize goes to an established designer or team of designers with solid professional achievements every year; the Fennia Prize or honourable mention is awarded to companies; the Young Designer of the Year Prize is given to a promising young designer; and the Estlander Prize is awarded to bodies or organisations, even outside the field, that have promoted design in significant ways. The professional associations grant the Ornamo Design Award and the Grafia Designer of the Year. There are also awards for ‘best advertising’ and ‘best writing in the field’.

• Design policy:
The policy document Design 2005! was ratified by the Finnish government in 2000, setting up the vision for a five-year implementation plan. Design 2005! was linked to the innovation system and exploited design in three ways: for national competitiveness, for the improvement of the environment and for the strengthening of the national identity. This policy created two groups, the Design Round Table and Designium, which became important design policy actors in the national design system. The Design Round Table was created to articulate, monitor and evaluate the delivery of the policy by the national design system’s different actors; and Designium was created to combine research, education and support for business development, among other roles (Design 2005!, 2000). In this capacity, Designium also produces research in support of the delivery of design programmes in Finland, such as the Global Design Watch, which compares the effects of national design programmes on national competitiveness in the design sector (Sorvali & Nieminen, 2008).

6.3 Case study: Korea

6.3.1 Historical review of design promotion in the country
After the Korean War, Seoul was a devastated city and the country suffered from poverty, unemployment and poor infrastructure. In four decades this scenario has changed completely: from one of the five poorest countries in the world, relying on assistance from UN member states, Korea grew to be the 12th largest economy in the world by 2004 (Cho, 2004). As one of the wealthiest countries in Asia, Korea became a role model for developing countries. The booming economic growth between the 1960s and the 1990s became well known as the ‘Miracle on the Han River’ (Chung, 1993) and design has been part of it. The development of design promotion programmes in Korea is as impressive as the development of the economy.

The history of design promotion in Korea begins with the financial assistance of the International Cooperation Administration (ICA), as part of the USA’s technical assistance programme to semi- and non-industrialised nations. Its aid sponsored a survey of craft-based activities developed in Korea, followed by recommendations for an increase in the competitiveness of Korean products (crafts) in the USA and in the open market. As a result of the recommendations, the Korea Handicraft Demonstration Centre (KHDC) was established in 1958. The objective was:

...to provide additional earning power to people living under a primarily agricultural economy by stimulating the development of native crafts and small industry products to a level where articles of improved design, quality, and function were produced for both domestic and export consumption. (Chung, 1998, p.7)

The KHDC played an important role in establishing industrial design courses in Korea, with the aid of academics and crafts experts from American universities. Although the Centre obtained financial success in exporting crafts-based Korean products, it was still dependent on funds received from ICA. This financial aid stopped in 1961, resulting in the closure of the Centre.

However, in 1960 Korea was already experiencing rapid industrialisation. At that time, a series of five-year economic development plans were launched, establishing exports as the engine for Korea’s economic growth (Cho, 2004; Chung, 1993). This favourable scenario increased the demand for design, even though the general understanding of design was still limited to the styling of products. This was demonstrated by the official slogan for design promotion at that time: ‘Export by Fine Arts’ (Chung, 1998). In 1965,
a group of craftsmen and designers established the Korean Craft/Design Research Centre, which became the Korea Design Centre a year later. The centre was proactive in promoting the importance of design as well as facilitating collaboration between industry and academia (Chung, 1998).

In 1970, this Centre was merged with two packaging institutions and became the Korea Design & Packaging Center (KDPC). Cho (2004) explains that although this merger was intended to acquire financial support from the prosperous packaging industry, the association of ‘design and packaging’ reinforced the idea of design as a decorative discipline. During the 1970s and 1980s, the KDPC undertook many design promotion activities, including research and development, publications, exhibitions, international co-operation and consultancy to companies, mainly to small and medium businesses.

A system to acknowledge products with the Good Design ‘GD’ Mark was launched in 1985. This system of screening products on the market for their performance in design, economic and utility factors was recently linked to the government’s public procurement service, becoming an important tool in presenting the government as a role model in the purchasing of good products.

In the 1990s, Korean industry was struggling to remain competitive:

_It was 1992 when I first got to know the importance of design. This was in Japan. I was a visiting professor at the University of Tokyo, studying the industrial policy of Japan. In a visit to the General Industrial Policy Bureau of the Ministry of Commerce in Japan I was told that the Ministry of Future was looking to develop the industry, which would become important 10 years ahead. He pointed out the design industry. (INTERVIEWEE K1)_

The concept of developing a strategy for the design industry was transferred to the Korean government, which was increasingly recognising the importance of design for improving the competitiveness of Korean products. As result, in 1993 the first five-year Comprehensive Plan for Industrial Design Promotion (1993–1997) was launched, ‘with which the number of designers and design firms have grown explosively, just as the investment on design development for SMEs has incredibly expanded’ (KIDP Korea Institute of Design Promotion, 2008d).
In 1997, the Asian financial crisis forced Korea to review its economic and business standards. Businesses that resisted the crisis and companies that took over other bankrupt companies had to face a restructuring programme in exchange for rescue loans. The programme was prescribed by the International Monetary Fund (IMF) and included eliminating unnecessary assets, non-performing businesses and excess workforce. As result of this process, many companies developed a high degree of competence in product development, production and marketing, and many large companies (e.g. Samsung, LG, Hyundai) reinforced their design departments. This contributed to the establishment of design-led companies in Korea (Cho, 2004).

The demand for quality products rather than quantity and the need for fundamental innovation in design strategy were the issues for the second five-year design plan in Korea, launched in 1998:

*In the second Five-Year-Plan for Industrial Design Promotion (1998-2002), the government aims at primarily heightening design awareness among the general public, establishing the infrastructure that will allow design industry to go further, encouraging industries to invent innovative design, and ultimately enhancing the competitiveness of Korean products on the international market. It will lead to win the world status of design for Korea. To achieve this goal, the plan should focus on: improving design quality, not quantity; enhancing product competitiveness on the international market; promoting the design industry in a comprehensive way.* (KIDP Korea Institute of Design Promotion, 2008a)

As described by Chung (1998), in order to accomplish the objectives established in the policy plans, major strategic tasks were assigned to relevant government offices in Korea. The Design and Brand Division at the Ministry of Trade, Industry and Energy (later changed to the Ministry of Commerce, Industry and Energy, MOCIE and in 2008 to the Ministry of Knowledge Economy) is responsible for formulating the policies (see Figure 16). Policy tasks are delivered through KIDP, the Korean Institute of Design Promotion (previously the Korea Design Packaging Centre, renamed the Korea Institute of Design and Packaging in 1991, then the Korea Institute of Industrial Design Promotion in 1997 and finally KIDP in 2001). KIDP is the authority for design in Korea, 70% funded by the national government and 30% from its own income (e.g. rent, training, exhibitions). With a staff of 107 people distributed in 3 divisions and 13 teams, KIDP’s annual budget in 2008 was about US$45million.
The second five-year plan was particularly successful in establishing a design infrastructure in Korea. Achievements included the construction of the Korea Design Centre in Seoul, which hosts KIDP; Design Innovation Centres in major universities around the country; and the International Design Trend Research Centre. Another major aspect of this policy was the expansion of international activities, which was achieved by hosting the ICOGRADA Millennium Congress 2000 Seoul, the ICSID 2001 Seoul, and the 1st World Design Forum in 2002.

The Third Comprehensive Plan for Industrial Design Promotion (2003–07) was announced by the Korean government in 2003, aimed at promoting the design industry systematically in order to make Korea an industrial hub in the East Asian region (KIDP Korea Institute of Design Promotion, 2008d). Strengthening design R&D capabilities; building regional design centres in Busan, Gwangju and Daegu; innovating the national image of Korea; and expanding international design exchange and strengthening cooperation in North East Asia were some of the objectives included in this plan.

*The five-year plan will put Korea’s design industry side by side with that of developed nations (...). Through the plan, the number of companies having in-house designers will be raised to 100,000 from current 20,000 and the market value of design industry will rise to 20 trillion won (3% of GDP) from current 7 trillion won (1.2% of GDP) by 2007. (KIDP Korea Institute of Design Promotion, 2008b)*

The fourth five-year plan was launched in December 2008.

As a result of efforts to promote design in Korea, design became one of the most popular degrees, competing with law, business and medicine. There are 1,301 design-related courses in Korea from both private and public universities, as shown in Table 17, based on information provided by INTERVIEWEE K3.

As explained by INTERVIEWEE K3, the challenge for the next policy is to improve the quality of design education in Korea in order to provide the industry with graduates who are more prepared to face jobs when they leave the academic environment, and to strengthen the global competences of Korean designers.
Table 17: Korea – Education system (KIDP Design Census, 2007)

<table>
<thead>
<tr>
<th>Level</th>
<th>Number of Design Courses</th>
<th>Number of Design Students Enrolled</th>
<th>Number of Students Who Have Graduated</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
<td>581</td>
<td>47,347</td>
<td>21,697</td>
</tr>
<tr>
<td>University (Bachelor’s degree)</td>
<td>418</td>
<td>57,960</td>
<td>9,876</td>
</tr>
<tr>
<td>Graduate School (Master’s degree)</td>
<td>260</td>
<td>6,853</td>
<td>1,532</td>
</tr>
<tr>
<td>Graduate School (Doctoral degree)</td>
<td>42</td>
<td>881</td>
<td>63</td>
</tr>
<tr>
<td>Total</td>
<td>1,301</td>
<td>113,041</td>
<td>33,168</td>
</tr>
</tbody>
</table>

The geographical spread of design promotion activities across the country was always a concern for the Korean government, who are aware of the concentration of design agencies around Seoul (INTERVIEWEE K5). In order to support the establishment and survival of design agencies and in-house design departments in companies in the country’s rural areas, three Regional Design Centres opened in Gwangju, Daegu and Busan. These centres are also important hubs for promoting design to citizens and for informing both local and international audiences about Korea’s design potential and capacity (Cho, 2004; KIDP Korea Institute of Design Promotion, 2008c).

In 2010, Seoul will host the World Design Capital, a biennial title granted by the International Council of Societies of Industrial Design (ICSID). Major projects currently in development for WDC Seoul 2010 include the Seoul Design Olympiad, the U-Design International Competition, construction of the Dongdaemun Design Plaza, the city’s participation in the IDA World Design Report, a Youth Design Creative Camp, as well as initiatives to encourage citizens’ participation in WDC projects (ICSID/IDA, 2008).

6.3.2 Overview of the country’s current design system

Figure 16 shows Korea’s national design system as of February 2008. The flowchart was developed during that month, through interaction with the interviewees in Korea. The process of drawing this system was particularly successful for the preparation of this case study, as it helped to overcome difficulties in communication through a second language.
The most noticeable element of the Korean context is the government's commitment to design promotion. Even though Korea has a history of successful implementation of government policies over the past decades, financial resources for design promotion are notably larger if compared to other countries. During the interviews, it became clear that the Korean government maintains strict control over the planning and delivery of design programmes.

In contrast, the strength of the professional sector, represented by the number of design associations, is important to balance the design system, which has the government (represented by KIDP) as its strongest stakeholder.

Another important aspect of the Korean system is its emphasis on education. However, due to the large number of design courses available in the country, the flowchart had to be simplified, only indicating the existence of courses in both public and private institutions.

![Figure 16: Schematic representation of the national design system in Korea](image-url)
• Funding sources:
The government is the main funding source for design promotion, through the Design & Brand Division at the Ministry of Knowledge Economy. Moreover, the Ministry of Education, Science & Technology has supported some design education programmes; the Ministry of Culture, Sports & Tourism has supported some design development programmes in the public arena; and regional governments contribute financially to the promotion of design, particularly the maintenance of local centres.

• Design education:
There are 1,301 design-related courses among both public and private institutions (see Table 17). KIDP maintains an e-Design Academy, which aims at long-life education for design professionals. Samsung maintains the Samsung Art & Design Institution (SADI), a non-degree design school, which provides three-year courses on product design, communication design and fashion design.

• Professional sector:
In the private sector, Korea has many design associations which deliver design programmes such as exhibitions and design promotion seminars. Nineteen design associations are under the Korea Federation of Design Association (KFDA), in addition to about another 20 independent associations. KFDA was established in 1995 by different design organisations coming together to exchange information and search for integrated development in the field of design. The Federation also plays a role in collecting and informing the opinion of design professionals in the development of Korean national design policies (Korea Federation of Design Associations, 2007).

• Design support programmes:
Besides the three regional design centres built to support design activities in the regions, 30 Design Innovation Centres were built across the nation as facilities for supporting industry, universities and laboratories. Design support programmes for industry are delivered by KIDP and the Innovation Centres. The Design Innovation Programme is one of the main KIDP programmes for industry, operating since 1994. It is available for any company experiencing difficulty with the design development process or financial
resources for design. It is considered a bridge between design firms and SMEs, providing support from design development to commercialisation. Financial incentives are available up to US$100,000, covering up to two thirds of the design fees. If the resulting product is commercially successful, the company pays back a percentage (20% for SMEs and 40% for large companies) as a royalty to the Korean government. A total of 113 projects were realised through this programme, involving 250 enterprises, local government, public organisations, design consultancies and schools.

- Design promotion programmes:
Design promotion programmes are delivered by KIDP, the three Regional Design Centres, and the various professional design associations across the country. Some of these design associations are sector specific and promote design in their fields. Among the many design promotion activities delivered by KIDP are the Korea Industrial Design Exhibition, the Good Design Mark (GD), the Young Designers Competition, design surveys and a forum for design management (Sung et al., 2007). Notably, Korea has made large investments in promoting Korean design internationally. The strategy is twofold: hosting international design events in Korea in order to attract foreign visitors, and organising exhibitions and missions outside the country in order to promote Korean design.

- Design policy:
Design policy in Korea is part of the country’s industrial policy portfolio. It is planned and delivered by KIDP, under the guidance and supervision of the Ministry’s Design and Brand Division. The policy is re-launched with new objectives every five years, but implementation is monitored continually through periodical evaluations. Each policy development stage includes consultation with the public and design experts. The current plan states the goals for 2008, which aims for Korea ‘to be a design advanced country in 21st Century’.
6.4 Case study: Brazil

6.4.1 Historical review of design promotion in the country

Brazil was the fifth nation in the world to have dedicated patent legislation, developed as an ‘effective protection system for the development of the national industry’ (Rodrigues in Rezende & Cardoso, 2005). This was in 1809. In 1875 a system for registration and protection of names and images (e.g. logos) was also developed. In 1882 the visionary Brazilian politician Ruy Barbosa delivered a speech entitled ‘Design and Industrial Art’ (Leal, 2007):

...It is design my dear sirs, simply design, this modest and gentle discipline that is purifying, communicative and affectionate of all disciplines, such as the drawing classes taught to children and adults from kindergarten to university, as a mandatory foundation for all social strata...

Industrial design education also had its beginnings in the 19th Century. This discipline started to be taught in the country in 1850, as part of the evening course at the Imperial Academy of Fine Arts in Rio de Janeiro (Cardoso, 2005).

In the 1930s and 1940s, design emerged among the art movement of ‘modernists’, when artists/designers produced specially commissioned objects (Leal, 2007). Recognition of design as a professional activity happened a few decades later with two important events: the opening of the Contemporary Art Institute (IAC) of the Art Museum in 1950 and the launch of the Superior School of Industrial Design (ESDI) in 1963 (Cardoso, 2005).

The 1950s was a particularly prosperous decade for Brazil. In 1955 Juscelino Kubitscheck was elected national president with the slogan ‘Fifty years of progress in five’. Brasilia, the national capital, was built during his mandate and the country witnessed many ambitious projects and an economic boom. The consumer goods’ industry received government support, which combined with the favourable economic scenario fostered the opening of many new companies and also increased consumerism. ‘Some companies commissioned designers to develop their products, including the automotive industry, which was quickly expanding. ... This time was also ripe for the emergence of the first initiatives in design.’ Brazilian design was starting to
be internationally recognised through awards, such as that for the Mole armchair designed by Sergio Rodrigues (Leal, 2007).

The 1960s was the decade when important Brazilian brands and design icons emerged, including the rebranding of large state companies such as Petrobras, the Brazilian oil company (Leon & Montore, 2008). It was also the decade when the first design promotion programmes were established in Brazil: the Brazilian Association of Industrial Design (ABDI) in 1963 and the International Design Biennials in Rio de Janeiro in 1968, 1970 and 1972 (Leal, 2007). Soon afterwards, in 1973, the Ministry of Trade and Industry launched a design promotion campaign. Within that framework, the Industrial Design Institute (IDI) in Rio de Janeiro launched a programme of packaging standardisation aiming to improve exports of Brazilian products (Leon & Montore, 2008).

In 1975, the Federation of Industries in Sao Paulo established the first design centre in the state with the objective of disseminating design to companies in the region. This initiative was called the Industrial Design Centre (NDI), until 1982 when it became part of the Department of Technology (DETEC). The Centre developed quality design work in the field of orthopaedic and hospital equipment (Leal, 2007) and was effective in the creation of the Museu da Casa Brasileira and its award in 1986 in partnership with the State Secretary of Culture. This remains one of the most respected design awards in the country.

In the 1980s, in addition to the Brazilian Ergonomics Association (Abergo), important design centres were also opened in Brazil by the federal government research institution (CNPq). Between 1984 and 1997, three associated Laboratories of Product Development/Industrial Design (LBDI) were established in the south, south east and north east of the country. However, only the first one prospered. Associated with the university’s technological centre, the LBDI became one of the most important research institutes in product design in Latin America. Its main activities were services to industry, training and research in design (Rede Design Brasil, 2004b).
The transition from the 1980s to the 1990s was marked by hyperinflation and economic stagnation. Several economic plans had been tried before, but another one was needed in order to bring the country to stability in a global economy. The first president elected after the military regime, Fernando Collor de Mello, introduced policies aimed at removing restrictions on free enterprise, increasing competition, privatising public enterprises and boosting productivity. He did not succeed in stopping inflation, but his policies helped Brazilian products to be introduced to the global market. As a result of this policy, national industries were facing international competition and needed to seek commercial advantage for their products. Design became an important asset for business competitiveness.

On their own initiative, industrial and graphic design students organised the first National Design Student Congress in 1991. Seven hundred Brazilian students gathered in Curitiba for this meeting, which became an annual event (Rede Design Brasil, 2004a).

The Brazilian Programme for Design (PBD) emerged in this context. It was created in 1995 by the Ministry of Industry, Commerce and Tourism based in the federal capital Brasilia, but regional programmes were also established in some states in the following years. Some institutional and private initiatives also found this a favourable time to set up activities. Brasil Faz Design and Objeto Brasil were two of the initiatives for the promotion of Brazilian design both within the country and abroad (Leal, 2007).

A design policy for the state of Sao Paulo was launched in 1995 under the title ‘Programa Sao Paulo Design’. This policy established a base for co-operation between various stakeholders in the state and included the establishment of the Sao Paulo Design Centre, which is still in operation (CSPD, 2008).

Many other states in Brazil launched their own design policies in the same period. The policies evolved in different ways, depending mainly on the support available from local government, professional associations and leadership. In some states the policy resulted in the creation of regional design centres.
The Design Centre Parana was created in 1997, with full support from the state government and under the umbrella of the state's Institute of Technology. Its main activity was to provide services to industry as a bridge between designers and companies. In 2000, it launched the Criação Paraná programme, a design support programme providing tailored advice for manufacturing industries, taking them from the initial stage of the design process to the prototype stage. The programme was run twice (in 2002 and 2005) and each iteration closed with an exhibition of more than 40 products developed during each programme. The programme was based on the experiences of the Glasgow Collection, developed in Scotland/UK from 1997 to 1999. Although the two iterations of the programme were successful, a third was jeopardised by lack of funding. The Design Centre is still in operation, however it is no longer solely funded by the State government. It was disconnected from the Institute of Technology, having to search for new funding sources and, as consequence, having to diversify its services.

In 2001, the Brazilian Service of Support for Micro and Small Enterprises (SEBRAE) launched a programme that had the potential to become the most influential ever investment in a design programme in Brazil. 'Via Design' had three streams: assisting SMEs in the use of design, promoting design among SEBRAE, and strengthening the Brazilian infrastructure of design services for SMEs. The third stream was responsible for the establishment of about 100 design centres and/or units around the country. However, financial support from Via Design for these centres lasted only until 2005. After that, the centres had to find their own means for sustaining their operations and about 30% of them closed their doors. SEBRAE is still one of the most important stakeholders in the Brazilian design system. It takes the lead and, with large amounts of investment and operational support, implements its own programmes and provides contributions to other initiatives such as the PBD and Design Biennial.

The first Brazilian Design Biennial took place in 2006 in Sao Paulo and was an important event in the promotion of design in Brazil. It was organised as a co-
operation between the Ministry of Development, Industry and Foreign Trade and the Programme Competitive Brazil (MBC).

A Brazilian design identity has been a constant topic of discussion for designers in the country. It is also considered an important issue for Brazil's exports. The Marca Brasil Programme (launched in 2000) was one of the attempts to establish a single identity. A special government-aided programme called Design & Excellence Brazil is dedicated to supporting Brazilian products in international competitions such as the iF award.

The most recent design policy document in Brazil was published in 2007, entitled PBD 2007–2012 – Strategic Plan. This was based on three preparatory documents: International Overview of Design Promotion Policies (Raulik, 2006); Overview of the Brazilian Design Initiatives (Miasaki et al., 2006); and Demands and Design Strategies on the Brazilian Productive Sector (CDP, 2006); and a consultation meeting with representatives from government, design sector, academia and industry. This was coordinated by the Brazilian Design Programme (PBD). The aim is to encourage industrial and technological modernisation through design in order to improve the quality and competitiveness of Brazilian products and services. However, the policy does not distribute actions among the stakeholders.

6.4.2 Overview of the country's current design system

Different from Korea and Finland, in Brazil sources of finance and the consequent control of design activities are split between government, private and not-for-profit sectors. Moreover, the country's vast territory requires local design programmes developed in the federal states, which results in a relatively balanced distribution of the design system over the territory. However, in the absence of a major funding source or national organisations, these programmes operate independently.

Figure 17 illustrates this scenario, Brazil's National Design System as of January 2008. The flowchart below was drafted by the author, with the interviewees' contributions.
- Funding sources:

Government is not the main funding source for design initiatives. Instead, large non-profit organisations (e.g. SEBRAE, SENAI, industry federations) provide a large part of the investments in design in the country.

- Design education:

There are more than 300 graduate courses, at both public and private institutions. Six educational institutes offer postgraduate courses and the first doctorate programme was launched in 2002 (Raulik et al., 2008b).

- Professional sector:

Professional associations are important stakeholders, in particular the national associations for graphic design (ADG) and product design (ADP), founded in 1987 and 2002 respectively.
• Design support programmes:
There is a large infrastructure of design support programmes, as the main rationale for design promotion in Brazil is the improvement of the use of design by its national industries. Design support is mainly provided by regional design centres established in the federal states. In 2002, the Via Design programme was launched by SEBRAE to increase the number of these centres and, consequently, increase the supply of design support to Brazilian companies. Besides these design centres, the national programme for design management by the National Industrial Training Service (SENAI) maintains approximately 25 design hubs linked to universities and business associations for the support of specific industry sectors around the country. Some technology incubators are also part of the design and innovation system. However, these support programmes, including centres, hubs and incubators, often have a short life in Brazil. For this reason, it is difficult to be precise about the number of programmes and institutions that are part of the Brazilian National Design System.

• Design promotion programmes:
Many initiatives on design promotion take place in Brazil. For instance, Design Excellence Brazil aims to promote Brazilian products in foreign markets, and the DesignBrasil online portal is a network of information about design for students, professionals and businesses. The number of design awards is increasing. Some of the competitions are sponsored by private companies. The most important awards are the ‘Museu da Casa Brasileira’ and the ADG Biennale organised by the graphic design professional association. The CNI Award for Design Management is the only award targeted exclusively at businesses. Moreover, many seminars and events take place around Brazil throughout the year.

• Design policy:
The Brazilian Programme for Design (PBD) is a federal government design initiative that has been running since 1995. It is responsible for formulating national design policy and creating a synergy between the various other design initiatives in the country. However, its operation and leadership are limited, mainly due to budgetary constraints (according to INTERVIEWEE B1).
6.5 Case study: India

6.5.1 Historical review of design promotion in the country

The history of modern design in India begins in 1947, when the country became independent. This was the post-war era, when design and architecture were playing a role in the reconstruction of the countries and the improvement of people's quality of life around the globe. In India, the early years after independence were marked by optimism and enthusiasm, 'with the desire to improve living standards, to provide better education, and at the same time to revive the aesthetic traditions and techniques of the great past...' (Wheeler, 1956).

The crafts tradition in India can be traced as far back as the second millennium B.C., and its wide variety of materials and skills cannot be ignored in the history of modern design. Not surprisingly, the first events related to design which took place in the newly independent India were mainly associated with the craft, fashion or arts sectors. Among them was the establishment of the All India Handloom and Handicrafts Board (1952) to advise the government on problems of handicrafts and to suggest measures for improvement and development (Indian Gifts & Handicrafts Trade Promotion Network, 2008) and the opening of the National Gallery of Modern Arts in New Delhi (1954).

In contrast to Europe and other Western countries, India was a laggard in terms of industrialisation. The Western Industrial Revolution of the 18th and 19th centuries had little impact on the colony; India only started its own Industrial Revolution after independence. This included the creation of an industrial infrastructure, the introduction of technology-oriented processes; and the training of technical and scientific manpower (Banerjee & Chatterjee, 2008). There was the challenge of promoting economic and social changes in order to modernise the country and catch up from the shortfall left after years of colonial rule. The development of industry was one of the government's major concerns.
In the spring of 1955 at the Museum of Modern Art in New York, during the exhibition ‘The Textiles and Ornamental Arts of India’, an unplanned meeting occurred between the Indian crafts writer Pupul Jayakar and the American designer Charles Eames which would become a significant event in the future of design in India.

As result of that meeting, Eames visited India with his wife in 1957, invited by the government of India and sponsored by the Ford Foundation. The couple had been commissioned by the government to present ‘recommendations on a programme of training in design that would serve as an aid to the small industries’ (Eames & Eames, 1958). After dedicated research, travelling around India for three months meeting up with local producers and citizens, Charles and Ray Eames delivered the ‘India Report’ (also known as ‘Eames Report’). However, instead of a conventional feasibility study, this was a document setting up the ‘spirit’ that was required for the establishment of an institute of design of national importance. The report states:

In the light of the dramatic acceleration with which change is taking place in India and the seriousness of the basic problems involved, we recommend that without delay there be a sober investigation into those values and those qualities that Indians hold important to a good life, that there be a close scrutiny of those elements that go to make up a ‘Standard of Living’. ... One suspects that much benefit would be gained from starting this search at the small village level.

We recommend an institute of design, research and service which would also be an advanced training medium. It would be connected with the Ministry of Commerce and Industry but it should retain enough autonomy to protect its prime objective from bureaucratic disintegration. (Eames & Eames, 1958)

In 1960, the Ford Foundation commissioned Ernst Scheidegger from Switzerland and Vilhelm Wohlert from Denmark to prepare a plan for the implementation of an institute of design in India, based on the Eameses’ recommendations. Their report reinforced the principles originally proposed and presented some suggestions for staffing and equipment (e.g. workshops should be adopted as the epicentre of design education at the Institute; all creative and aesthetic work should be linked to functional demands within an environment; (Banerjee & Chatterjee, 2008).

Based on the two reports, and with the support of the Ford Foundation, the government of India established the National Design Institute in 1961. It was located in Ahmedabad, an industrial city in the north west of India. In 1967, the institute was
renamed the National Institute of Design (NID) and moved to a new purpose-built premises.

After nine years of financial support, the Ford Foundation ceased its funding to NID, obliging the Institute to rely on more limited contributions from the government of India.

From the beginning, NID was set up with an unorthodox educational system, based on recommendations from Eames, and with strong influence from Bauhaus methods:

- Students are empowered to self-learn instead of the traditional ‘spoonfeeding’ of information (under the influence of Bauhaus’s Walter Gropius and his ‘learning by doing’);
- Teachers are encouraged to work in partnership with students;
- Formal examinations are replaced by a system of continuous feedback and qualitative evaluation;
- Theory and practice are combined. Studio and workshop learning is enhanced by real-life projects, working prototypes and batch production of ‘designed’ solutions;
- Teacher–student ratio does not exceed 1 to 15;
- The innovative and minimal administrative structure reflects the ethos of the institute: ‘a design problem is never solved by a committee but by a well-knit team’.

Since the opening of the Institute of Design, there has been a goal of extending its activities outside Ahmedabad. An original idea was to establish centres in important Indian cities where the best of both foreign and Indian designs of consumer products could be displayed in order to stimulate competition among Indian manufacturers and promote exports (Banerjee & Chatterjee, 2008). The first two Design Centres were opened in 1967 in Hyderabad and Moradabad. In 1968, an NID Cell was opened in Delhi in collaboration with the Handloom and Handicrafts Export Corporation.

Gradually, the National Institute of Design (NID) became the most important institution for design in India, accumulating four roles: design promotion, education, research and consulting. Its influence on the development of design as a discipline and
as a profession in India is undeniable. This institution has formed some of the best designers in India as well as having among its faculty important intellectuals from the political and social scene. Moreover, NID was also set up as a service institute for companies in India. Practice is considered an important part of the philosophy of learning and therefore students are engaged in practical real-life projects. Throughout the decades, the faculty and the team of future professionals have been responsible for some of the most important brands and design projects in India (e.g. Indian Airlines, State Bank, Delhi Transport Corporation, Indian Telephone Industries).

In 1969, the Indian Institute of Technology in Bombay opened the Industrial Design Centre (IDC), an academic institution which started with a programme in industrial design. The founders were former faculty members and graduates from NID (IDC, 2008; NID, 2007a).

In 1977, NID received the ICSID-Philips Award, an international prize for design in developing societies. This was the start of a close relationship between NID and ICSID, the International Council of Societies of Industrial Design. In 1979 NID hosted the first United Nations meeting on design, the UNIDO-ICSID meeting. An important outcome of this event, called The Meeting for Promotion of Industrial Design in Developing Countries, was the Ahmedabad Declaration which stated ‘its firm conviction that design can be a powerful force for the improvement of the quality of life in the developing world’. A plan of action for the achievement of this statement’s objectives in India was also part of the Declaration. Two proposals were formulated based on the Declaration: a Forward Plan for 1979–84 linking priority needs to NID’s education and training activities; and a design policy for possible inclusion in India’s Sixth Five-Year Plan. The first was accepted in essence by the government Commission; however, the second was not incorporated. Therefore, the event and the Declaration, which should have been an important boost to design in India, ‘remained largely a statement of intent and less one of achievement’ (Chatterjee, 2005).
NID’s clear strategy of co-operating with international institutions was twofold: to promote Indian design abroad in order to boost exports; and to improve Indian design as result of knowledge exchange and projects with international co-operation.

It is important to note that NID was operating in an unfavourable environment. After independence, the Indian government adopted a policy of protection ‘to encourage local production and discourage competition from imports’. Since they were not being threatened by aggressive competitors, Indian companies were struggling to understand the need for investments in design. Market differentiation was not a concern. This situation started to change in the 1980s when the government’s policy evolved towards a more competitive economy. This shift abandoned the protectionist policy and recognised that international market competition could have a great impact on design. Once it could differentiate products in the market, design was no longer a luxury but a necessity for business advantage (Chatterjee, 2005).

As well as its successful achievements in design education, NID was endeavouring to influence the government’s policies towards design. At the time of preparation for the Seventh Plan Period, NID was requested by the Minister of Industry to review the possibility of establishing a design promotional body in India, following the recommendations of the Ahmedabad Declaration. A working group formed by NID, the Industrial Design Centre (IDC), the Society of Industrial Designers of India and other representatives of Indian institutions studied models from Europe and North America. The group presented a proposal at the end of 1983. The proposal was approved, securing government funds for the first steps of the implementation of a National Design Council. However, the plans of initially hosting it at NID met opposition from the IDC. Failing to agree about the initial location of the proposed Council, the plans for implementation were abandoned (Banerjee & Chatterjee, 2008).

NID remains the main educational institution for design in India and also the only public school dedicated to design. However, other design courses are offered by the Indian Institute of Technology (IIT), Indian Institute of Management (IIM) and many other private schools.
In 2001, NID and the Confederation of Indian Industry (CII) collaborated to promote the Design Summit. This meeting invited companies and designers from all over India to discuss design and corporate strategy. It is one more event that demonstrates the efforts made by design professionals and academics in India to increase the awareness of design and the benefits that it can bring to India.

In 2004, NID and CII also started interactive sessions to discuss policy issues. Four sessions took place between 2004 and 2007 in different parts of the country. The Department of Industrial Policy and Promotion (IPP) at the Ministry of Commerce and Industry supported the sessions (see Figure 18). As a result, the government ratified a National Design Policy in February 2007. The policy aims to have a ‘design enabled Indian industry which could impact both the national economy and the quality of life in a positive manner’. Some of the actions recommended in the document are:

- Setting up of specialised design centres or ‘innovation hubs’ for sectors such as automobile and transportation, jewellery, leather, soft goods, digital products, toys and games;
- Improvement of existing design education and encouragement of the establishment of departments of design in Institutes of Technology and schools of Engineering and Architecture;
- Improvement of Indian design through the development of strategic alliances with foreign design firms and institutions in order to gain access to technology and know-how;
- Promotion of design through workshops and seminars for industry and SMEs;
- Establishment of the Chartered Society for Designers and the India Design Council.

It was a consensus among everyone interviewed in India that the publication of the National Policy was a major step forward for the design sector in the country. However, there is concern about the content of this policy, which focuses on economic development and industrial competitiveness. As described by (Ranjan, 2007), ‘it is
largely dominated by the traditional view of design as a tool of business and not as a core activity of human society’.

Once the Design Policy was published and ratified by the national government, it was expected that budget figures were to be allocated for the implementation of the activities described in the document. However, as explained by INTERVIEWEE 13, the government budget plan that succeeded the policy did not allocate any funds to design activities or mention design in its text. Implementation of the design policy plan was compromised due to the lack of financial resources.

The Association of Indian Design Industry (AIDI) was created in 2005 and made official in 2007, when the challenge of implementing the national design policy encouraged the establishment of a cohesive professional body. AIDI is a proactive group of design professionals which ‘hopes to be the platform that enables the implementation of the many design visions of this country’ (AIDI, 2008). In December 2007 AIDI organised a workshop to debate the implementation of the design policy (Sundar et al., 2007). This report presents a comparison between the situation of India in 1958 (year of publication of the Eames Report) and now (Table 18).

Table 18: Comparison between 1958 and 2008 – India (Sundar et al., 2007)

<table>
<thead>
<tr>
<th>1958</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected economy</td>
<td>Liberal economy</td>
</tr>
<tr>
<td>Barriers of language</td>
<td>Media breaking down barriers</td>
</tr>
<tr>
<td>Deep-rooted tradition</td>
<td>Tradition &amp; modernity</td>
</tr>
<tr>
<td>No designers</td>
<td>First-generation practitioners</td>
</tr>
<tr>
<td>Population (around 400 million)</td>
<td>Population (1 billion)</td>
</tr>
<tr>
<td>Agrarian economy</td>
<td>Agrarian economy moving to services economy</td>
</tr>
<tr>
<td>Craft production</td>
<td>Industrial production with craft production</td>
</tr>
</tbody>
</table>

As shown in the table, the crafts sector, particularly textiles, is a significant part of the Indian economy. The Development Committee of Handicrafts and Handloom at the Ministry of Textiles is part of the National Design System in India along with the National Institute of Fashion Technology (Figure 18). Fashion is a strong industry which supports itself independently of the design industry. Institutions such as the Fashion
Design Council of India are well established with hundreds of members and a set calendar of activities, which include India Fashion Week.

The relationship between crafts and design is sometimes controversial in India. INTERVIEWEE 13 believes that crafts can be the foundation of the creative industry in the country; in contrast, others believe that 'crafts is an antiquated way of producing goods' (Kasturi, 2005). Crafts are of particular importance in India because of their role in village finance. Boosting the village economy and helping those within it to survive is a crucial task for the government of India. Crafts are believed to be one of the alternative sources of economic value and design may be useful in helping products to reach the market more successfully.

In India, online communication cannot be ignored, as it plays a relevant role in promoting design, at least among designers. The website 'Design in India' (http://www.designinindia.net/) and the blog 'Design for India', maintained by NID lecturer Ranjan (http://www.design-for-india.blogspot.com/), are important vehicles of information about design in the country.

6.5.2 Overview of the country’s current design system

Similar to the case of Brazil, in India the government does not control the national design system. Instead, design promotion is delivered by professional associations, non-profit organisations and industry bodies. In contrast to other countries in this study, the Indian design system includes activities, and consequently actors and organisations, related to crafts and textiles.

The system is not mature. Some of the organisations and programmes were recently established or are still under implementation. This is the case of the Association of Indian Design Industry (AIDI), formed in 2007 in response to the ratification of the National Design Policy. However, India is gradually increasing its design promotion.
Figure 18 represents the National Design System as of March 2008, when the interviewees were asked to provide information for the development of this flowchart.

- **Funding sources:**

The government is an important funding source in India, through the Ministries of Commerce & Industry, Science & Technology, Textiles and Human Resource Development (Education). However, many private institutions and individuals are also significant sponsors, who run their own design initiatives, as result of which it is difficult to quantify these non-State investments.

- **Design education:**

The National Institute of Design (NID) is the main stakeholder of the Indian design system, as it continues to provide education for most of the Indian design professionals, articulates design policy and delivers design promotion programmes. According to INTERVIEWEE 13, design education does not receive the same attention as science, technology, engineering and management, schools for which are still
increasing in number, even though there is large supply of courses in these fields spread over the country. In contrast, the number of public design schools has not increased. In order to fill the gap, a proposal for a design module in the engineering programme in each technical institute is under development. Several private schools offer design courses, in particular in fashion design to cope with popular demand.

- Professional sector:
As a result of the shortage of design schools, the professional sector is considered small for the size of the country (between 3,000 and 5,000 designers, according to the Association of India Design Industry, AIDI). However, this number is difficult to estimate reliably because some designers are professionals by practice and do not hold degrees or any registration. Professional associations are expanding gradually. The three main associations are the Fashion Design Council of India, the Pune Design Foundation and AIDI. A better regulatory system for the design profession is part of their agenda. The National Institute of Design (NID), although an institution for design education, is also the largest design consultancy in the country. Faculty members develop design projects as well as delivering lectures and conducting academic research.

- Design support programmes:
The Confederation of Indian Industry (CII) is an active organisation developing programmes to raise awareness about design among Indian companies. NGOs are also an important part of India’s design system, mainly in support of design in the villages. Several of these projects are in place all over the country, developed by NGOs.

- Design promotion programmes:
Various seminars and promotional events take place in India organised by the professional design associations, the design schools and fashion organisations. In a similar way to design support programmes, some individual design consultancies are also proactive and work voluntarily on the promotion of design in India. Every year, NID and CII cooperate in the organisation of the Design Summit.
Design policy:
NID and CII also came together for the discussion of policy issues, as already described in this chapter. Besides NID and CII, the Department of Industrial Policy and Promotion (IPP) at the Ministry of Commerce and Industry is an important stakeholder in this process, representing the national government. Recently, the professional organisation AIDI was formed to support the implementation of the Indian design policy, which was ratified in 2007.

6.6 Summary
This chapter presented four case studies, which reviewed the history of design promotion and the current design system in four countries: India, Brazil, Korea and Finland.

6.6.1 Finland
Design promotion has a longer history in Finland compared to other countries. The Finnish Society of Crafts and Design was launched in 1875, and became the foundation for Design Forum Finland and is currently the main design promotion organisation in the country. Finnish design is world renowned, along with the reputation of Scandinavian design in general. This is a result of international promotion that started in the 1950s with participation in international fairs and touring exhibitions. In the 1990s, Finland faced economic crises and needed to implement development policies. The Finnish government opted for long-term strategies, including investment in R&D. This created a favourable scenario for the launch of a design policy that placed design within the country’s innovation system. Although not fully evaluated, the national policy had some positive outcomes, but was not followed up by a new plan. Instead, the main design promotion strategies are currently focused on education, creating courses that will link design, economics and technology.
6.6.2 Korea

The first design-related programme in Korea began in 1958, the Korean Handicraft Demonstration Centre, partly financed by international aid to help the country recover from war. However, industrialisation was already experiencing rapid expansion in the 1960s, creating a favourable environment for design. Inspired by the Japanese industrial design policy, the first plan for industrial design promotion in Korea was launched in 1992. Since then, a new policy has been launched every five years with specific targets (e.g. to increase the number of design courses, to improve the quality of design education, to promote Korean design abroad, to build regional design centres). The implementation of strategies has been consistently financed and monitored by the national government. KIDP leads the development of national strategies, but regional centres are able to address local issues and focus on specific sectors of the industry.

6.6.3 Brazil

In Brazil, the first design promotion initiatives were launched in the 1960s, after a decade of progress and economic boom that increased consumerism and demand for new products. It was an opportunity for the consolidation of design as a profession. Design promotion programmes were steadily established in the country. However, many of them existed for only a short time. By the end of the 1980s, government policy opened the country to exports. Facing competition, Brazilian companies were forced to invest in differentiation and therefore in design. In this context, the 1990s was the time of the implementation of the National Design Programme and a few other regional centres. Many design programmes are delivered all over the country, not necessarily as government schemes but mainly as a result of non-profit or industry-led initiatives. Due to the industry’s leadership, design support programmes tend to be sector specific and delivered in particular regions, rather than nationally. Recently, the national government has been encouraging design programmes targeted at exports.
6.6.4  India

The history of contemporary design in India starts in 1947, when the country became independent. In 1958 the Indian government ratified the first design policy. Presented by the American designers Charles and Ray Eames, the plan suggested a strong focus on education in order to provide services to industry, but also to help in the development of villages. The National Institute of Design was opened in 1961, and ever since it has accumulated functions: education, promotion, policy development, design consultancy. A new, industry-oriented policy was published in 2007, ratified by the national government but without financial resources for its implementation. In order to implement design programmes in India, non-profit organisations, industry institutions and professional associations have been taking the initiative. With limited resources, design promotion is usually limited to seminars and meetings.

6.6.5  Conclusion

This historical review provided a perspective of how Finland, Korea, Brazil and India develop their programmes and policies for design promotion. Studying the history of strategies for promoting design in each country was important in understanding the style or the approach of each individual nation to this practice. Design programmes and policies change over time and studying only the current practice would provide an inaccurate picture of design promotion in the subject countries. This review showed that design promotion is linked to the gradual establishment of design as a profession, which in turn is related to the demand for design instigated by the economic and political environments. Once again, there is strong evidence to suggest that social, political and economic context is highly relevant to the development of strategies for design promotion, issue raised in the first research question of this thesis.

This chapter included a map of the design system in each country. The maps, developed through a process of visual elicitation (see Chapter 3), present how the many stakeholders are interlinked, and how the national design system is structured. This study shows that clear differences can be noticed when comparing the National
Design Systems of Finland, Korea, Brazil and India. The interviews conducted in these countries reinforce the notion that deficiencies in the system may be even more relevant for policy-making than issues related to market failure. In order to develop design-related intervention operating in efficient systems, and to produce effective policies, policy-makers need to understand and address their National Design System.

The next chapter will compare the four case studies in order to address the main objective of this thesis: a comparative analysis of design promotion in countries of contrasting national contexts. As described in Chapter 3, a framework of seven categories identified through GT open coding applied to the interview transcripts, will guide the comparative analysis. The process of identifying the categories implied breaking down the interview transcripts, labelling data, grouping similar information, until the final list of categories had emerged:

- Design programmes (promotion and support);
- Design education;
- Professional design sector;
- Rationale;
- Design policy (including implementation and evaluation);
- National design system;
- National context.

These categories have emerged from data and represent issues that must be considered in research and practice in the field of design promotion. Three (design programmes, design policy and rationale) were part of the original concepts for this research; hence they were covered in the Literature Review. The other four topics (design education, professional sector, national design system and national context) developed during data collection. Each issue grew in importance in relation to this research as interviewees reinforced or dismissed their relevance. Consequently, these categories became indicative of contrasts and similarities in the comparison of design promotion strategies in India, Brazil, Korea and Finland.
Comparative analysis of design promotion in India, Brazil, Korea and Finland (analysis of individual categories)

7.1 Overview

Comparative analysis is a key aspect of grounded theory (GT). It helps researchers to reach a better understanding of the research material, examine basic assumptions and biases, and identify contrasts and patterns in the data (Strauss & Corbin, 1998). In this research, the constant comparative method was already applied during the development of the case studies, in particular for the guidance of data collection during the interviews. As described in Chapter 3, interviewees were selected through theoretical sampling, which allowed the researcher to pursue the investigation into categories or theories that were emerging during the investigation (Charmaz, 2006).

The interview transcripts were analysed by open coding, process that consisted in identifying, labelling and grouping the concepts until a list of relevant categories emerged from the data (Strauss & Corbin, 1998). As result of this GT approach, seven factors (here referred to as ‘categories’) emerged:

- Design programmes (promotion and support);
- Design education;
- Professional design sector;
- Rationale;
- Design policy (including implementation and evaluation);
- National design system;
- National context.

These factors were identified in response to the second research question presented in this research: Is it possible to identify factors that are particularly relevant to the
efficacy of design promotion? Besides representing fundamental issues for the understanding of design promotion, these seven factors were applied as a framework for this Chapter’s comparative analysis, in addressing the thesis’ third research question: Do these factors suggest differences between advanced economies and developing countries in terms of their approaches to design promotion?

This research’s main objective is to identify and inform some of the fundamentals of design promotion and therefore empower practitioners and researchers to challenge current programmes and to develop their own models, without having to rely on the transfer of practices.

As well as the structure provided by the framework, the subject countries were divided into two subgroups for comparison purposes: developing countries, represented here by India and Brazil, and advanced economies, represented here by Korea and Finland.

The interview transcripts were the primary source of data for this analysis. In this chapter each of the individual categories is introduced with a table containing a summary of the data coded in this process, which represents the interviewees’ opinions about that category in India, Brazil, Korea and Finland. However, evidence was also gathered from secondary research, in order to argue the conclusions and construct the theories presented in this Chapter.

7.2 Design programmes

Table 19 lists the most relevant information related to this category (design promotion and support programmes) provided by the interviewees in India, Brazil, Korea and Finland. In designing their programmes, governments make choices about whether their approaches will favour awareness-promotion or industry-support programmes, and whether they will adopt national or regional programmes.
with regard to the first issue, the four countries have different choices that determine the profile of their design programmes: Brazil and Finland run both support and promotion programmes, in contrast to India and Korea, which place emphasis on promotional campaigns. While in India there is a lack of financial resources to run support programmes, in Korea design promotion is a strategic choice made by the national government.

In 2004, Cawood et al. stated that the strategy of simply promoting design was gradually being abandoned in favour of direct support for SMEs, which is a more proactive approach. This shift of emphasis from design promotion to support

<table>
<thead>
<tr>
<th>INDIA</th>
<th>BRAZIL</th>
<th>KOREA</th>
<th>FINLAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Design programmes operate only at national level. Government, local and regional design programmes are needed.</td>
<td>• Most programmes operate within the federal states.</td>
<td>• After years running design support programmes, the new strategy is to invest in strategic and promotional programmes rather than support for companies.</td>
<td>• A national design support programme is run by the Ministry of Trade &amp; Industry, benefiting from its network of local business centres around the country. It is aimed mainly at newly established enterprises for developing product ideas and new corporate identities, covering all the fields of design, from textile or fashion design to industrial design.</td>
</tr>
<tr>
<td>• No government programmes currently link technology and design.</td>
<td>• Implementation of programmes is made possible through partnerships.</td>
<td>• The annual award programme provides labels for ‘good design’ products, which have an advantage in the public procurement process.</td>
<td>• There is a long list of prizes and awards given by different institutions, including professional associations.</td>
</tr>
<tr>
<td>• CII and NID work together on design awareness programmes.</td>
<td>• Most programmes are targeted at specific sectors of the industry (e.g. furniture, textiles, jewellery).</td>
<td>• The promotion of the Korea Design brand is one of the strategic issues for design programmes.</td>
<td>• A special support programme links design to R&amp;D and technology innovation.</td>
</tr>
<tr>
<td>• Design Clinics for SMEs are in preparation. These will include assessments and awareness workshops for business clusters.</td>
<td>• Seminars are common programmes for the promotion of design.</td>
<td></td>
<td>• Finland is basically a market economy, but it is accepted that there should be some sort of aid for small and medium-sized companies, especially, if there is a market failure.</td>
</tr>
<tr>
<td>• CII’s design promotion strategy includes workshops that put together successful case studies from India and overseas, and designers talking about how they work with companies, for raising awareness among companies (e.g. the annual summit).</td>
<td>• Many private companies promote awards and competitions for products in their own market area.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Programmes for crafts are not supported with design input. It is still difficult to find adequate support and funding for crafts, despite the fact that they could be the future added-value differential for Indian products.</td>
<td>• Design support programmes focus on linking companies with designers. Sometimes part of the project cost is subsidised. Usually the programmes aim for concrete outputs, such as a collection of products for an exhibition.</td>
<td></td>
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<tr>
<td></td>
<td>• Programmes are mainly focused on product design. Graphic design and brand are rarely included as a topic for support.</td>
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programmes was described as a consequence of increasing economic competition, combined with doubts about the effectiveness of design promotion programmes (Cawood et al., 2004).

However, the research reported here reveals that this shift is not definitive, nor is it confirmed as a trend. First, the survey of design strategies around the world (Chapter 5) proved that design promotion is currently practised in 41 countries compared to 27 employing design support programmes. Secondly, the case study analysis revealed that all four countries have design promotion programmes, but only two (Brazil and Finland) provide design support to businesses. Indeed, Korea has recently ceased its design support programme, presenting a new strategy based on promotion.

INTERVIEWEE K5 explained that direct design support to Korean companies was not cost effective. Although SMEs may stop investment in design due to the cost of this type of project, medium and large Korean companies are already conscious of the benefits that design brings to their businesses. Therefore, the Korean government’s current strategy is to allow free-market competition to require investments in design by national industry. In contrast, India aims to start programmes of design support for companies, as stated by interviewees there:

*We are now trying to work out the design clinics for SMEs. These companies cannot afford, so they don't even think of design, but for their products design has a big role to play. So the Ministry of Small and Medium Enterprises has funds to allocate...* (INTERVIEWEE 11)

*Demonstration projects can drive policy more powerfully. Many kinds of advocacy, promotion, lectures, speeches don't work... The small incremental steps are the fertiliser, the seed for it to become large. So we need these demonstration projects.* (INTERVIEWEE 13)

The discussion of the advantages and disadvantages of design support in comparison to design promotion was exhaustive. Design support (i.e. direct advice to companies) is seen as more effective due to its tailored intervention and tangible outcomes. INTERVIEWEE B4 stresses one of the Criacao Parana programme’s strengths: 'The tangible results (i.e. prototypes) at the end of the programme have an educational value for the company besides promoting the businesses and meeting the interests of the programme sponsors.' In contrast, design promotion programmes (e.g. seminars, exhibitions, workshops) have the advantage of reaching a larger number of companies or individuals.
Tether (2006) emphasises the combination of both promotion and support practices for a more cost-effective approach. First, companies attend seminars or workshops when the fundamentals of design for businesses are explained. Then, if necessary, they move to design support for one-to-one assistance. This approach has received increasing attention from support organisations, in particular in the UK.

There is no definitive conclusion to the debate about the effectiveness of support in comparison to promotion programmes. Judgement about this remains problematic due to the absence of references or recognised standard methods for the delivery of design promotion and support programmes. The main barrier to the progress of this discussion is the lack of data, including on the implementation costs of the programmes and companies' financial growth as a result of the design investment. This jeopardises an analysis of the effectiveness of these two types of programme and, therefore, a more definitive position on their value compared to the investment required.

The second point of discussion is the geographic spread of the programmes within a country and the strategic approach of implementing national or regional programmes. In India, INTERVIEWEE 13 criticised the lack of programmes tailored to local and regional needs: ’...the problem is that design needs a mindset, you need to understand what is needed in the country. So the policy should be different from one country to another. Yes, it has to be localised. It is very important to have a local agenda in design. We have a national policy but we haven’t heard about any local policies.’ In Brazil, support and promotion programmes are mainly restricted to each federation state. In Korea, KIDP operates on a national level, but there are regional design centres in order to encourage co-operation between the local design schools and closely located businesses. This strategy also targets the development of business projects that are unique and original to each region, aiming to enhance the characteristics of local products and regional brands (Kim, 2004). Finally, in Finland the national design support programme operates in partnership with a network of local business centres.

INTERVIEWEE F3 stressed the value of this network:
I think that so many companies engage in the programme because of the network of the TE Centres. They have such good networking, they even know most of the companies personally, they belong to the same clubs and they go to the same seminars and have so many opportunities to spread this good message, this is the key.

Locally tailored programmes are the preferred approach among practitioners, as revealed above. Two main reasons support this choice: implementation strategy, as in the Finnish programme, and economic benefit, as in Korea. INTERVIEWEE 13 reinforced the economic advantage of the local approach:

... local will be valued over the the global ... otherwise we are going to wipe out all the variety around the world. It is happening because of communication, but I believe it all will come back and we will react to it. ... Interesting again to see how we differentiate ourselves.

This analysis of practices adopted in India, Brazil, Korea and Finland revealed several contrasting points of view about the implementation of design programmes in the individual countries. However, in response to this chapter’s research question, there appeared to be no patterns that presented evidence of significant contrasts between developing countries and advanced economies.

7.3 Design education

During the case study research, design education was emphasised many times by interviewees either as the country’s strength or as a barrier to the advancement of design promotion and national policy. Therefore, design education emerged as a fundamental influence on design promotion.

In the comparative analysis of this category, interviewees have revealed clear differences between design education in the four subject countries, as shown in Table 20. Yet here it is important to acknowledge the limitations on identifying evidence that would prove the interviewees’ perceptions. A fundamental barrier is the impracticality of establishing a precise comparison of the number of design students in the four subject countries, because classification systems vary greatly as well as there being a broad scope to ‘design studies’. In spite of this constraint, this comparative analysis
has benefited from data presented in published studies, even though they covered only one or two of the samples in this thesis.

Table 20: ‘Design education’ – Interviewees’ views

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<th>INDIA</th>
<th>BRAZIL</th>
<th>KOREA</th>
<th>FINLAND</th>
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</table>
| • Design education does not receive the same attention as science and technology, engineering and management. Despite the fact there are plenty of schools in these areas, many more were recently announced. No new design schools were announced.  
• In order to fill the gap, a proposal for a design module in the engineering programme in each technical institute is under development.  
• There are also several schools in the fashion domain in the private sector. It is a popular demand.  
• In India, designers are awarded with diplomas, a lower qualification than a degree. | • There are more than 300 undergraduate design courses around the country.  
• Only six institutions are capable of delivering master’s courses and one at post-doctoral level.  
• The country is short of specialist professionals and researchers.  
• The quality of the courses is divided between some excellent schools (usually public) and some poor-quality private courses. | • There are 1,301 design-related courses in Korea.  
• There are both public and private universities.  
• KIDP has an e-Design Academy which provides education for design practitioners; Samsung has SADI (Samsung Art & Design Institution), a non-degree design school which provides three-year courses on product design, communication design and fashion design.  
• There is a major concern about spending the great majority of the budget on design education.  
• The recent focus is to improve the quality of the education, once the quantity of courses has achieved a satisfactory target due to previous policies. | • There are two higher levels of educational institutions providing design education and a number of secondary-level and polytechnic-level schools.  
• The number of people educated in industrial design and related subjects has been increasing dramatically.  
• A new university is being created from the merger of arts, business and engineering universities.  
• Education is free up to university level. |

Finland and Korea have been compared in the ranking presented by the International Design Scoreboard project (Moultrie & Livesey, 2009). Proportionally to the size of its population, Korea has the largest number of design graduates, confirming the information provided by interviewees (Table 20). Korea is isolated at the top, with 766 design graduates per million population. In second place is Japan (219 design graduates per million population), followed by the UK (218); Finland is sixth (178). This result is even more meaningful when it is considered that this number is the result of policy implementation. As described in the case study (Chapter 6), the increase of design capability was part of the government’s design agenda. The number of graduate designers is currently too large for the size of the country (INTERVIEWEE K3) and,
therefore, the focus of policy is now turning to improvement in the quality of design education, rather than the number of courses. However, according to INTERVIEWEE K1, the side effect of this imbalance, which results in a large number of citizens graduating in design, is not necessarily a negative factor. On the contrary, the excess is minimised by the country’s low unemployment rates, as described below:

_There has been a mismatch between demand and supply in Korea in the last 15 years. Probably the supply of designers is far greater than demand ... inevitably the result is that the pay level is very low... Fortunately in Korea the unemployment rate is only 2 to 3%. Even designers who cannot find jobs as designers can easily find a job in other places ... So that helps to spread around designers._ (INTERVIEWEE K1)

In contrast, India has few design schools, particularly when compared to the number of institutions in the fields of technology and business management in the country.

However, the number of design departments is increasing in these schools as a solution to the shortage of dedicated design courses. Whereas in Korea the promotion of design in recent decades has provoked great interest in design careers, in India the lack of opportunities for design professionals has undermined design courses.

INTERVIEWEES 14 and 15 emphasised together the fact that design is not recognised at degree level in the country and the consequences of this:

_In India, designers don’t get degrees. Architecture gets a degree as any other profession but designers get a diploma ... It is just a technical certificate which means nothing if you want to get a job ... Families prefer that children become a doctor or an engineer._

This scenario contrasts with the Finnish approach to design education, which is described by INTERVIEWEE F7:

_In Finland education is free of charge so everybody can get free education from the basic up to the university level... In that sense of course the government is supporting design because it is supporting education in design ... The number of people educated in industrial design and related subjects has been increasing very dramatically._

An aspect to be highlighted in this comparative analysis is the fact that all four countries have schools of recognised excellence in their territory. In the ranking of the 60 best design schools in the world (Business Week, 2007), two are located in Korea, two in India, one in Finland and one in Brazil. However, this does not represent the real distribution of leading schools around the world. Figure 19 shows that 83% of the best design schools are located in advanced countries (Stage 3 of economic development).
Only 8% (five schools) of schools are located in countries at Stage 1 of development, of which two are Indian and other three Chinese.

![Diagram showing distribution of design schools per stage of economic development]

Figure 19: The 60 best design schools in the world – Distribution per stage of economic development

Therefore, India and Brazil appear to have a higher quality in design education than other countries at the same stages of economic development. In order to check this evidence, this research examined the recent list of research papers presented at the two latest International Design Research Society Conferences, Wonderground (2–4 November 2004, Lisbon, Portugal) and Undisciplined! (16–19 July 2008, Sheffield, UK). The evidence presented in Figure 20 confirms two issues:

- More advanced economies (Stage 3 and transition from 2 to 3) have presented a significantly larger number of academic papers in comparison to less advanced economies. Therefore, they are likely to have better design education institutions;
- Among the less advanced economies, the number of papers presented by Brazil is significantly high. In fact, the number of Brazilian papers (five in 2008 and eight in 2006) exceeds many of the countries at the advanced stages of economic development.
Figure 20: Percentage and number of papers presented by countries at the conferences

Therefore, India and Brazil cannot be considered a representative sample of countries at Stages 1 and 2 of economic development, or even a representative sample of developing countries in this category of comparative analysis.

Further investigation is recommended here, as design education clearly emerged as a fundamental issue in the debate about how to deliver design promotion. As the foundation for the professional sector, it defines the quality of the services that will be provided to industry. Disappointing services will cause rejection by industry. Consequently, there appears to be a need for design support programmes as a corrective measure when the professional design sector is unable to provide satisfactory services to industry.
Table 21: ‘Professional design sector’ — Interviewees’ views

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<th>INDIA</th>
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<tr>
<td>• The profession is badly regulated (graduate designers get only diplomas).</td>
<td>• Professional design associations are strong and active in Brazil, delivering exhibitions and seminars.</td>
<td>• The supply of designers is far greater than demand, resulting in low pay levels.</td>
<td>• There are two major design associations: ORNAMO (product design) and Graphia (graphic design).</td>
</tr>
<tr>
<td>• NID is the biggest design consultancy in the country.</td>
<td>• There has been an increase in the number of professionals in the market, beyond the demand.</td>
<td>• There is a concentration of design consultancies in the cities and limited services available in rural areas.</td>
<td>• Many small associations are located outside the capital, Helsinki.</td>
</tr>
<tr>
<td>• Most of the design consultancy clients are from overseas.</td>
<td>• There is a good spread of design consultancies over the territory, with design courses distributed all over the country.</td>
<td>• Professionals are very well organised in more than 30 different design associations.</td>
<td>• The supply of industrial designers is bigger than the demand.</td>
</tr>
<tr>
<td>• The number of designers is still too small for the country (between 3,000 and 3,500).</td>
<td>• Design professionals are not prepared/willing to work with SMEs nor with the crafts sector.</td>
<td>• The professional design sector is unprepared to provide services at the speed and quality demanded by manufacturing companies.</td>
<td>• Exporting design consultancy is becoming an important business.</td>
</tr>
<tr>
<td>• Some designers are professionals by practice but do not hold degrees.</td>
<td>• Design services are unaffordable for SMEs.</td>
<td>• There is an increasing interest in exporting design consultancy, in particular to China.</td>
<td></td>
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<tr>
<td>• Design services are unaffordable for most Indian companies.</td>
<td>• Design consultancies need better training to provide services for SMEs.</td>
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In principle, the size of the professional sector is a reflection of the number of design graduates in a country. Hence, the excessive number of graduates recoded by interviewees in Brazil, Korea and Finland resulted in a supply of design services that is larger than the demand in these countries. In this framework, the national context becomes a crucial influence on the number of graduates who do not find jobs in the design market. As the employment rates in Korea are low (see Table 22), the large number of designers can be converted into an opportunity, as described by INTERVIEWEE K1:

...design has many graduates every year who obviously don’t become all professional designers, but spread along other occupations: housewives, managers with an understanding of design. The Korean society becomes more interested in design.
In contrast, in India the small number of design consultancies increases the costs of design services, making them unaffordable for Indian companies; however, their services are still attractive to international clients, as described by INTERVIEWEES I1 and I4. This makes Indian design a potential export service, which is captured in the National Design Policy: ‘Making India a major hub for exports and outsourcing of designs and creative process for achieving a design-enabled innovation economy’ (NID, 2007b, p.7).

If, in India, selling design services abroad is a response to the unaffordable costs of these services, for Korea the exporting strategy is a solution to the excessive supply of design services: ‘From this year on we are trying to focus on exporting design ... services, our design consultancies ... A successful tool for exporting design is participating in design fairs, such as 100% Design in England’ (INTERVIEWEE K5).

Finnish interviewees reported that the supply of design services is larger than the demand. However, the policy document Design 2005!, published by the Arts Council of Finland and Finnish Ministry of Education in 2000, states a clear strategy of increasing the number of designers in the country as a means of increasing the use of design by Finnish companies. As a consequence of more services being offered, designers will have to improve their skills in order to match the competitive environment. This will ultimately create a basis for Finnish design ‘firms operating in the international marketplace’ (Design 2005!, 2000, p.22).

Along with the strategy for exporting design services, Indian design consultancies are encouraged to associate with international institutions, as prescribed in the Design Policy: ‘Encouraging Indian firms and institutions to develop strategic alliances with

<table>
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<th>Table 22: Unemployment, the supply of design services and R&amp;D investment</th>
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<tr>
<td>Unemployment, total (% of total labour force) (World Bank, 2008)</td>
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<tr>
<td>Design services supply (according to interviewees)</td>
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</table>
design firms and institutions abroad to gain access to technology and know-how improving Indian design’ (NID, 2007b, p.13). Similarly, but with much less emphasis, the Brazilian design policy also encourages ‘exchange between research centres and universities at national and international levels, as well as interdisciplinary partnerships’ (PBD, 2007, p.8). This strategy of acquiring new skills and competences from the transfer of foreign models into local conditions was used before by the US and Germany in the late 19th Century and Japan more recently. During the learning process, internal markets are protected to stimulate growth and it is possible to exploit the competitive advantage of low costs. However, in order to advance, this strategy must be followed by R&D self-sufficiency and the capacity to transfer knowledge and skills into higher value-added products (Heskett in Cox, 2005; Simpson, 2006).

Evidence shows that this is still a weakness for Brazil and India. There is a large difference in the percentage of GDP invested in R&D by these two countries (lower than 1%) in comparison to Korea and Finland (higher than 3%); see Table 23.

<table>
<thead>
<tr>
<th>Research and development expenditure (% of GDP)</th>
<th>INDIA</th>
<th>BRAZIL</th>
<th>KOREA</th>
<th>FINLAND</th>
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<tr>
<td></td>
<td>0.69% (2004)</td>
<td>0.82% (2005)</td>
<td>3.23% (2006)</td>
<td>3.41% (2007)</td>
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</table>

On the other hand, companies’ spending on research and development is considered as a ‘notable competitive advantage’ or relative strength of the Brazilian and Indian economies, according to the World Economic Forum’s Global Competitiveness Index (Lopez-Claros et al., 2006, pp. 175 and 243). This disparity reinforces Simpson’s point that India’s economic growth has been achieved despite the state (Simpson, 2006). It is also reinforced by INTERVIEWEE I3, who listed several examples of independent individuals’ initiatives to promote design in India, in the absence of government support. The examples vary from student projects to private consultancies.

In contrast, governments in advanced economies are concentrating investment and effort on strengthening their R&D capability and, therefore, on improving their
competitive advantage over emerging economies such as Brazil and India. This strategy is stressed in both the Finnish and Korean design policies:

In Finland, the design research tradition is still quite meagre. This is why the implementation of the design research programme will include foreign researchers’ visits and work in Finland and the application of know-how of international research centres to the creation of a Finnish research tradition. (Design 2005!, 2000, p.25)

To strengthen design R&D capabilities. The plan aims at turning Korea into a design leader by strengthening R&D activity in such fundamental areas as materials, colours, trends and ergonomics and by establishing networks with world-famous design institutes. (KIDP Korea Institute of Design Promotion, 2008b)

Investments in R&D, associating research and design in order to bring products to the market more quickly, were strategies of the Finnish design policy 2005!, as already seen in the case study in Chapter 5.

Another important issue for design promotion in Finland is making design accessible to all companies. Any existing market failure in this context is due to the poor distribution of design consultancies throughout Finland and the lack of understanding of design services and their costs, as described by INTERVIEWEE F3:

Companies ... were quite afraid of the costs and they didn’t know the competence of, for example, an industrial design. They had a misunderstanding of their role and the wide field of know-how they can provide for their clients. Also in northern and eastern Finland there are not enough agencies and so they were afraid of using southern agencies because of the cultural differences, the expensive travelling costs...

According to interviewees, poorly prepared design professionals are a common problem in Brazil and Korea. The main problem is the availability of good professionals in sufficient quantity to meet the market demand. In each country, designers have specific weaknesses:

- In Korea, according to INTERVIEWEE K5: ‘The manufacturing industry... needs better and faster design companies.’
- In Brazil, according to INTERVIEWEE B3: ‘our professionals are educated to be a designer at Fiat, so working with SMEs, getting to the production level, knowing the characteristics of these firms is a problem. ...They are not prepared for this reality.’
This problem has been addressed by design support programmes, which provide facilitation between designers and companies. These programmes provide expertise, mainly in management, in order to compensate for the unsatisfactory performance of the design sector. Surprisingly, there are no published examples of countries where this problem has been addressed through programmes of improvement for the design education system. Design support has been used as a ‘corrective measure’, rather than preventing this failure through better education.

7.5 Rationale

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<th>INDIA</th>
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<th>FINLAND</th>
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<tr>
<td>• There is a lack of awareness of the broader use of design. Many companies still think that design is a ‘finishing’ tool.</td>
<td>• Design as a strategy can be better promoted among businesses.</td>
<td>• There are investments in R&amp;D in the design area, hoping that design companies will improve their skills and design ability.</td>
<td>• Explore design at a more strategic level within companies.</td>
</tr>
<tr>
<td>• There is a need to use design to address problems not only in industry but also in crafts, agriculture, health, public systems etc... It must be accepted by all the ministries.</td>
<td>• Design needs to be encouraged as a tool for innovation.</td>
<td>• The Brazilian government’s focus on social programmes can be an opportunity to use design.</td>
<td>• Structures inside Finnish companies are not well organised to understand the knowledge generated by university projects.</td>
</tr>
<tr>
<td>• Design can be a differentiator in social projects.</td>
<td>• The Brazilian government’s focus on social programmes can be an opportunity to use design.</td>
<td>• There is an increasing debate about sustainable and responsible design.</td>
<td>• Design programmes are used to raise design awareness among the public, as they are consumers of design.</td>
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The rationale for design programmes and policies was already listed in the Literature Review:

- Enhancement of national industry’s competitive advantage;
- Improvement of products and services targeting foreign markets;
- Necessary government intervention in the case of market failure;
- Facilitation of companies’ access to innovation;
- Provision of favourable conditions for companies to operate and innovate;
- Creation and promotion of a national identity/brand.
During this research, economic competitiveness was reinforced as the main reason for the implementation of design promotion programmes. In India, Brazil, Korea and Finland design promotion currently has the clear objective of increasing the use of design by national industry. Along with this objective, the design sector also becomes the focus of attention. This profile was not a surprise, as most literature in this field of research pointed in this direction.

The Literature Review also presented studies that questioned the rationale for design promotion specifically in developing countries. Er (2002), Amir (2004) and Margolin (2007) have criticised the current mainstream design promotion approach (i.e. design for industrial competitiveness and economic development) employed in developing countries.

These ideas received strong support from some of the interviewees in India in Brazil. However, it was also clear that these ideas remain as ideas, and little has been implemented to broaden the scope of design promotion in these countries:

- *My question to the Secretary of Industry... was what fuss has been made to make design part of each agenda of other ministries. Like Ministry of Health, the question of adopting design in their core activity, similarly rural level, infrastructure, finance, banking... You cannot go for industry alone. ... There are thousands of options for design to help.* (INTERVIEWEE 13)

- *The current Brazilian government cares a great deal about social issues, and design for social inclusion is a world trend. We promoted a design contest for urban solutions in 2005. We couldn’t repeat it, for financial reasons. ... We intend to focus on design and sustainability. We had plans for a major project, but the bureaucracy was a barrier.* (INTERVIEWEE B1)

This indicates that in India and Brazil, design has not been contributing significantly to policy priorities that would set the foundations for these countries’ sustainable growth. These priorities are mainly infrastructure, health, education and services (Lopez-Claros *et al.*, 2006).

Surprisingly, it is in the more advanced economies where design promotion has been broadened in scope. The Shaping the Design Agenda Conference (Turin, November 2008) presented design policies from 10 countries. Table 25 shows the key topic covered by the speaker from each of these nations, all advanced or high-income
economies apart from China and Costa Rica. The level of complexity of the topics listed in Table 25 illustrates a sharp contrast between the approaches developed by advanced economies in comparison to developing countries. While the first group is developing ‘exciting new innovative user-centred projects...’, other countries are just getting to terms with the fact that design is a priority on their policy agenda’ (Vanderbeeken, 2008). For example, design promotion policies in China and Costa Rica only reinforced the mainstream understanding of design, as a tool for economic and cultural development. The reason behind this difference may lie in the short history of design promotion, as only in this decade has design become a matter for government policy development in these countries.

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>DESIGN POLICY MATTER</th>
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<tbody>
<tr>
<td>China</td>
<td>Design as a lubricant for industrial growth</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Declaration of the design sector as a public interest (Penon, 2008)</td>
</tr>
<tr>
<td>Italy</td>
<td>Design for urban transformation (infrastructure, culture and art) Service design, experience design, interface design, strategic tool for business innovation</td>
</tr>
<tr>
<td>Finland</td>
<td>Human-centred design Integrate design into the national innovation system</td>
</tr>
<tr>
<td>Qatar</td>
<td>Protection and renewal of cultural identity</td>
</tr>
<tr>
<td>Japan</td>
<td>Design for sustainability and public engagement Emotional fulfilment</td>
</tr>
<tr>
<td>Norway</td>
<td>Education and awareness raising in innovation</td>
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<tr>
<td>Netherlands</td>
<td>Creativity in social change</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Design education in business schools</td>
</tr>
<tr>
<td>UK</td>
<td>How to integrate participation and user involvement in policy making</td>
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</table>

Overall, the understanding of design has evolved. It started off associated with arts and crafts, became an important discipline for industrialisation and now is growing as creative input in strategic thinking. However, as seen from the examples above, design is still being used as a tool for industrial competitiveness, rather than for the development of the nation. Its strategic potential is particularly ignored by emerging economies like India, Brazil and China (Heskett, 2002).

The European Commission is also looking at broadening the use of design, addressing the three main challenges set for European countries by the Lisbon agenda:
competitiveness, sustainability and social cohesion (Thenint, 2008). The aim is to go beyond economic benefits, improving human wellbeing. Figure 21 shows how design can be integrated into addressing these issues. The proposal is to create promotion programmes and policies that will produce sustainable and inclusive goods and services, create better cities and use design to improve the EU welfare sector.

![Diagram showing the relationship between Competitiveness, Well-being, Environment, Building where we live, and Social aspects.]

Figure 21: Rationale for design promotion and policy – Building a model in Europe (extracted from Thenint, 2008, p.9)

The employment of design programmes for social inclusion, sustainability and urban development is already in place in many countries. Korea is an example, with its plans to transform Seoul into an international design centre, hosting design competitions and winning the title of World Design Capital 2010. The country faces the challenge of direct competition from its neighbours Japan and China, which explains the government’s promptness to develop and implement policies for competitive differentiation (The Seoul of World Design, 2008).

To conclude the discussion of this category, it is possible to highlight significant differences in the rationale of design promotion in India and Brazil, in comparison to Korea and Finland. The key difference is the extent to which design is applied in either or both national strategies for economic and social development. It is noticeable that there is a trend towards broadening the scope of design promotion programmes and
policies in more advanced economies, which, however, has not yet been exploited in developing countries.

7.6 Design policy

Table 26: ‘Design policy’ – Interviewees’ views

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<tr>
<td>• The federal government ratified India’s national design policy in 2007. However, there has been a very limited allocation of government funds for its implementation.</td>
<td>• There is no national design policy ratified by the government. However, the document ‘Strategies for design 2007–2010’ was published by the Brazilian Design Programme as a guide to the many design initiatives around the country.</td>
<td>• The first policies for design in Korea were benchmarked against the Japanese industrial policies of the 1990s, encouraged by the Korean government’s aim of overcoming or at least matching the level of economic development of Japan.</td>
<td>• Design 2005 was the national policy launched in 2000, ratified by the government with funds allocated for implementation.</td>
</tr>
<tr>
<td>• It is a consensus that the publication of the design policy was a great step in bringing design to the national agenda.</td>
<td>• The document establishes a list of 23 priorities; however, there is no budget allocated for implementation.</td>
<td>• Sets of ‘Five-Year Plans’ have been published since 1993. The launch of the policy is supported by budget allocation for its implementation.</td>
<td>• A strong emphasis exists on technology, innovation and promoting technologies, but the awareness of the role of design policies has been growing very fast.</td>
</tr>
<tr>
<td>• The current design policy is industry oriented. There is a need to expand its scope to cover other areas such as crafts, rural matters, government services, health...</td>
<td>• Although developed under extensive consultation, criticism of the document highlights the fact that the priorities are not aligned with the government agenda.</td>
<td>• Design policy also maintains a focus on education.</td>
<td>• The Design 2005 and Design 2010 programmes have been increasing awareness of the significance of design.</td>
</tr>
<tr>
<td>• The design agenda should be local or regional, and not only national.</td>
<td></td>
<td></td>
<td>• Policy approach encourages the free-market system. However, there is acceptance that government has a role to play in certain areas, in particular when there is a market failure. This justifies the provision of design support for SMEs.</td>
</tr>
</tbody>
</table>

Despite recent interest in broadening the rationale of design promotion, this comparative analysis revealed a common primary objective of design policies in India, Brazil, Korea and Finland: enhancing the use of design by national industry. This is clear in the policy documents, in the statements of their missions and visions:

- ‘...to have a design enabled Indian industry which could impact both the national economy and the quality of life in a positive manner’ (NID, 2007b, p.1);
• ‘To foster industrial and technological modernisation through design, in order to contribute to the improvement of the quality and competitiveness of Brazilian goods and services’ (PBD, 2007, p.4);
• ‘Providing support of design innovation to manufacturers of world-class products, encouraging companies to hire at least one in-house designer, connecting small and medium size companies with design institutes...’ (KIDP Korea Institute of Design Promotion, 2008b, p.1);
• ‘Design improves the quality, competitiveness and demand of Finnish products and services in the global marketplace, thereby promoting welfare and employment’ (Design 2005!, 2000, p.9).

This reinforces the fact that design policies are currently employed mainly to promote the use of design for economic advantage and the enhancement of national competitiveness. This emphasis on industry-focused policies may be the result of historical developments after World War II when countries around the world embarked on programmes of economic reconstruction. Many developed policies to boost their industries. Competing in international markets was the challenge for countries such as Japan, with its example followed by Taiwan and Korea (Heskett, 2002). The clear improvement in these countries’ economies, particularly concerning their industrial revitalisation, has made their design policies worldwide references.

Another issue contributing to the lack of variety in policies, is the absence of references due to design practitioners failing to present reliable data to prove their programmes’ achievements, as already discussed in the Literature Review. Reasons for this are the lack of predefined methodologies, difficulty in collecting data and, mainly, the complexity of filtering outputs that are the direct result of design intervention (Hollanders, 2008; Tether, 2007). In the absence of accurate references, design practitioners have been relying on benchmarking studies for the identification and transfer of best practices. Therefore, the transfer of practices has been subject to individuals’ judgement, rather than actual evaluation of economic data, which would identify successful strategies. This has contributed to the duplication of design policies and design programmes.
The greatest risk of transferring strategies between countries is to overlook the context in which the strategy (programme or policy) is going to be introduced. This practice has been criticised by some authors, particularly transfers made from developed countries to less developed ones (Amir, 2002; Giard, 1996). The development of policies must take into account the economic, political, social and cultural context in order to address the weaknesses and build on the strengths of the nation.

INTERVIEWEES I3 and B3, who criticise the lack of alignment of their national design strategic plans with overall government policy, reinforce this concept:

*Design has many other abilities, such as adding huge value, social and cultural benefit. The problem is that design needs a mindset, you need to understand what is needed in the country. So the policy should be different from one country to another. Yes, it has to be localised. It is very important to have a local agenda in design.* (INTERVIEWEE I3)

*In order to be a strategic plan, it must be part of the government priorities. However, there is no statement of the government or the ministry priorities in this plan. As a consequence, no funds have been allocated. If it is a government priority, then funds are allocated. Otherwise, it is just discourse or wish list.* (INTERVIEWEE B3)

Any plans for the development of national policies must take into account a country’s profile of government, which will reveal opportunities and barriers to policy implementation. On this matter, the model proposed by Heskett and reinterpreted by Giard (1996) and Er (2002) appears to be a useful tool. According to their model, Korea is classified as ‘centrist’, where the national government maintains a high level of control over the development and implementation of policies in a co-operative manner with private industry. Finland is classified as ‘integrated’, as its design policy Design 2005! was incorporated into the national innovation system. In Brazil and India, design policies have been approved at a government level, but implementation has been compromised, relying on non-governmental initiatives.

Therefore, this research proposes a reconstruction of the model based on the comparative analysis of design policies in India, Brazil, Korea and Finland (Figure 22).
From the six dominant types of government design policy suggested in the original models (statist, centrist, dirigiste, devolved/decentralised, indirect/hybrid and integrated), two (statist and dirigiste) were excluded from the new model proposed above because the scenario where industry is owned by the state is no longer realistic. For the same reason, the original axis ‘ownership by state’ was replaced by ‘government commitment’, this commitment being mainly measured by the financial resources made available for the delivery of design policies and design promotion programmes in the country concerned.

Moreover, indirect/hybrid was replaced by ‘activist’, in recognition that some form of design initiative exists even in countries where there is little or no government support for design initiatives. The term ‘activism’ was suggested by INTERVIEWEE 13:

...we should have design activism as well. ... It is not promotion, support or policy. It is an activism. Putting an idea forward. It may be an individual, it may be a group, it is not government. ... And through that many things get transmitted.
Therefore, this new model presents four dominant types, the first two reinterpreted from the original model:

- Centrist: National government plays a central role in determining and implementing design policy in a co-operative manner with private and public institutions. Substantial financial resources are committed to stimulating the exploitation of design in the country (e.g. Korea);
- Decentralised: Government policy is implemented through a semi-independent design promotion body (or bodies), not directly controlled as part of the administration of government (e.g. Finland). In some cases, there is no explicit policy but only directions, which guide public investments in design.
- Dependent: Government controls the main (or the most important) design bodies in the country through financial resources or management conditions (e.g. India). However, there is limited commitment or support for the advancement of the implementation of design policies and the overall promotion of design in the country;
- Activist: Limited or absent government engagement results in weak or no design policies proposed or controlled by the state. Design is promoted mainly by independent organisations and individuals, with little co-ordination of actions (e.g. Brazil).

There can be no sure conclusion as to which type is best. These four are a result of the environment to which design policies have to adapt, rather than choices being made by policy makers.

One could say that there is a tendency for developed countries to occupy the top half of the model (decentralised and centrist types), while developing countries tend to be classified as activist and dependent in the model’s bottom half. Indeed, this happens to Finland and Korea, Brazil and India, according to this analysis. However, this is not a definitive rule; for example, China is characterised by large public investments and firm control over policy implementation. The Chinese government’s recent interest in design (Vanderbeeken, 2008) is likely soon to place this developing country as a centrist type in the top half of the model, along with Korea. In fact, any country can
easily be reclassified if its political conditions change. Moreover, the dominant type may also vary from region to region within a country, as some regional governments are particularly keen on the implementation of design in comparison to others.

During the development of this research, design policy grew in importance, gaining increased attention from governments, policy makers and researchers. As seen in Study Two (Chapter 5), in 2007 eight countries were practising design policies. This number has definitely increased in the past two years. Among the countries which have recently launched design policy proposals are the United States (Tunstall, 2008) and Mexico (Pena, 2008). Design programmes are undoubtedly more common than design policies, and evidence shows that this is because the first can be any individual’s initiative, while the second requires government support and co-ordination efforts (Er, 2002).

7.6.1 Design policy implementation

The only common factor in the development of design policies in the four subject countries is at the early stage of the policy process: all four countries opened the policy document to consultation and discussion by members of industry, academia and government. However, after the preparation of the document, each country followed a different process. These differences are demonstrated here, based on the generic policy process model proposed below:

Figure 23 shows a generic policy process model based on eight steps:

1. Identification of opportunity, idea or problem, defining what must be achieved;
2. Consultation with experts and representatives from pressure groups. Ground research about the context in which the policy will be implemented and gathering evidence of related policies, assessment of costs, risks and potential results;
3. Proposal, recommendation to politicians and government, stating clearly the rationale for government intervention;
4. Decision by government;
5. Allocation of resources and formulation of the delivery plan, allocating responsibilities for fulfilment of the objectives;
6. Implementation. If necessary this stage can be preceded by a pilot programme;
7. Results;
8. Evaluation. Although this stage is the last in the cycle, evaluation must be continual during the entire process. It is crucial to record the scenario prior to the start of the implementation in order to compare it against the post-implementation achievements. The results of the analysis should feed back into the proposal for a new policy.

![Diagram of Generic Design Policy Process](image)

Even though authors (e.g. Dunn, 1994; Hogwood & Gunn, 1984; Lusk, 2007) present different models for the policy process which differ in the number of steps and complexity, there is general agreement on the basic process above. However, it is also important to notice that policy making is a dynamic activity which tends to be adapted continually according to the situation and resources available. Inevitably there is a difference between practice and theory; that is, between how policies are made and how they should be made (Hogwood & Gunn, 1984). However, having the fundamental policy process in mind during development is crucial in order to reduce risks, improve the chances of successful implementation and enhance the results.
This generic model was applied to the four subject countries investigated in this thesis, analysing the process that led to the publication of the most important recent policy document in each country.

7.6.1.1 Design policy process in Finland

Most of the steps were followed. The consultation process was particularly well developed, including a national survey and the publication of two reports, which served as foundation documents for development of the policy. The weakness of the Finnish process is the final stage (evaluation). Failure to evaluate the impact can be due to the proximity of the events (10 years would be a more appropriate gap over which to measure the impact of the investment) and the difficulty in differentiating the direct results of the policy from the natural evolution of the design sector in Finland (Valtonen, 2005). However, a crucial issue that may have jeopardised the evaluation process was the lack of systematic evaluation, including data prior to the implementation of the policy. Therefore, there was no feedback information incorporated into a new policy.

![Design Policy Process - Finland](image-url)
7.6.1.2 Design policy process in Korea


A design policy has been fully developed in Korea since 1993. Evaluation is carried out at regular intervals, feeding back into the implementation process. At the end of each five-year plan, a comprehensive evaluation takes place and a new plan is formulated (Bitard & Basset, 2008). Because of this consistency, Korea is well known worldwide as a reference in design policy making. Its efficient policy process is seen as a result of the close rapport between government and citizens in the implementation of the strategies (Chung, 1998) and the country’s power to mobilise its population, companies and government towards the same goal (Cho, 2004). Moreover, Korean policy for design has been achieving remarkable results not only in identifying and addressing specific weaknesses of the Korean design sector, but also in recognising and exploring future opportunities.

Figure 25: Design Policy Process – Korea
7.6.1.3 Design policy process in Brazil

Process analysed: policy document PBD 2007–2012 Strategic Plan, published in 2007. The plan was formulated by the Brazilian Programme for Design, based on the results of the meeting ‘PBD’s Strategic Evaluation’, which gathered representatives of industry, government, academia and the professional design sector. The plan did not obtain full ratification from the national government and therefore funds were not allocated for its implementation. One of the reasons for this failure may be the lack of focus and the fact that little rapport existed between the national government and the design system.

![Diagram of Design Policy Process - Brazil]

Figure 26: Design Policy Process – Brazil

7.6.1.4 Design policy process in India

Process analysed: policy document National Design Policy, published in 2007. This policy document was developed in consultation with representatives of the professional sector, academia, industry and government in a series of meetings (summits). It was successfully ratified by the Indian government, however without budget allocation. This situation jeopardised policy implementation but did not stop its progress. The professional sector was proactive in taking the plan forward (Sundar et al., 2007).
7.6.1.5 Comparative analysis of the design policy process in India, Brazil, Korea and Finland

This analysis revealed significant differences between the design policy process in Korea and Finland (the more advanced economies) compared to Brazil and India (developing countries). The contrast is evident in the completion of the process for design policy delivery. While Korea and Finland complete the full cycle, India and Brazil find problems in accomplishing the implementation despite having obtained government ratification. The question is: why do advanced economies succeed in implementing their design policies, while developing countries fail?

Young (2005) has studied this issue through running policy stakeholders’ workshops in developing countries. He notes that policy making is a ‘dynamic, complex, chaotic process, especially in developing countries’. Based on observation of his workshops, he highlights four practical issues that complicate the policy-making process in developing countries:

- A troubled political context, which may include instability, frequent turnover of key positions, lack of transparency and empirical policy making;
- The lack of availability of quality research evidence in support of policy making;
High influence of funding providers on both research outcomes and policy implementation;

The increasing role of civil society in policy making.

Indeed, many interviewees pointed out characteristics of their governments to justify the success or failure of their design policy endeavours, as shown in Table 27.

Table 27: ‘National context’ – Interviewees’ views on the political context and rapport with government

<table>
<thead>
<tr>
<th>INDIA</th>
<th>BRAZIL</th>
<th>KOREA</th>
<th>FINLAND</th>
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</thead>
<tbody>
<tr>
<td>Government is supportive but ignores the broad use of design. In particular, the concept of ‘design as good for business’ restricts the use of design in social and urban programmes, so important for India.</td>
<td>Government support is still weak and lacking in understanding of how design can be used for the development of the country both economically and socially.</td>
<td>Full support from the government is translated into a high degree of financial support and commitment to design policy and programmes in Korea.</td>
<td>Government is not directly involved in all design initiatives (e.g. awards), but provides indirect support via financial aid given to educational and promotional institutions.</td>
</tr>
<tr>
<td>Most of the time government support is not financial but only endorsement.</td>
<td>The perception of design varies from government to government.</td>
<td>Regional governments also have funds for design, in particular for the maintenance of local centres.</td>
<td>Professional associations also obtain government support.</td>
</tr>
<tr>
<td>The perception of design is individually driven and varies between departments.</td>
<td>Most design initiatives are not directly funded from government resources. Many are maintained by non-profit national institutions for SME and industry development.</td>
<td>Design policies do not suffer interruption from government changes.</td>
<td>Low hierarchies, small organisations and no bureaucracy provide a better chance of creating solutions as everybody takes part in solving problems.</td>
</tr>
<tr>
<td>Government bureaucracy and poor decision making jeopardise policy implementation.</td>
<td>Bureaucracy and lack of continuity, in particular in the face of government changes, are major problems for the implementation of design programmes.</td>
<td>Programmes are dependent on partnerships, but government bureaucracy jeopardises these agreements.</td>
<td></td>
</tr>
<tr>
<td>Although bureaucracy is a problem for the implementation of projects, it also secures stability for policies, which cannot be changed easily when a new government comes into power.</td>
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</tbody>
</table>

The inefficient implementation of design policies in Brazil and India is widely blamed on government bureaucracy, which includes:

- Slow decision making (INTERVIEWEES B1, I1 and I5);

- Excessive investments in standards and regulations, rather than actual solutions (INTERVIEWEE I3);
• Lengthy paperwork for access to government funds (INTERVIEWEE B1);
• Hurdles for partnership agreements, which are crucial in a country with limited
government sponsorship for design programmes (INTERVIEWEE B1).

In contrast, INTERVIEWEE F7 described the advantageous system in Scandinavian
countries:

...we have very low hierarchies here, we don’t have any big organisations or bureaucracies or planning approach... which means that... we have much better chances in a way to develop creative solutions because everybody is taking part in solving the problems, and everybody has a right to voice him- or herself in any company.

INTERVIEWEE I1 from India observed: ‘it takes time to do anything in the government system so the first suggestion is that the Design Council and the Chartered Society of Design have to be implemented out of the government system’. Similarly, a recent presentation about the development of design policies in another developing country, Costa Rica, also reported attempts aimed at ‘simplifying bureaucratic procedures: the declaration explicitly makes a call that every procedure that has to do with the design industry be made in all of the rest of the public institutions, as a priority and in an efficient manner’ (Penon, 2008).

Besides bureaucracy, INTERVIEWEES I3, B1, B3 and B4 criticised their government’s general understanding of design, a critical barrier to funding allocation and general support for design initiatives. The perception of design is individually based and varies from government to government and between departments, as described by INTERVIEWEES B4 and I1. Thus, frequent changes in government administrations tend to make the support provided for design initiatives more vulnerable in Brazil and India. Interestingly, INTERVIEWEE I1 observed that bureaucracy was often a positive influence in this scenario, securing stability for policies because the relevant documents cannot easily be changed in a bureaucratic system.

In general, a country’s political and economic model is decisive in determining how much intervention the government is willing to apply in regulating the market, industry and the design sector (Er, 2002; Giard, 1996; Heskett, 2001a). Moreover, there are conditions that influence the delivery of policies, determining how effective the policy
or government intervention is likely to be. The contrasting efficiency in the delivery of government design policies in India, Brazil, Korea and Finland is confirmed by the World Bank Governance Indicators. Data is collected, organised and synthesised by the Worldwide Governance Indicators (WGI) Project, combining the ‘views of a large number of enterprise, citizen and expert survey respondents… drawn from a diverse variety of survey institutes, think tanks, non-governmental organizations, and international organizations’ (Kaufmann et al., 2008). For this research, three of the six dimensions of governance reported by the WGI Project were selected due to their relevance in the context of design policy implementation:

- Political stability: measures the likelihood that the government will be destabilised by unconstitutional or violent means, which may have a direct effect on the continuity of policies;
- Government effectiveness: measures perceptions of the quality of public and civil services and the degree of their independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies;
- Regulatory quality: measures the ability of the government to formulate and implement sound policies and regulations that permit and promote private-sector development. (Kaufmann et al., 2008)

Figure 28 compares these three indicators and their values for Finland, Korea, Brazil and India, as shown in Table 28:

<table>
<thead>
<tr>
<th>GOVERNANCE INDICATORS (scale -2.5 to +2.5)</th>
<th>INDIA</th>
<th>BRAZIL</th>
<th>KOREA</th>
<th>FINLAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Stability (2007)</td>
<td>-1.01</td>
<td>-0.22</td>
<td>+0.45</td>
<td>+1.43</td>
</tr>
<tr>
<td>Government Effectiveness (2007)</td>
<td>+0.03</td>
<td>-0.12</td>
<td>+1.26</td>
<td>+1.94</td>
</tr>
<tr>
<td>Regulatory Quality (2007)</td>
<td>-0.22</td>
<td>-0.04</td>
<td>+0.88</td>
<td>+1.67</td>
</tr>
</tbody>
</table>

In Figure 28, the highest score for each indicator identifies the best-quality governance and is placed furthest from the centre. Again, Finland and Korea perform well and
reinforce conclusions from the previous investigation. Both countries have the highest scores, presenting a favourable environment for policy continuity, long-term plans, high quality in policy formulation, government commitment to policy implementation, and reliable government interventions within the private sector. This scenario coincides with what has been described during primary research in Finland and Korea.

Brazil and India have the lowest scores. Brazil performs better in political stability, a reflection of the well-established current democratic regime that should ensure policy continuity. However, government commitment to policy implementation is limited to the mandate. According to interviewees in this country, almost every new government tends to revise strategies, jeopardising the achievement of long-term objectives in policy implementation.

According to the graph, the Indian government’s credibility in committing to the implementation of policies in the country is a positive factor. Indeed, the interviewees in India declared their confidence that the design policy would be taken on board by the next government. However, this confidence seems to be related only to the plan
itself, as financial resources for the implementation have not been allocated and are still under negotiation with government departments (according to INTERVIEWEE 13).

7.6.2 Design policy evaluation

Table 29: ‘Design policy’ – Interviewees’ views on the policy evaluation stage

<table>
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<th>INDIA</th>
<th>BRAZIL</th>
<th>KOREA</th>
<th>FINLAND</th>
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<tbody>
<tr>
<td>(in the absence of design programmes and policies actually implemented, there were no evaluation methods to report.)</td>
<td>• SEBRAE, the SME support institution, uses periodical qualitative and quantitative evaluation of its programmes. The process includes interviews with company owners who were supported by the programme. The evaluation process does not evaluate deliverers but only participant companies.</td>
<td>• Policy implementation is systematically reviewed every year and the general strategy revised every five years. • After a specific design programme is finished, KIDP has meetings with representatives of the design industry and experts to discuss the effectiveness of the policy just implemented. • It is important to have a measured starting point, in order to be able to analyse changes. The first measurement is crucial.</td>
<td>• Measurement of impact has been done for research and development programmes but not for design. • Design Start is evaluated by an independent auditor. • An important result of the programme was the benefits to designers, as in some regions companies are now willing to use expert services. • The number of companies who participate in the programme is also an indicator, together with some concrete results in the business (e.g. increased turnover, better productivity).</td>
</tr>
</tbody>
</table>

Evaluation is a crucial stage in the design policy process. Failure to prove a programme’s success often means cuts in funds for implementation. Even so, evaluation remains a major issue for design programmes and policies overall.

Interviewees in Brazil, Korea and Finland described evaluation procedures, including both quantitative and qualitative methods. The aim of these procedures is to obtain indicators such as programme acceptance, impact on business, use of external design consultancies and employment of internal designers.

Qualitative methods (e.g. consultation with business representatives) are the most common procedures for evaluation of design programmes in the three countries.
Quantitative data (e.g. increase in turnover) is obtained from companies which have participated in the design support programmes in Brazil and Finland. However, limitations are encountered when businesses are not co-operative in releasing financial data.

In addition to a lack of co-operation from business clients, there are several other difficulties in conducting policy evaluation, as listed by Hogwood and Gunn (1984):

- Criteria for success will be unclear if policy objectives are not well defined at the start of the implementation;
- Unforeseen events may have impacts on policy results in both positive and negative ways;
- The side effects of policy implementation may be of even greater relevance than the initial objectives under evaluation;
- The programme impact needs to be separated from other influences, including other programmes targeting the same group;
- Political sensitivity to the results of the evaluation needs to be taken into account;
- The costs of the evaluation process may be considerable.

Indeed, interviewees have experienced some of the difficulties listed above. INTERVIEWEE B1 reported problems in isolating results that are directly linked to the design intervention in their programmes. Obtaining quantifiable data is a problem even in Korea, as described by INTERVIEWEE K5: ‘It is very hard to find an evaluation in numbers so we tend to evaluate our policy by talking to the design industry ... one year after that programme has finished.’

INTERVIEWEE K1 reinforced the crucial issue of documenting data from the project’s starting point in order to be able to gauge the sensitivity of the design industry (or any other industry) to a certain design policy:

One of the projects that we received from the ministry was to measure the size of the design industry. ... We came up with approx 4.6% of total GDP on design. Then once you have this measurement you can easily measure the sensitivity of a certain design policy upon the design
Problems in evaluating the impact of design programmes, as interviewees describe above, are largely experienced by researchers and practitioners, as already discussed in this thesis's Literature Review. However, the difficulties are inherent to this field of research, and does not diminish the need for accurate data that will support the advancement of design policies. Recently two important reports have stressed this fact:

Report published as part of the Global Review of Innovation Intelligence and Policy Studies, a PRO INNO Europe project: 'Measurement is indeed a great concern when trying to appraise design's effectiveness in terms of innovation and competitiveness. It could be argued that one should not persist on measurement issues but the lack of factual evidence of design's added-value constitutes a mental barrier to business strategists' choice.' (Thenint, 2008, p.7)

Report on how the UK design industry, Government and Parliament can work together reports that 'lack of evidence for impact on public policy' is one of the reasons 'why MPs have a limited engagement with design and design businesses': 'An MP is most likely to engage with design issues via a particular area of public policy (such as the design of low cost housing...). Unfortunately it is hard to quantify the financial and other benefits of good public service design. This makes it difficult to justify additional expenditure or replicate a similar investment across other departments.' (Show, 2008, p.13-14)

Among the six difficulties of policy evaluation listed by Hogwood and Gunn (1984) above, the issue of political sensitivity is of great relevance when researching design promotion. They explain that evaluation results can affect politicians' reputations, public servants' careers, sponsors' commitment and therefore the continuation of programmes. For this reason, if an evaluation report does not present positive results, the report may have to be treated as confidential. Although this may guarantee the continuation of policies and design programmes, this confidentiality retards the advancement of academic research in this field.

The accuracy of evaluation and therefore the confidence in the data may also influence the 'style' of design policy documents in India, Brazil, Korea and Finland.

In analysing the design policy documents from the four subject countries, the difference in 'style' was noticeable, what may be point out to aspects that may be influential in obtaining government support for the implementation of the plans. The
Finnish and Korean policies are clear in their goals, closely aligned with the existing government agenda, and with roles already distributed to stakeholders. Typical paragraphs from the two policy documents are given below:

New enterprises as users of design. ... Under the direction of the Ministry of Trade and Industry, regional and national development bodies will jointly launch a project with a view to encouraging 200 enterprises annually to integrate design into their core operations. (Design 2005!, 2000, p.15)

To broaden the base of design industry. ... The plan aims at enhancing the market value of design industry to 20 trillion won from current 7 trillion won (1.2% of GDP), thus giving more job opportunities to designers and raising public interest in design and branding. (KIDP Korea Institute of Design Promotion, 2008b, p.2)

In contrast, the Brazilian and Indian policies are more inspirational, defining a vision and priorities without establishing plans or responsible organisations for the plan’s delivery:

To investigate the current profile of design companies in order to better support their growth needs; To encourage the development of mechanisms for the adoption of design by SMEs; To develop efforts to improve allocation of Government budget resources for the support of design initiatives; To promote design initiatives related to sustainability, economy, social and environmental matters. (PBD, 2007, p.8-9)

Setting up of specialised Design Centres or ‘Innovation Hubs’ for sectors such as automobile and transportation, jewellery, leather, soft goods, digital products, toys & games which will provide common facilities and enabling tools like rapid product development, high performance visualisation etc. along with enterprise incubation as well as financial support through mechanisms like venture funding, loans and market development assistance for start-up design-led ventures and young designer’s design firms/houses. (National Design Policy, 2007, p.10)

Lusk (2007) stresses the importance of establishing clear goals for a policy, which can be expressed by the ‘SMART rule’, an acronym that stands for: Specific about what is to be achieved; Measurable by indicators and targets; Agreed with stakeholders; Realistic in that it is achievable; and Timebound, allowing the setting of milestones and targets for achievement. Given their inspirational style, but lack of defined objectives and targets, it is not surprising that the Indian and Brazilian policies have encountered more problems in their implementation.

This category’s analysis has proved a clear contrast between design policies in Finland and Korea (advanced economies) and developing countries (India and Brazil), particularly in their capacity for concluding the process of policy implementation. Furthermore, among the four case studies, Korea has stood out as the only country
where evaluation has been a systematic process. It may be fair to conclude that this contributes to the success of policy implementation in this country. Indeed, in the analysis of policy processes in India, Brazil, Korea and Finland (Figures 15 to 18), the Korean model is noticeable for its full cycle and feedback into the process, generating new policies. This is indication that it is probably important that a policy does not become a static document. In Korea the implementation is continually monitored and the results evaluated. Monitoring provides conclusions about the effectiveness of the policy, but also contributes to the discussion about the need for such policies and aids in the reformulation of strategies (Dunn, 1994). Policy makers must be able to adapt a policy over time in order to have the chance to tackle imminent problems and exploit new opportunities (Er, 2002).

### 7.7 National design system

In order to understand the range of design programmes and policies adopted by different countries, it is necessary to have some appreciation of the network of organisations, institutions and government bodies that influence design promotion and support. In this respect, the mapping exercise developed for the case studies was crucial in understanding who the stakeholders are and how they are interrelated.

Finland is an example of a system where government, industry, academia and professionals are all active stakeholders. Given the long history of running design programmes, it is not surprising that Finnish design institutions are well established and that design programmes there tend to have a long life in comparison to other countries. Similarly, but with a more recent history, Korea shows a system of strong design bodies, supported by a physical infrastructure of design centres and laboratories. National government is the main stakeholder, represented in practice by the Korea Institute of Design Promotion (KIDP), the national authority for design. In both countries, the professional sector has an important presence, organised through member associations and reflected in the large number of professionals.
<table>
<thead>
<tr>
<th>INDIA</th>
<th>BRAZIL</th>
<th>KOREA</th>
<th>FINLAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>• NID is the main stakeholder in India. Its remit includes education, promotion, research and consulting. It is the largest design consultancy in India.</td>
<td>• The Brazilian Design Programme is the national institution for design, maintained by the federal government. Its function is to foster design initiatives, lobby for the design agenda within the federal government and articulate the design system. However, the programme has a low budget and a lack of leadership.</td>
<td>• KIDP is the main stakeholder, directly linked to the Ministry of Knowledge Economy and responsible for both elaboration and delivery of the policy.</td>
<td>• Design Forum Finland is the national promotion body, but other institutions (e.g. TEKES and the University of Helsinki) are as important in the design system.</td>
</tr>
<tr>
<td>• The professional sector plays a role in promoting design, not only through professional associations, but also by awareness raising in promoting design services.</td>
<td>• Many design initiatives are in place around the country but with little integration among them.</td>
<td>• Three regional design centres exist to support design activities in the regions of South Korea.</td>
<td>• There are two major design associations, traditional and active in design promotion: Ornamo (product design) and Graphia (graphic design).</td>
</tr>
<tr>
<td>• The Minister of Economy and Industry maintains the Industrial Policy and Promotion department, which has brought a design policy to the country.</td>
<td>• Partnerships and cooperation are key for the implementation of design programmes.</td>
<td>• Thirty design innovation centres across the nation facilitate support for industry, universities and laboratories.</td>
<td>• Many small associations are located outside of Helsinki.</td>
</tr>
<tr>
<td>• Alliances are key for the implementation of the design policy.</td>
<td>• There is a lack of leadership caused by the difficulty of coordinating all the initiatives around the country due to cultural differences, distance and lack of resources.</td>
<td>• Many private professional design associations deliver design programmes such as exhibitions and seminars for design promotion in Korea. Nineteen design associations are under the Korea Federation of Design Associations (KFDA) and there are about another 20 independent design associations.</td>
<td>• There is poor communication among the many support services in the country.</td>
</tr>
<tr>
<td>• Fashion and architecture are mature fields, with representation and secured funding.</td>
<td>• India has the opportunity to develop design system as the infrastructure already exists. The policy can have a positive influence to make the infrastructure more effective.</td>
<td>• The excellent infrastructure of design centres around the country provides an invaluable opportunity for promoting design.</td>
<td></td>
</tr>
</tbody>
</table>

In contrast, Brazil and India have more unstable, changeable systems, featuring short-life programmes instead of long-life programmes provided by established institutions. What is noticeable in both countries is the important presence of substitute funding sources such as industry federations, which compensate for the shortage of government funds. In Brazil, design centres are important institutions. They are independent, not interrelated to the design policy or the national government’s agenda. The Indian design system is characterised by a large preponderance of...
educational institutions and non-governmental organisations (NGOs) in comparison to the other countries.

The most obvious contrast that emerges from the comparison of developing countries (represented here by Brazil and India) and advanced economies (represented by Korea and Finland) in this category is the role of the government in the national design system. As seen in Figures 15 and 16 in Chapter 6, the governments in Korea and Finland play a key role by defining strategies and financing design policy and programmes. It is a different scenario in Brazil and India, where, in the absence of public funds, design programmes are mainly independent initiatives, self-guided. As a direct consequence there is a difference in the balance between the public and private/non-governmental sectors, with more private/non-governmental initiatives seen in India and Brazil compared to Korea and Finland (see Figures 17 and 18 in Chapter 6). Furthermore, leadership and integration are clearly more defined in Korea and Finland in comparison to the developing countries, which may be a result of the key financial role played by their national governments. INTERVIEWEE B4 expressed concern in relation to the lack of leadership and integration in the Brazilian national system:

The future of design promotion in Brazil still depends on initiatives from individuals and single institutions, working without any interrelation, in the absence of government leadership. The Brazilian Design Programme is trying to set up some form of co-ordination but it is jeopardised by the lack of financial resources.

With a shortage of funds, alternative solutions are developed in Brazil and India in order to articulate design promotion. Private design consultancies become important agents, NGOs have a crucial role in delivering design programmes, and partnerships with large public and private institutions become the means for implementing design programmes, as described by the interviewees:

Brazil operates through partnerships, public and private. ... Many times they are not only based on financial exchange but also on service exchange. ... For example, we establish partnerships with city councils, who provide the venue for the programme, and with the local community, who facilitate the implementation. (INTERVIEWEE B3)

The private sector has been playing the biggest role in design promotion in this country. ...private designers, young students from NID, have been playing the biggest role until now in the past 20, 25 years in promoting design understanding in this country. ... NGO sector is another one. ...out there in crafts and in building, textiles, handicrafts, house building... The weight of this sector's work in India is huge... but not visibly recognised. (INTERVIEWEE B3)
A National Design System is still a recent concept. Based on the notion of a National Innovation System, as explained in this thesis's Literature Review, it implies the identification and understanding of the network of actors involved in design activities in an individual country (Nelson, 1993). The original concept of an Innovation System identified primarily links of knowledge exchange (OECD, 1997). In this research, the concept of a National Design System also includes the collective actions necessary for the flow of knowledge (e.g. policy making and funding sources). This is in recognition of the relevance that financial resources seem to have in making design promotion programmes feasible (Cawood et al., 2004).

Nevertheless, evidence shows that design promotion can happen even in countries where there is a total absence of public support for design promotion. In these countries design promotion might be led by the professional sector (see the ‘indirect’ type in Table 3 and ‘activist’ in Figure 22). However, one may say that intellectual and strategic advancement is likely to take place where individuals are supported in their primary needs and are thus able to think, evolve and implement their ideas (Diamond, 1997). Therefore, it is fair to conclude that design programmes are more likely to advance or to obtain positive results in countries where financial support is guaranteed, most likely by government sources (e.g. Korea and Finland).

An important indicator of the significance of the study of National Innovation Systems is the fact that it has shifted the focus of innovation policy making from market failures to systemic failures. Instead of restricting the rationale of government intervention to the inability of firms to benefit from innovation, the investigation has revealed that the National Innovation System's weakness may be responsible for the unsatisfactory innovative performance of companies (OECD, 1997). Similarly, further investigation into National Design Systems may have a fundamental impact on the advancement of design policy research.
National and regional government policies are not implemented in isolation. Instead, every policy or strategy created operates within a context, with direct or indirect impacts from other policies and from the environment. Design is no exception.

Many of the interviewees reported problems that were not directly related to design but that constituted barriers or advantages for the development of design in the country. For instance, interviewees in India and Brazil pointed out the problems caused by bureaucracy, as already discussed. In contrast, in Finland a lack of rigid hierarchies, small organisations and no bureaucracy provide better chances for solutions to be generated as people engage in problem solving. As described by INTERVIEWEE F7, this scenario is favourable for the development of design programmes.

Geographic issues are also cited as being relevant to design policy matters. For instance, the large size of the Brazilian and Indian territories led to a strong feeling that the design agenda should be local or regional and not only national. Despite their size, the spread of designers over these countries is not an issue. In contrast, this is a concern in Korea, where designers are concentrated in the capital Seoul, and in Finland, where there is a shortage of design services in the northern and eastern regions. According to INTERVIEWEE F3, the poor distribution of services jeopardises the use of design because companies in these Finnish regions are reluctant to use southern agencies due to cultural differences and costs.

Evidence also shows that major economic, political and social events have a fundamental influence over design promotion. The review of the history of design promotion in the subject countries (see case studies in Chapter 6) showed that many design programmes were developed in response to these events. For instance, the Brazilian Design Programme was created when the country was introduced to the global market; the Finnish Design Policy was formulated when the country was trying to recover from an economic crisis. Similarly, international, high-profile events are also likely to boost the design industry, increasing the demand for disciplines such as
graphic design, media and products. INTERVIEWEE l reported that the
Commonwealth Games 2010 taking place in India will be an opportunity to raise
awareness of design among companies, and to raise funds for design promotion
programmes: ‘because of that there have been a lot of things happening, including a
lot of designers being involved by the government, which is a good thing... in the whole
process’.

Design policies operate within a national context, which can contribute to or
jeopardise its development. For instance, macroeconomic stability, although not
sufficient to ensure economic development, is of central importance to the rapid
economic growth of a country and its individual business sectors. For example, the
property market sector is more likely to grow in a country where an environment of
strong property rights encourages investments; an efficient judicial system ensures fast
and transparent legal disputes; and the overall regulatory framework supports new
business creation (Lopez-Claros et al., 2006). Like the property sector, the design
sector is also subject to the national environment.

on 137 factors that are critical to driving national competitiveness. Factors vary, for
example, from GDP per capita to quality of roads, from national savings rates to
stringency of environmental regulations. Although most of the factors have some sort
of direct or indirect impact on design activity, seven factors were selected for this
research’s purposes, due to their more direct influence over design in a national
context:

- Buyer sophistication: There is no business without consumers and, for the
design sector, the consumer’s choice is crucial in order to prove its value. This
factor measures whether buyers in a country are unsophisticated and make
choices based on the lowest price, or knowledgeable and demanding and buy
based on superior performance attributes.

- Nature of international competitive advantage: The same principle applies to
external markets and, therefore, the nature of export trade. This factor
indicates whether companies in a specific country compete in international
markets based on low cost and local natural resources, or on unique products and processes.

- Government procurement of advanced technology products: Government is an important consumer and its purchase decisions can either encourage or be indifferent to the use of design. This factor indicates whether public procurement is based solely on price, or on technical performance and innovativeness.

- Company spending on research and development (R&D): Investments in R&D are crucial in order to innovate. This constitutes a favourable scenario for the use of design, which is a discipline that transforms innovative ideas into marketable products. This factor is an indicator of how much companies from each specific country spend on R&D relative to international peers.

- University/industry research collaboration: Collaboration between universities and industry aids the creation and development of innovative ideas. As with the above factor, this can create a favourable environment for the development of new products and processes, and therefore an increase in the demand for design. This factor measures the R&D activity between businesses and local universities (whether minimal or intensive).

- Capacity for innovation: In order to maintain a competitive advantage, countries must continuously design and develop cutting-edge products and processes. This factor indicates whether companies obtain technology exclusively from licensing and imitating foreign companies or by conducting formal research and pioneering their own new products and processes.

- Number of procedures required to start a business: A sound national design system must include a large number of design agencies or independent design professionals. It is important to encourage the establishment of new design businesses in order to promote the sector’s growth. This factor is an indicator of how the country encourages new businesses and entrepreneurship.

Figure 29 shows how Finland, Korea, Brazil and India perform in relation to the above factors. The centre of the spider diagram corresponds to the lowest score possible for each indicator (shown in Table 31, column ‘scale’), which is the least favourable
environment for the development of design. Thus, the outermost line corresponds to the best possible national context where design can be encouraged.

Figure 29: The author’s visual representation of national context for the development of design based on World Economic Forum’s country/economy profile indicators

Table 31: Country/economy profile indicators – World Economic Forum (Lopez-Claros et al., 2006)

<table>
<thead>
<tr>
<th>COUNTRY/ECONOMY INDICATORS (2006-2007)</th>
<th>SCALE (lowest – highest scores among 125 countries)</th>
<th>INDIA</th>
<th>BRAZIL</th>
<th>KOREA</th>
<th>FINLAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer sophistication</td>
<td>1.6 – 6.2</td>
<td>5.4</td>
<td>4.1</td>
<td>5.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Nature of international competitive advantage</td>
<td>2.1 – 6.4</td>
<td>3.6</td>
<td>3</td>
<td>5.1</td>
<td>5.9</td>
</tr>
<tr>
<td>Government procurement of advanced technology products</td>
<td>2.1 – 5.5</td>
<td>4</td>
<td>3.9</td>
<td>4.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Company spending on research and development (R&amp;D)</td>
<td>1.7 – 6.2</td>
<td>4.2</td>
<td>3.8</td>
<td>5.1</td>
<td>5.5</td>
</tr>
<tr>
<td>University/industry research collaboration</td>
<td>1.6 – 5.7</td>
<td>3.6</td>
<td>3.5</td>
<td>4.6</td>
<td>5.5</td>
</tr>
<tr>
<td>Capacity for innovation</td>
<td>1.9 – 6.1</td>
<td>4.3</td>
<td>4.1</td>
<td>5.2</td>
<td>5.8</td>
</tr>
<tr>
<td>Number of procedures required to start a business (hard data, 2005)</td>
<td>19 – 2*</td>
<td>11</td>
<td>17</td>
<td>12</td>
<td>3</td>
</tr>
</tbody>
</table>

* In the table above, the highest scores represent the most favourable environment for the development of design. However, the indicator ‘number of procedures required to start a business’ is measured by hard data. In this case, it is the lowest score (2) that represents the most favourable environment.
According to these indicators, the advanced countries (Finland and Korea) clearly provide a more favourable context for the development of design than the developing countries (India and Brazil).

All Finland’s indicators have outperformed the other three countries, reinforcing its high competitive position. In Korea’s performance two factors become particularly evident: the high score in government procurement and the low score in business start-up procedures. The first can be linked to the government’s commitment to supporting value-added industries. As already reported, one of the successful programmes for design in Korea is the Good Design label, a design competition linked to the national public procurement system. In contrast, Korea has a poor performance in the number of procedures for starting a business, placing the country’s market efficiency at a disadvantage. The number of procedures was reduced from 12 to 10 in 2008. However, it remains a weakness to be overcome in order to encourage entrepreneurship in the country.

It is noticeable in Figure 29 that India presents a more favourable environment for the development of design in comparison to Brazil. This differs from the position of these countries on the table of Stages of Economic Development, where Brazil (Stage 2) is positioned ahead of India (Stage 1). As explained in the report, India performs remarkably well in factors related to the country’s capacity for innovation and sophistication. The increasing number of highly skilled professionals, particularly scientists and engineers, has improved the quality of products and processes. The rise in income has generated improvements in productivity and consumerism, which is demonstrated in the above indicators. Despite this economic growth, India has yet to develop a better health service, education system and infrastructure that would benefit the greater part of the population, which still lives in poverty (Lopez-Claros et al., 2006).

In contrast, a solid foundation of macro stability is the weakness that jeopardises Brazil’s economic growth. In particular, red tape and bureaucracy are two factors that make this country the least favourable environment for the development of design. For example, a designer is more likely to start a business in Finland (where doing so
requires an average of 3 procedures and 14 days) than in Brazil (an average of 17 procedures and 152 days). Brazil is also at a competitive disadvantage due to its history of trading natural resources rather than added-value industrial products.

7.9 Summary

This chapter provided a comparative analysis of design promotion in India, Brazil, Korea and Finland. The analysis was driven by the search for similarities and contrasts in seven categories:

- Design programmes;
- Design education;
- Professional design sector;
- Rationale;
- Design policy;
- National design system;
- National context.

The aim of this chapter was to address the two research questions: Is it possible to identify factors that are particularly relevant to the efficacy of design promotion in these countries? Do these factors suggest differences between advanced economies (here represented by Korea and Finland) and developing countries (here represented by India and Brazil) in terms of their approaches to design promotion?

The comparison of the first category revealed that, even though there are differences between how these four countries deliver design programmes, there are no significant patterns that differentiate the design programmes in advanced economies and developing countries.

The second and third categories, design education and professional design sector, did not result in a conclusive outcome. The differences and similarities between India, Brazil, Korea and Finland are not sufficient to generalise patterns that will contrast design education and the professional design sector in advanced and less advanced
countries. More importantly, the growth of these two categories during this research revealed their relevance to the study of design promotion strategies.

The fourth category compared the rationale for design promotion in the different countries, identifying a significant contrast between advanced and less advanced economies. While developing countries are still primarily focusing on the development of industry, advanced economies are broadening the scope of design policies, covering social inclusion, sustainability and urban development.

Design policy was the fifth category to be investigated. Again, a significant contrast was identified, marked mainly by:

- The contrasting levels of control and engagement of government over design policy in the four countries;
- The country's governance efficiency for implementing sound policies;
- And the ability to effectively evaluate design policies and provide feedback into the process.

Success or failure in the above topics was perceived in the delivery of design policy. While advanced economies accomplish a full process cycle, developing countries present a fragmented delivery process.

The sixth category, comparative analysis of national design systems, revealed contrasting scenarios. In advanced economies, government plays a key role in defining national strategies and co-ordinating the design system, sometimes through a semi-independent design body. In contrast, in developing countries the professional sector and NGOs share the lead with government and public institutions. Moreover, private organisations and industrial representation bodies are essential for the implementation of programmes, providing a crucial part of the financial support.

Finally, national context was the framework's seventh category. Obviously, different profiles were expected in the comparative analysis of India, Brazil, Korea and Finland. However, this research indicates an association between the characteristics of these national contexts and design promotion. For example, the size of the country relates to
the geographic distribution of design activity; the political conditions determining bureaucratic procedures and therefore affecting design entrepreneurship; citizens' buying habits influencing the demand for design goods. This chapter showed how such characteristics coincided with the strengths and weaknesses that interviewees reported. In conclusion, this demonstrated contrasting conditions in advanced and less advanced countries, which should be taken into account in order to tailor the development of design programmes and policies in these countries.
8 Recommendations for further research (analysis of the interrelation of categories)

8.1 Overview

The previous chapter provided a discussion about design promotion in India, Brazil, Korea and Finland, based on the comparative analysis of seven individual categories:

- Design programmes;
- Design education;
- Professional design sector;
- Rationale;
- Design policy;
- National design system;
- National context.

These categories have emerged from data to represent factors that are fundamental for the understanding of design promotion, and through which it was possible to investigate differences between advanced economies and developing countries in terms of their approaches to design promotion.

Significant differences between advanced economies (here represented by Korea and Finland) and developing countries (here represented by India and Brazil) were identified in four of the categories (rationale, design policy, national design system and national context). In the other three categories (design programmes, design education and professional design sector) differences were identified in the individual countries, but there was no evidence to support any generalisation that would characterise contrasting approaches to these categories at different stages of development.
Besides the identification of categories through data coding, grounded theory also entails the examination of interrelationships between categories, in order to provide a more complete understanding of the research subject (Strauss & Corbin, 1998). The study of interactions between stakeholders, institutions and their agendas is also part of political comparative analysis. In the study of political phenomena, an emphasis on individual factors alone tends to overlook the importance of context dynamics and their potential consequences (Kamrava, 1996).

This chapter will explore the interrelations between categories that emerged from this study, in order to enhance the discussion about design promotion approaches in contrasting national contexts. It is acknowledged that further data gathering would be required for a thorough comparative analysis of these interrelations. However, this was not feasible at this stage of the research. For that reason, this chapter concentrates on suggesting avenues for further research in the field of design promotion, rather than providing a comparison of data between national contexts.

8.2 The interrelation between ‘design programmes’ and ‘design policy’

The first strong interrelation to be introduced is between design programmes and design policies. Two contrasting scenarios were identified here: the use of design policy for the coordination of different design programmes within a country (as seen in Finland and Korea); in contrast to individual design programmes taking place in the absence of an effectively implemented design policy (as seen in Brazil and India).

It is undeniable that there is still controversy about the need for national design policies, although these have been widely advocated by design practitioners across the globe. The argument is that every organisation needs a strategy that will set up a vision of the future and a plan of how that organisation will thrive in that future (Lusk, 2007). In a similar manner, regions and nations also need strategies for the various economic sectors, including design, and different political agendas. In reality, however, very few countries have adopted design policies, as seen in Chapter 4.
Design policy is a relatively new subject, thus there is still limited understanding of its scope and advantages or the risks involved. Furthermore, design policies may not be suitable in some political and economic circumstances, where the country’s approach is to liberalise and allow companies to realise comparative advantages by competing in the free market. In this context, government intervention is unsuitable, as it may result in unfair competition (Lall, 2004).

In comparison to policies, design programmes demand less financial and bureaucratic commitment and are more easily implemented and monitored. Moreover, they do not depend strictly on government support, as seen in the case studies of India and Brazil. Given this substantial difference in practicability, design programmes have indeed been implemented more often across the globe, in comparison to design policies.

Regardless of that, the number of countries adopting design policies is increasing across the globe. For instance, in the past two years, discussions towards national design policies have been taking place in U.S.A., Mexico, Australia and Colombia. National design policies are therefore being implemented in countries where several design programmes are already operating. Inevitably, there is a requirement to integrate the different initiatives and align them to the national governments’ agendas.

In order to support decision making in the adoption of design policies and design programmes, further research is needed into evidence of the economic and social benefits of these two types of strategy. A study of the advantages of using design programmes alone in comparison to the integration of programmes with design policies would be worthwhile.

8.3 The interrelation between ‘design education’ and ‘professional design sector’

Another important interrelation, which was already highlighted in the last chapter, exists between design education and the professional design sector. This link is not
new, but this research aims to emphasise that consideration of these two categories has been neglected in the development of design programmes.

A market failure, characterised by companies that do not make use of design, is the most common rationale for design programmes. In these cases, design programmes are set up to intervene as a bridge between designers and companies, facilitating project management and ensuring successful results. Instead of this 'corrective measure', the approach could entail improving the availability and quality of design services. In this case, the strategy would encompass the improvement of design education, which ultimately would affect the shape of the professional design sector. This would be a 'preventive measure', focusing on companies' demand.

Improvement in the education sector is part of design policy strategy in some countries, including Korea and Finland, but this is not the case in several others, hence this thesis emphasises this issue.

The lack of attention to this issue may be a consequence of design education and design programmes/policies usually being dealt by different government ministries. On several occasions during this research, limited communication among government departments and ministries was reported in matters related to design promotion.

It is recommended that when planning the implementation of design programmes and policies, practitioners and policy makers consider that market failure may occur between design education and the supply of commercial design services.

8.4 The interrelation between 'rationale' and 'design programme'

As highlighted several times in this research, the rationale for most design programmes is the improvement of the nation's industry to enhance economic competitiveness. In this context, market failure and exploitation of new opportunities are the two grounds justifying government intervention in the private sector. The
The flowchart below (Figure 30) is proposed by the author to visually represent the interrelation between this rationale and design programmes:

![Flowchart](image)

**Figure 30:** The author's schematic representation of the interrelation between rationale and design programme – flowchart 1

This flowchart illustrates that industry is the central target of government intervention, which ultimately aims at obtaining economic and social benefits.

In Figure 31 the flowchart is expanded to include the professional sector and design education. This representation implies that design programmes can operate:

- in the link between design education and the professional sector, in order to ensure a suitable quality and number of design professionals to supply services to industry (a 'preventive measure');
- or, in the link between the professional design sector and industry, in order to ensure that satisfactory design services are provided to industry (a 'corrective measure').

![Flowchart](image)

**Figure 31:** The author’s schematic representation of the interrelation between rationale and design programme – flowchart 2
Therefore, government intervention and investment in design may begin in design education (e.g. providing public schools of design or securing the quality of private educational institutions) in order to shape the quality and size of the professional design sector. This sector provides services to industry, which result in products and services being sold to consumers. The products and services produced by companies and sold in the internal market generate both economic benefits (profit and taxes) and social benefits (e.g. consumer satisfaction, health improvement, energy savings, efficient services). Products and services sold to external markets generate economic benefits for the country (taxes, export duties), improving its competitive advantage and trade balance. The quality of products and services offered to both markets is crucial for achieving sales, but is particularly important when targeting external markets in order to be able to beat tough competition.

If one of the links in the flowchart (Figure 32) malfunctions or is absent, it may constitute a market failure, which can justify government intervention (e.g. a design programme).

There are two ways in which the rationale for design policies may be broadened:

- in identifying opportunities to link design programmes with other government policies in order to assist industry. For instance, design may be integrated into government R&D policy, as illustrated in Figure 32;

![Figure 32: The author’s schematic representation of the interrelation between rationale and design programme – flowchart 3](image-url)
• in identifying government priorities other than industry to which design policies can contribute. For instance, design may be utilised in the health sector, as illustrated in Figure 33.

![Figure 33: The author's schematic representation of the interrelation between rationale and design programme – flowchart 4](image)

This thesis proposes the flowcharts above to illustrate the core idea that design programmes operate in a wide context. The idea of reviewing the rationale for design programmes and broadening the scope of design policies was reinforced on several occasions during this research:

• in the Literature Review, particularly in the context of policies for developing countries;
• in the primary research case studies, mostly in the approaches adopted in Korea and Finland;
• and in the investigation of categories, which covered recent concepts of design promotion.

Given this evidence, it is clear that there are more opportunities for exploring the rationales for design promotion, which is crucial for the advancement of this field of research and practice.

8.5 The interrelation between ‘national context’, ‘design programmes’ and ‘design policy’

Another relevant issue for the design policy process is the significance of the national context. The relevance of this context to design policies and design programmes is
manifest in the shape of policies and programmes in two aspects: content and delivery.

First, in order to develop the content of design programmes and policies, it is crucial to understand both the potential of design intervention and the context in which this intervention is going to be delivered. For instance, countries at different stages of economic development have different needs for government policies to address. At the lowest stages of economic development, policy must focus on building a stable system for the operation of the economy, which includes improving public and private institutions, infrastructure, education, health and the macroeconomy. At intermediary stages, policies can address the efficiency and quality of processes and products directly, through better exploitation of higher education and technology in order to improve competitiveness. At higher levels of economic development and higher costs of production, countries must focus on innovative products of the highest level of technology or design in order to remain competitive. Knowledge of the country’s needs, associated with an understanding of how design can address these priorities, is likely to result in good-quality strategies (policies and programmes) for design promotion.

Secondly, the delivery of policies and programmes is highly dependent on the national context (as analysed in Chapter 7). In this respect, the likelihood of the government supporting these strategies must be taken into consideration when the delivery plan is set up. Design promotion programmes can provide short-term results for the microeconomy, but their impact on the country’s macroeconomy is a long-term achievement. Therefore, government commitment is essential. If it is not likely to be in place, strategies must be planned accordingly (e.g. planning tangible results for short-term evaluation).

As described earlier in this chapter, in some countries the political strategy is to encourage free market competition. In such cases, government intervention is unsuitable and therefore the government is unlikely to support design intervention directly. Instead, its role is to provide a stable macroeconomic environment for
companies to operate in, including skilled human capital and infrastructure (Lall, 2004). Once this approach is understood, in these countries design practitioners must become proactive at promoting design, which may entail setting up partnerships with the private sector. The design community must then understand what is required for them to operate their businesses, which will become their demands to the government.

Further research on the interrelation of design programmes, policies and the national context might investigate the variables that affect the design activity within a country. These variables are likely to differ considerably depending on the country’s stage of economic and social development. This aspect of research would be of particular benefit in the study of barriers to policy implementation, as seen in the developing countries Brazil and India.

8.6 The interrelation between ‘national design system’ and ‘design policy’

This research has introduced the concept of national design systems, which is the network of actors (e.g. organisations, institutions and government bodies) involved in design activities in an individual country (see Chapter 6). Because this is a new concept, there is still little evidence of its interrelation with design policies. In the absence of such information, the best reference is the study of national innovation systems by the Organisation for Economic Cooperation and Development (OECD, 1997), which proposed new approaches to government technology policies.

To date, most government policies in technology have been aimed at correcting market failure (i.e. companies’ underinvestment in technology development due to their inability to understand the benefits of such investment). R&D tax credits and subsidies are some of the corrective measures adopted in technology policy. The study of national innovation systems has challenged this focus on market failure, directing the ‘attention of policy makers to possible systemic failures which may impede the innovative performance of industry’ (OECD, 1997, p.41).
In a similar manner, the study of national design systems may be able to confront the current mainstream rationale for government intervention in design (i.e. companies' failure to invest in and use design for competitive improvement), directing attention to possible systemic failures in national design systems. In conducting further investigation, researchers may be able to identify, for example, insufficient interaction between actors in the system, an imbalance between privately and publicly funded programmes, mismatches between design support and promotion programmes and other deficiencies that may be contributing to industry's poor use of design. This would be a significant contribution to the development of new policies for design.

8.7 Conclusion and limitations

After having identified categories for the investigation of design promotion, and analysed each of them separately in Chapter 7, this chapter has examined the interrelation of these categories. The objective was to use information acquired during the development of this thesis in order to propose topics for further investigation and ultimately contribute to the accumulation of knowledge in this field of research.

It is important to highlight that this chapter proposes and discusses the interrelation of categories, but it is not in a position to draw conclusions that will contribute to the comparative analysis of design promotion in national contexts. These interrelations have emerged over the process of this study, which is why evidence to support their comparative analysis was not gathered during the primary research. Therefore, the crucial limitation of this analysis is the insufficient data available to support the comparative analysis of interrelated categories.

In spite of this limitation, this chapter has presented a list of topics with the potential for further investigation:

- The economic and social benefits of design policies and programmes;
- The potential weaknesses of design education, affecting the quality of the professional design sector and, ultimately, the supply of design services to industry;
• Broadening of the scope and rationale of design programmes and national design policies;
• Political and economic factors that affect the design activity in a country;
• Political and economic factors that affect the implementation of national design policies;
• The investigation of systemic failures in national design systems.

At this point, it is fair to state that the advancement of design promotion (both practice and research) depends on broadening studies in this field. Evidence gathering is crucial to support the case for the development of policies and an increase in investment in design promotion programmes.
As the global market becomes more competitive due to the fall of barriers to communication and the opening of markets, countries find the need to strengthen their national industries. Design is seen as one route, among several, to achieve this. Consequently, the attention paid to strategies for the promotion of the use of design for business advantage has increased rapidly in the past decade. These strategies vary from initiatives by individuals to introduce design to small communities, to government programmes for encouraging the use of design by national industries, to official public policies encouraging the use of design resources.

However, as strategies for design promotion become more common and developed, research in this field is just starting to unfold, as seen in Chapter 2. To date, most of the knowledge has been based on practitioners' know-how, and publications have tended to be biased towards reporting the achievements of the various design promotion strategies. The perception of good practice in the field depends on these publications, which often omit investments made and problems encountered (cf. topic 2.7). In this process, the best published practices become references, which inevitably are copied by other regions and countries where new initiatives are set up.

Nevertheless, as also seen in Chapter 2, this transfer of practices is questionable, as it tends to disregard factors from the national context. In particular, developing countries tend to be inspired by successful strategies demonstrated by developed countries, ignoring the fact that an unstable political scenario and different national priorities may jeopardise the implementation of strategies developed in a very different national context.

The Literature Review also showed that design promotion has evolved in the context of industrial policy, exports and economic development. This narrow focus for the use
of design (i.e. product development within industry) is criticised by theoreticians, in particular when applied to developing countries, where it is proposed that design policies should adopt a more user-centred and ethical approach that would raise the population’s quality of life rather than only benefiting economic development (cf. topic 2.2.2).

Over time, many studies have tried to (1) assess the impact of design in the national economy; (2) measure the impact of design programmes within national industries; and (3) compare design programmes from different countries. However, limited results have been achieved mainly due to (1) the difficulty of isolating the results of design from the context; (2) the limited data collected by practitioners during the implementation of programmes; and (3) the lack of consistent and comparable data between countries. Despite these limitations, some comparative studies have been developed, mainly through benchmarking. These studies are usually based on the description of the process developed to implement the design promotion strategies. The study of these strategies in their specific national contexts was a gap in knowledge that had not been investigated (cf. topic 2.7).

Therefore, the aim of this research was established: to lay foundations for improved practice as well as further systematic research in the field of promotional programmes and policies for design. This aim would be explored by three key research questions:

- What is the relevance of the social, political and economic context in the development of strategies for design promotion?
- Is it possible to identify factors that are particularly relevant to the efficacy of design promotion in the selected subject countries?
- Do these factors suggest differences between advanced economies and developing countries in terms of their approaches to design promotion?

The grounded theory (GT) approach was adopted for this research mainly for its appropriateness in addressing fields that remain under-researched, as in the case of design promotion. GT, being a theory-building rather than a hypothesis-testing
approach, was suitable for the context of this study, which combined qualitative and quantitative research methods. In exploring a new field of research, it was important to have the flexibility of building theory and modifying the data gathering and analysis process as it evolved, absorbing and testing new concepts as they emerged, opportunities created by the application of GT.

In order to investigate the topic and build grounded knowledge, three distinctive studies were planned: (1) the evolution of design promotion over time; (2) the incidence of strategies for design promotion around the world and their correlation with countries' competitiveness; and (3) the use of design promotion strategies in four individual countries. The first two were developed based on secondary research and surveys. The third study contained four case studies, developed through a systematic methodology consistent with GT. In line with this approach, the research evolved through a constant comparative method. The main source of data consisted of the interviews conducted in the four countries, for which theoretical sampling was adopted.

9.1 Reflecting on the research questions

The first Chapter of this thesis presented three research questions that guided this study. The questions are repeated here to show how they have been answered through the data collected and research findings:

9.1.1 What is the relevance of the social, political and economic context in the development of strategies for design promotion?

Study one presented in Chapter 4 has shown that there is a complex interrelation between social, economic and political events and the establishment of design promotion strategies. The historical review suggested that the great exhibitions of the 19th Century were the first important series of events for the promotion of industry and industrial design. With large government investments and in the context of rapid economic and industrial growth, these events aimed at encouraging competition among industry and therefore its improvement.
In Scandinavia towards the end of the 19th Century, the first design organisations were established based on design associated with arts and crafts. Svensk Form and Design Forum Finland are two of these organisations, which are still in operation.

The next important time for the establishment of design centres was post the Second World War period, when the design sector was playing an important role, along with architecture, in the reconstruction of countries and the improvement of citizens’ quality of life around the globe. It was a time when industry benefited from the combination of optimism, consumerism and demand for products. Many national programmes for design promotion were established in this period.

In the past three decades the fall of physical, political and communication barriers has also encouraged design promotion programmes. Eastern Europe and Asian countries invested in their own design programmes, aiming to enhance the competitive advantage of their products in the worldwide market.

The expansion of design promotion strategies – including policies and programmes for design – across the world was characterised by the exploitation of design for economic development and market competition. In this context, design policy emerged from industrial policy. Government intervention programmes were justified in cases of market failure.

Recently, however, this focus has been questioned. The broadening of the use of design, the better understanding of design’s strategic role for businesses, and the example of successful government policies for design has had an impact on the perception of strategies for design promotion. There is an increasing interest in strategies at policy level as opposed to isolated programmes. Moreover, the industrial focus tends to shift towards the use of design for the improvement of national infrastructures, services and systems. The current most important paradigm shift in the field of design promotion strategies is their integration into cross-disciplinary policies for innovation and sustainability.
The Chapter examined the history of strategies for design promotion. The most important conclusion was the interrelation between their evolution and historical facts. It is indicative that some key events (e.g. the Industrial Revolution, the Post-War period, the recent fall of communication barriers, economic crises) have generated a demand for design, which, in turn, stimulated the implementation of programmes for design promotion and their related public policies across the globe. This understanding confirms the issue raised by the research question: social, political and economic context is relevant to the development of strategies for design promotion and consequently the fundamental importance of developing the ability of interpreting economic and social context in order to drive the advancement of strategies for design promotion (cf. topic 4.6).

Study two, presented in Chapter 5, has proved that there is a relationship between economic development and design promotion strategies. The findings proved that design promotion, in the form of government programmes and policies, is present mainly in the most competitive countries. In a comparison of the use of these strategies with the stage of countries’ development, it was possible to identify strong willingness for investment on such initiatives among countries on the transition to the highest stage of development (cf. topic 5.3). It is recognised as a limitation of this research that the presence of a comprehensive design strategy cannot be considered a guarantee of economic success. However, this research demonstrates that strategies for design are part of the most competitive economies (for example, 77% of countries on the highest stage of development – according to the World Economic Forum Competitiveness index 2006-2007 – have design promotion programmes in place, compared to only 4% of countries on the lowest stage). The exploitation of a comprehensive design policy is certainly beneficial, considering the focus and coordination that it brings to a country in order to enhance economic competitiveness. This study demonstrates the relevance of the social, political and economic context in the development of strategies for design promotion, though elucidating the strength and direction of this relationship is a subject for further research.
The investigation was further developed through case studies. Interviewees were asked about their opinion on how the social, political and economic context influences design promotion in their countries. Evidence from these interviews have revealed in particular the challenges of running design promotion in bureaucratic and unstable political conditions (as reported by interviewees in India and Brazil), in contrast with supportive and continuous political system (as reported in South Korea) and low hierarchies in small organisations that create conditions for implementing programmes (as reported about Finland). Further research based on policy and research documents in these countries has confirmed the contrasting political and economic conditions in which design promotion is implemented in these four countries (cf. topics 7.6.1 and 7.8).

This thesis presents strong evidence to suggest that social, political and economic context is highly relevant to the development of strategies for design promotion, therefore addressing the first research question.

9.1.2 Is it possible to identify factors that are particularly relevant to the efficacy of design promotion?

At the outset of this research programme, there was indication that design promotion activity was directly linked to the industry needs and economic development and that social issues were present in design promotion strategies in developing countries. These two concepts have evolved significantly during the course of the research. Through GT, it was possible to investigate new factors that emerged during the course of investigation, in particular during the interviews. For example, there was no evidence from the literature review of the relevance and importance of design education and the professional sector in the development of design promotion. However, interviews in South Korea and India indicated how strategies addressing design education can be of fundamental impact in the overall strategic plan for design promotion. Interviewees in South Korea described that the number of design graduates was identified as an early weakness of their system. As a consequence, the Korean design policy immediately set targets to address the deficiency. This strategy
was developed in line with the low levels of unemployment in the country. In contrast, it was learnt from interviewees in India that the level of recognition to design education is a barrier to the profession, and should be addressed by the national design policy.

Equally, the relevance of the national context was reinforced by the particularities presented by interviewees about their countries, as well as by the findings that addressed the first research question described above. In understanding their criticisms of their national policies, it became clear that their national contexts were paramount in the shaping of design policies. This study identified seven factors, which although not exhaustive, represent fundamentals that must be understood for a cohesive design promotion strategy:

- **DESIGN POLICY**: Overall, design policies are government strategies that aim to develop national design resources and/or to encourage their effective use in the country. One aim of these strategies is to create an environment where design and creativity can flourish; where companies are encouraged to develop their own products and services by making use of the expertise of design professionals; and part where the public sector works with designers in order to improve its processes and therefore provide good, accessible and inclusive services to the population.

- **DESIGN PROGRAMMES**: While design policies determine a strategic vision and plan for the use of design in a country, design programmes are the means by which these policies are encouraged or even delivered. Programmes can work directly with businesses and the public sector, providing SUPPORT for the effective use of design, or can focus on the general PROMOTION of design.

- **DESIGN EDUCATION**: Education should be an integral part of design promotion strategies, ensuring that the number, quality and expertise of design graduates formed in the formal design education system are sufficient to meet the expectations envisaged by the policy.

- **PROFESSIONAL DESIGN SECTOR**: A strategy for design promotion must monitor the design sector's capability and encourage their continuous development. This is seen in various countries as either being able to help realise design
policy by serving increased demand or as constituting a key element in promoting design.

- NATIONAL DESIGN SYSTEM: The implementation of design policies requires action by a complex network of actors who accumulate experience, knowledge, capabilities and leadership in their own areas. Promoting design demands an integrated approach among these various stakeholders, which include government, the design community, industry and academia.

- RATIONALE: This used to be based on economic development, competitiveness and market failure. Recently, there has been a trend to expand this rationale to address social issues and systemic failures (i.e. any barriers to the effective interaction between the national design system’s stakeholders, as they may be contributing to the poor use of design). Understanding the rationale behind design promotion is crucial and fundamental in building a theoretical base for the development of strategies in this field.

- NATIONAL CONTEXT: Government policies are not implemented in isolation; rather, every policy or strategy created operates within a context, with direct or indirect impacts from other policies and the environment. Design is no exception. Recently there has been a great deal of excitement over convenient new ways for knowledge sharing and know-how exchange. This allows anyone to learn from the experiences of others who are addressing design promotion or similar challenges. Whereas this brings endless opportunities for learning, the benefits incur a cost. The transfer of models from other countries may save time and resources that would otherwise be spent on tailoring and justifying a programme. But, when this stage of development is neglected, there is a risk that the unique characteristics of the country to which it is being applied will also be neglected.

9.1.3 Do these factors suggest differences between advanced economies and developing countries in terms of their approaches to design promotion?

The factors were investigated separately in the comparative analysis of the four subject countries (Chapter 7). For the purposes of this comparison, Brazil and India
were the representative subjects for developing countries, while Korea and Finland represented advanced economies. Each topic presented a different pattern that indicated differences or similarities because they were advanced economies or developing countries. Fundamental differences were identified in the categories RATIONALE, DESIGN POLICY, NATIONAL DESIGN SYSTEMS and NATIONAL CONTEXT, confirming the contrast in approaches to design promotion taken between advanced economies and developing countries in relation to these factors. The review of DESIGN EDUCATION and PROFESSIONAL DESIGN SECTOR did not result in a conclusive outcome (cf. topics 7.3 and 7.4 respectively). The relevance to design promotion strategies of these two factors emerged clearly in the latter stages of the research. Although there was not enough evidence to quantify any relationship, they are highlighted here as being important issues to be investigated in future research.

The analysis of RATIONALE showed that advanced economies have started to broaden the scope of their design policies, covering issues such as social inclusion, sustainability and urban development (see the example in Table 25). In contrast, in developing countries, design promotion remains primarily focused on the increase of design awareness among businesses, mainly manufacturing industries, for economic development. In these countries, the potential of design to contribute to solutions that will improve people’s quality of life is still not actively exploited by governments. Evidence of this was revealed by interviewees in Brazil and India. It is the advanced economies that have been exploring ways to associate design with other government policies such as environment, health care and education (cf. topic 7.5).

In terms of DESIGN POLICY, the main contrast between advanced and developing countries is in the delivery of policies (as visually represented in Figures 24-27, which are based on information provided by the interviewees). Korea and Finland demonstrated significantly better performance in the accomplishment of the design policy cycle. This research findings suggest that the delivery of policies is linked to the country’s governance profile (i.e. the characteristics of the exercise of political authority in a country, including the use of institutions and resources to manage the
society), which should be taken into account at the initial stages of any design policy planning in order to avoid failures (cf. topic 7.6.1).

In advanced economies, government institutions play a key role in the NATIONAL DESIGN SYSTEM, performing leadership and control over the policy process and the delivery of design programmes (this is explained by interviewees in Finland and Korea, and visually represented in Figures 15 and 16). In contrast, in developing countries there is a larger participation of private and non-profit institutions (see Figures 17 and 18), including sources of finance for design initiatives without a central coordination (as played by government in the advanced countries) – the research suggested that this structure presents a weakness in the lack of coordination and consequently lack of synergy between programmes, which jeopardises the potential impact of design intervention (cf. topic 7.7).

The comparison of NATIONAL CONTEXTS (i.e. the specific social, economic and political context in a country) in India, Brazil, South Korea and Finland produced sharply divergent results. In Chapter 7, topic 7.8, this research shows evidence of the national context’s relevance to design promotion strategies, emphasising factors such as the political system, bureaucracy, public procurement, consumers’ sophistication and geographic issues. For example, interviewees in India and Brazil manifested their concerns about national schemes that neglect the fundamental differences between the countries’ regions. None of these factors are directly related to design. However, based on the interviews and further desk research, such issues were proved to be critical in the environment in which design promotion is delivered. The impact of the national context in the delivery of policies in the four subject countries was clearly large. This reinforced the theory that the national context should be acknowledged in both advanced and developing countries in the preparation of strategies for design programmes and policies. Which suggests that this could be the case in every country, irrespective of its level of economic development.

Despite all these differences, the models by which strategies for design promotion are delivered (DESIGN PROGRAMMES) do not follow a pattern that would differentiate
them in advanced economies and developing countries. This research identified models for design support in Brazil and Finland, while South Korea and India were opting for models for design promotion that would not necessarily directly target companies (cf. topic 7.2). A programme delivered in Brazil (Criacao Parana), for example, was transferred from the UK (Glasgow Collection). The programme studied in Finland, delivered by the Ministry of Trade and Industry, had similarities with another programme described in Brazil (Fabrica do Agricultor). Overall, all the countries promote design prizes. The original policy for design in South Korea was inspired in the practice seen in Japan. This indicates that design programmes are transferred between countries, systematically (through official agreements) or not (inspired by examples or by an informal exchange of ideas), and that no patterns can be identified contrasting design programmes in advanced economies and developing countries.

9.2 Grounded research – personal reflections

The researcher also hopes that this body of work will contribute to new knowledge by providing an example of the application of grounded theory in the field of design research, demonstrating that this approach can contribute towards the development of an under-researched field, adding theories as well as informing practice. As a personal reflection, the researcher recognises the value of the constant comparative method, which, associated with theoretical sampling, provides the opportunity for the researcher to pursue and investigate specific concepts that emerge during the process of investigation, without jeopardising the validity of the method. There was also the opportunity to abandon or to refine various lines of enquiry. For instance, after the first batch of interviews it became clear that the analysis of individual design programmes developed in the subject countries would not offer a true perspective of the type of strategies adopted in that country. Instead, they would only represent a short period of time, and the chosen strategy of one specific government. For this reason, the author opted for reviewing the history of strategies adopted in the country, rather than the current practice. Also, the use of official indicators such as GDP data and population were abandoned, as they did not provide real representation of the dynamic and complex national systems under investigation.
GT’s adaptability is no doubt an attractive aspect for design researchers. However, it is important to highlight here that this freedom may also be a risk, considering the difficulty in identifying the limits to the adaptation. For this reason, this current research has paid particular attention to the systematic aspects of GT, in particular the principles of theoretical sampling and coding analysis. The coding process was particularly valuable in the process, as it provided a systematic approach to the analysis of qualitative data, in this case the interviews.

The use of the GT approach has allowed for interesting outputs in this research. The process of identifying emerging categories has revealed elements that could have been overlooked by the researcher if a specific hypothesis had been set at the start of the project. As an example, the researcher can highlight the inclusion of ‘design education’ among the final framework. At the beginning of this research, ‘design education’ was considered a distinct and separate field of research and practice. Indeed, at government level, design education and design promotion are dealt with by different ministries or departments. However, during this research, ‘design education’ emerged as an issue of great importance in the context of design promotion and therefore is now highlighted as one of the key factors to be observed in the research and practice of design promotion. ‘Design education’ is an example of a category that unexpectedly emerged from data during the research process, as a direct result of the use of GT.

9.3 Research limitations

Within this conclusion, it is important to acknowledge the limitations that restricted this research and their potential impact on the research findings.

The first and foremost limitation was the shortage of evidence available about the performance of design programmes and the impact of design policies. This type of evaluation can only be obtained through co-operation between researchers and practitioners, one creating methods and the other making data available. It would, however, require a long-term analytical process in order to compare scenarios before
and after the programme’s implementation. Therefore, from the beginning of the project, it was clear that the research methodology had to be designed in such a way as to avoid the immanent difficulties of collating data about the achievements of design programmes and policies over the long term.

The second limitation was the ‘fuzzy’ nature of the research topic. Being a topic that has been only recently explored in academic studies, the field was lacking terminology and definitions, what caused some problems during data collection. This was further complicated by the constraints of gathering data and interviewing individuals in non-English-speaking countries. In order to minimise these problems, there was a significant exploitation of visual representation and graphics during the primary research.

Taking into consideration the limitations of the data and the complexity of its terminology, the research methodology defined an exploratory process based on a combination of qualitative and quantitative data.

The third limitation to be acknowledged here is the size of the sample, which included four subject countries spread across three continents. This number was suitable considering the time and resources available for the in-depth investigation of design promotion in a range of national contexts. Critical attention was once again devoted to the sample’s selection criteria in order to attain subjects that would be representative of their economic groups. While this objective was achieved in most of the analysis, the subjects could not be considered representative in some individual categories (see India and Brazil in topic 7.3). Whilst the sample was sufficient for comparative analysis, unquestionably this research would benefit from an investigation into a larger sample of subject countries.

It is also important to acknowledge that this thesis was largely reliant upon the experiences and opinions of the interviewees, who were selected through systematic criteria that qualified their eligibility and relevance as subject samples. Although their perspective was fundamental in developing an understanding of design promotion in
their respective countries, it would be interesting to test whether further data collection would reinforce the patterns identified in this research.

9.4 Contribution to knowledge

At the beginning of this project, the researcher highlighted the shortage of academic studies and theories that could serve as references for the practice of design promotion. The researcher (who is also a practitioner) questioned whether a review of design promotion could contribute to the direction and advancement of programmes and policies in design. The researcher was concerned about enabling practitioners and researchers to rethink practice and to look for possible reorientation based on substantive theoretical base. In the absence of formal theoretical rationales and empirical studies, the researchers ruled out any hypothesis-testing, and opted for a theory-building approach, consequently selecting grounded theory as the most appropriate mechanism for conducting the study.

The most important contribution to the field of design research made by this study is the identification and development of knowledge and parameters in the area of design promotion developed during the investigation of the three main research questions (described in more detail above in topic 9.1).

This thesis' first study (Chapter 4) has provided an historical background of the practice of design promotion. The second study (Chapter 5) has developed evidence indicating a contrasting exploitation of design promotion, support and policies in countries of different stages of economic development through statistical analysis of the results of a survey across 44 countries. The third study (Chapter 6) contributed with case studies, of which interviews became the most important source of data for the comparative analysis. As result, the research makes the following contributions to knowledge:

The social, political and economic context in the development of strategies for design promotion. This research has demonstrated the interrelation between social, political and economic context – as demonstrated statistically in Chapter 5 – although further research
is needed to establish the strength and direction of any correlations. Interviewees and further desk research also indicated that the delivery of design policies is directly affected by the political context in the country (cf. Topics 7.6 and 7.7). Learning about how historical events (e.g. war, economic crises, and government changes) have been key to the implementation or disruption of design promotion programmes (cf. Chapter 4) also shows the relevance of the social, political and economic context to this practice.

Factors that are of relevance to the efficacy of design promotion in the selected subject countries. The research findings based on the analysis of the interviews revealed the most relevant parameters that need to be understood in the development of design promotion (cf. Chapter 7) are:

- DESIGN POLICY: To create an environment where design and creativity can flourish, where companies are encouraged to use design, and where the public sector uses design to improve processes for the population. It is the formal structure of strategies for design promotion.
- DESIGN PROGRAMMES: The means by which strategies for design promotion are encouraged or delivered.
- DESIGN EDUCATION: An integral part of strategies for design promotion, ensuring that the number, quality and expertise of design professionals are sufficient.
- PROFESSIONAL DESIGN SECTOR: To help realise the design promotion strategies and or as a key element in promoting design.
- NATIONAL DESIGN SYSTEM: Design promotion requires action by a complex network of actors who accumulate experience, knowledge, capabilities and leadership in their own areas.
- RATIONALE: Strategies for design promotion most commonly address market failure and industry competitiveness; however, new trends show the evolution of the strategies towards social innovation.
- NATIONAL CONTEXT: Design promotion strategies should not be implemented in isolation; every policy or strategy created operates within a context, with direct or indirect impacts from other policies and the environment.
Whilst the above individual factors are not original, this research is the first to present them together in a system, providing definitions, comparative facts and proposing their interrelation in the context of design promotion strategies.

**Differences between advanced economies and developing countries in terms of their approaches to design promotion.** The research presented four factors that suggest contrasts (cf. Chapter 7): rationale, design policy, national design systems and national context. For instance, the effectiveness of the delivery of design policies is contrasted in the four subject countries, as demonstrated by the investigation (see Figures 24 to 27). In arguing these differences, the researcher has drawn attention to the importance of national contexts (i.e. the political, economic, social and cultural aspects in which programmes and policies for design are embedded) in the analysis of design promotion strategies. As presented in the Literature Review, studies to date tend to overlook this aspect, which is here identified as highly influential for the effectiveness of design promotion practice. Therefore, this research has provided a benchmark that compares the development and implementation of design promotion programmes and policies in relation to national context. In doing so, it has addressed a gap in knowledge.

Finally, this study’s contribution to knowledge in design research can be highlighted in the **application of GT to the investigation of design promotion, the use of graphic elicitation** during the interviews (in the development of national design systems mapping) and the **exploitation of visual representation** in some of the findings. ‘Representation is a key component in making sense of a complex system’ and it requires a combination of different types of visualisation, interrelated by a common taxonomy (Koehler, n.d.). Consistent with the GT approach, the development of **maps of National Design Systems** has emerged as an important contribution to practice, in particular to policy-making in the field of design. The model of a ‘National Design System’ has proved to be a valuable tool for developing an understanding of the network of design activities within a country. However, further attempts must be made towards decoding the diagrams, and interpreting and analysing the knowledge gathered. As a result, the diagrams will become a tool for the analysis of systemic failures in the development of policies and programmes for design.
For the researcher, it seemed that in order to pursue effective practice, it was vital to first identify parameters and references before attempting to apply rigorous theories or to test hypotheses. Being in the position of a practitioner, at the same time as undertaking this research, was crucial for the author to be able to gauge the applicability of this research. This research is valuable to the extent that the knowledge can be shared with other practitioners and researchers in order to help understand and develop design promotion to advance in its effectiveness. This thesis main contribution is in establishing baselines for further systematic research, whilst identifying and developing key parameters which must be taken into account in developing strategies for design promotion.
Acknowledgments


Teubal, M. (2002). What is the systems perspective to Innovation and Technology Policy(ITP) and how can we apply it to developing and newly industrialized economies? Journal of Evolutionary Economics, 12(1/2), pp.233-257.


Thorpe, A. (2009, 27 January). Design policy, more thoughts, long-ish. Message posted to group PhD-Design@Jiscmail.ac.uk
http://dori3.typepad.com/


Taiwan: International Association of Societies of Design Research (IASDR).

Shaping the Global Design Agenda Conference. Core77, Retrieved 15 January 2009 from
http://www.core77.com/blog/events/the_best_design_policies_are_local_a_review_of_the_s
haping_the_global_design_agenda_conference_11798.asp

control during graphic elicitation in qualitative interviews. International Journal of Research &


Publishers.


Appendices
Appendix A: Definitions and clarification of terms

The definitions below intend to clarify terminologies that are widely employed in this thesis:

Design programmes, design initiatives or design interventions
These terms are used to describe delivery mechanisms of government design policies and mechanisms implemented by individuals willing to promote design.

Design policies
'Systematic government efforts aiming to develop national design resources and to encourage the effective use of these resources by firms for increasing national economic advantage in international markets'. This definition by Er (2002) is the most appropriate for the context of this research. However, in this study, design policies' aims are not restricted to international markets, but also employed in strategies for internal markets and social development.

Strategies
"Strategy is a plan for putting resources into a position most likely to achieve the desired objectives effectively in a given situation." This definition is provided by Sidney Gregory (cited in Chung 2008) and is applicable in the context of this study. Here, 'design strategies' will include the various approaches for design promotion, which are mainly programmes and government policies.

National context
For this research purposes, national context characterises the environment where design strategies (programmes and policies for design promotion) operate. It includes economic and political scenario, culture and social issues in a country, which are issues that may constitute favourable factors or obstacles for the development of design policies.

National design system
It comprises the collection of stakeholders for the design activity in a country, and their interrelation.

National competitiveness
According to the World Economic Forum, national competitiveness is the 'set of factors, policies and institutions that determine the level of productivity of a country. A more competitive economy is the one which is likely to grow faster in a medium to long-term perspective' (Lopez-Claros et al., 2006).
The Global Competitiveness Report
The Global Competitiveness Report provides information related to policies, institutions and factors that contribute to boosting countries' productivity. Published yearly by the World Economic Forum, it is used by policy-makers and researchers, governments and academia, to identify barriers and good practices in creating a supportive environment for high-quality economic growth (Lopez-Claros et al., 2006). The 2006-2007 Report was the source of information for this research.

Stages of Economic Development
125 countries are displayed in the Table ‘List of countries/economies in each stage of development’, which is published in the Global Competitiveness Report 2006-2007 (Lopez-Claros et al., 2006, p.13). Countries are classified by GDP per capita into 5 columns: Stages 1, 2, 3 and transitions. It is a reference for the analysis of policy priorities, according to the position of the country in the table.
Appendix B: The author’s biography

Gisele Raulik-Murphy graduated in Graphic Design and Industrial Design at the Paraná State Federal University (Brazil) in 1999. This was followed with a postgraduate diploma in Strategic Planning and Business Management at the FAE Business School, Curitiba (Brazil). Under the British Council scholarship programme she then gained a Masters with distinction in ‘Design Strategy and Innovation’ at Brunel University (UK) in 2003.

Prior to taking the Masters course she worked for the Centro de Design do Paraná (Brazil) for five years. In this organisation, her main role was providing advice to companies on the application of design in product development and business branding. Moreover, Gisele was responsible for execution of design promotion programmes and co-ordinated several Design to Business seminars and design exhibitions.

Since arriving in the UK in 2002, Gisele worked for the Design Council in London before being invited by Design Wales to organise the first IWDS - International Workshop on Design Support, which took place in Cardiff, Wales in May 2004. Gisele has since continued working as a senior researcher for Design Wales. Between 2005 and 2007 she coordinated the SEEdesign programme, an EU funded partnership of European design organisations for the sharing of information on design support. In 2008 she worked on the successful proposal for the project’s extension, renamed SEE – Sharing Experience Europe – Policy, Innovation & Design. The project was approved for European funding and recommenced in September 2008, bringing together a group of 11 partners focused on influencing regional and national policies for design in European countries.

Gisele’s studies for her Masters Degree and subsequent research work have been dedicated to understanding models for national design policies and design organisations, focusing on developing a better understanding of the nature and effectiveness of models for design promotion and support serving the SME sector and national economic development.

In addition to her academic publications, in the recent years, Gisele has been invited as a guest speaker, facilitator and consultant to several conferences and workshops:

Jan.2010 Challenges of design promotion in Europe Conference
Paris, France

Sept.2009 Design – an asset for European competitiveness and quality of life
Copenhagen, Denmark

Mar.2009 UK Design Support Network
Chelmsford, Essex, UK
Mar. 2009  Design Futures Conference
           Brunel University – London, UK

Jan. 2009  Expert Group Meeting – International Design Scoreboard
           London, UK

Nov. 2008  Shaping the Global Design Agenda
           Torino, Italy

Nov. 2008  Design Management Europe Workshop
           Barcelona, Spain

Jun. 2008  Design as a Tool for Innovation Workshop - European Commission
           Marseille, France

Jan. 2007  Challenges of design promotion in Europe Conference
           Paris, France

Jan. 2006  Wzonictwo – Culture and Economy Conference
           Warsaw, Poland

           Seoul, South Korea

Jan. 2005  Challenges of design promotion in Europe Conference
           Paris, France
Appendix C: Original Interview Protocol

Case Study components (Yin, 2003):

1. The study’s question
What are the similarities and contrasts between design promotion and policies in Finland, South Korea, Brazil and India?

2. The study’s proposition
Finland, South Korea, Brazil and India are at different developmental stages, according to the World Competitiveness Index (WEF). Different national contexts should demonstrate different strategies for design promotion, in coherence with their positions, weaknesses and strengths.

3. Units of analysis
A. Country’s profile: Includes brief historical review, aiming for a parallel between the country’s recent history and design strategies.
B. Design system: Aiming to identify the main design programmes, in particular the ones targeted at SMEs. Two or three programmes would be selected for micro case studies.
C. Design strategy: Aiming at understanding the national design policy or the proposition/studies for the implementation of a policy.

List of questions/topics explored in the interviews:

Factual data:
- Number of design schools
- Year of foundation of first dedicated design school
- Year of foundation of first design centre
- Design promotion programme(s) for raising the awareness of design
- Design support programme(s) for helping companies to make better use of design
- Design centre (with space for events and/or exhibitions)
- Design museum
- Tax incentives for the use of design
- Credit/financial support for the use of design by businesses
- Important design awards
- Who financially supports the activities in design promotion?
- Who is responsible for running the activities of design support and promotion?
- Which ministry or government department is responsible for developing design-related policy for economic development?
- The existence/development of a design policy

Questions
- What is the organisation’s history?
- What are its activities?
- Who are the target audience/public?
- Who sponsors the organisation?
- Are they the same body who sets up aims, objectives and activities?
- What are the organisation’s objectives?
• How are you evaluating if the objectives are fulfilled?
• What is this organisation’s role in the implementation of a national design policy?
• How did this organisation evolve over time?
• Who is responsible for the current design policy/programme agenda?
• Were there other national design policies/design programmes in the past?
• What was the methodology for developing the policy/programme?
• What is the approach for implementing the policy/programme?
• What is the main goal?
• What will indicate that this policy/programme was successfully implemented?
• What is the rationale for design promotion in this country?
• How do you expect design to contribute to the country’s development? And more specifically its contribution to economic development?
• Any emerging priorities for the next five years?
• How flexible is the policy/programme along this timescale? Do you monitor and adapt the plans during implementation?
• If the policy/programme had been planned in another time, in what aspects would it be different?
• How is this policy integrated into the government agenda/plan?
• What is the importance of design for the country’s economic development? What is the importance of design in the country? How is it exploited/encouraged by the government? Has this changed over time?
• What are the main barriers for promoting/encouraging design in this country?
• What are the main opportunities to be exploited in design promotion?
• Are there political/economic/social/cultural barriers jeopardising the effective use of design by companies/government/population in this country?
• What are the most important design support programmes for SMEs in the country?

Specific question to individual design support programmes for SMEs
• Who runs the programme?
• When did this programme start?
• How did it start? (Why? How? Any champions?)
• Is it still ongoing?
• What is the main objective of this programme?
• Who is the mechanism targeted at?
• Which staff are involved in the delivery of this project/mechanism? What are their professional profiles/backgrounds?
• What is the budget available for this programme/activity?
• Who sponsors it (local government/EU grant/private initiative)?
• How is this mechanism inserted into the context of the organisation? (e.g. how important is this mechanism compared to the organisation’s other activities?)
• How does the programme/mechanism operate? Can you describe the stages/steps of the process?
• How many companies were involved? From which sectors?
• Why is this ‘good practice’? What are the benefits it brings to the clients?
• What are the results achieved? And tangible outcomes?
• What do you highlight as key factors for the success (or failure) of this programme?
• Are there any barriers to the improvement or success of this programme?
• Are there any formal measurements of the effectiveness of the programme?
• How does this programme fit with the larger picture?
• What are the highlights of this implementation journey? And lows?
• Are there any future challenges to be tackled by the programme?
Extracts of interviews’ transcripts

...We are boosting the economy, pointing out those stress points, ‘this is a good thing in the future’. But then we are changing our funding to some other point, we’re always creating new things that might boost the economy. So what we are doing is short period moves to some parts of the economy and then we move on to the next new boost, so we are not staying there. If someone wishes, to do an application based on industrial design in the R&D work if it is already on the reactive side.

So it doesn’t mean you are not interested in design, but just that you don’t have a programme at the moment, is this correct?

That’s true and we’re not having the same programme any more, except Fusion and Reaction, the programme which has been running for 15 years and will continue for another 20 years. Making an energy out of water, so that will always take 50 years. But just a couple of days ago I made a check on how much money we have been investing in this area after the programme and you could see that the academic side used to handle 1 million euros per year, and then 1.5 million euros on the company side. So last year this was something like 2 million and this was something like 1.5. This year this is only 1 million but this is already 2.5, so it has increased after the programme. The funding is, say, 50% more, but I have to say it’s very hard to find these projects because it’s all on the reactive side, we’re not helping them at all, so we have to go through 300 projects and think: would these fit in the industrial design programme or not? You can’t find them there, so we are not having exact numbers.

During the programme, we did, because we are showing these numbers beforehand. The board members, you are reserving beforehand so you know. But now when they are on the reactive side we are appointing them only if they are good or not.

Do you conclude that the programme was a success in boosting companies’ interest in design?

When the evaluation was going on we had 4 different programmes evaluated at the same time and we were quite pleased to have this type of answers from those companies, the general significance of the programme in promoting expertise, They mostly thought it was very significant, so at least all those customers thought this programme a success, it was very different from the other 3 evaluated programmes.

Was this programme targeted at SMEs?

Companies in general. This was also quite interesting. The most important effect of new knowledge or expertise created by the programme: generally increasing awareness of the importance: 70%.

What were the weaknesses and the strengths of the programme?

Maybe frustrations?! What we found was that the structures inside companies are not very well organised to understand the knowledge we created in these university projects. They think that industrial design is just someone drinking wine and having long moustaches and coming in and saying “I’ll draw you some lines”. But we really had to bang our heads against the wall of traditional thinking about what a designer is. People in Finland are not aware of them as a strong tool to help them find customers, users, their position in the market.

Because design as a tool works in two ways – first in R&D work and second as a strategic tool. So you can position, you can compare yourself to your competitors, you can make a strategic position in the market based on the knowledge of using industrial design in a strategic way. This is the 2nd point and to come to this level you have to start using industrial design in the basic R&D project and then when you have hired the designer into the company and you think they might have a point when they say you have to think of the customer, usability, make a focus group and gather information to make a better product. Here it’s usually only used at the very end of the R&D process, but the more you get used to using this kind of ability...
It's a good way to analytically look at this because economists like to measure everything and what we have tried to do a little bit in some of the studies is to look at not the government support or the role of that in the direct design input, so I then ask that a firm are putting that much in design and then we ask what is the effect or what is the consequence or what's the effect of the performance of their companies from their design and then we ask what is the role of government support in the input side and try to separate the effect of government support so it's a very difficult job to do and we have done it for research and development but not for design because we don't have that much direct support for design. But this is a good way of thinking. I don't have any good answer to you so which one has been effective or not.

My main interest in this interview is to hear about your view and experience on design policy. To make the long story short, there is not a single person who can claim design policy or design management. Design is a very broad concept. Policy is also very broad. Thousands of people may argue that I started the design policy. I made one of them but there is no reason to claim that I started the first one. I'm not a designer. It is already more than 16 years that I've been in design so I'm not anymore an outsider but indeed designers in Korea still consider me an outsider even though I've spent more time than most of the professors in Korea. The reason is they are concerned of designers when they go through the various rigorous process of apprenticeship, when you had to work under your master for years and year, sharp the pencils of your master and clean the room and so on, so a kind of apprenticeship period. And designers still learn and practice through this apprenticeship rather than in the classroom. I didn't go through this apprenticeship. So when I was fully grown up there was no one to take me through this apprentice but the other way around without going through this practice. But still I had developed a framework as a management professional, which was my discipline. My role was to link management and design and in particular my field of study was management strategy, policy and planning, so it was very natural for me to incur into design policy and design planning. It was 1992 when I first got to know the importance of design. This was in Japan, I was a visiting professor at the University of Tokio and I was studying the industrial policy of Japan and when I visited the general industrial policy bureau of the ministry of Commerce in Japan he told me that the ministry of future, they were looking for to develop the industry, what would become important in 10 years ahead. So what the ministry was doing for the future, this was in 1992, so in the 20th century. He pointed out the design industry. Until there I thought that design was not an industry, I had never think of design as an industry, it was simply as a technique to apply to products in the industry. He frankly said that Japan was still not the best of the country because of the lack of design discipline. So I thought that making the same thing so we had the very fist spirit of rivalry between Japan and Korea. It was 1992 when I came back to Korea and met the ministry of Industry and I emphasised the importance of design industry and which developed the design policy.

When you talk about the design industry do you talk about the design professionals, consultancies or about the industry that produce design?

It really depends on who you are and how you want to define it. Design industry can very
small probably at the core of this is the industry of design consultancy companies and then you can cover the entire universe. If you read my paper where I elaborate the design revolution indeed my frame will be probably the widest and broadest of all of us in the design industry. It covers the existing industry, the existing designs but also the design industry, music production is also design, anything. And then I'm going to extend to product, You can design a new religion, you can design a new university, you can design a new government assistant, experiment, you can design anything, until God who has designed the whole universe. What is everything until a concept of design so the whole world can be conquered with design. Design is a part for the world or unify it, so indeed for me design can be anything, so design policy can be not only to help design consultancy but you can have also help to tell us how to live our life better. That can be also design. Not only our physical life but also your spiritual life. You can have new religious leaders to attract more people. That is also design and also design policy. So indeed, design policy can be anything. Design policy is more a concept than a practice itself. And the concept that you adopt will depend on where and who you are.

How does the government translate it into policy?
It was 1992, 93. I was quite influential at that time because I was not a designer. If designers come to the government and ask for emphasis on design it is quite a routine. But since I am not a designer, I'm a manager strategist; I mean the importance of management and then I was arguing the importance of design. So the Ministry of the Industry who was a close friend of mine, who knew as well about the importance of design and spent several months looking at it. When I was at this study in Japan he was also there and then he became the minister, he helped the then president to win the election. So I?? the importance of design and they immediately took it. Over 2 or 3 years, they increased the design budget from 3 to 4 times, from less than 30 million dollars to more than 100 million dollars so the government put a lot of attention and designers in Korea were in a situation ... Designers had to swim in the sea of government support. And I was at the government emphasising the importance of design policy. First I was not a designer. You need a person who is not a designer to emphasise the design policy. Secondly the fact that Korea was behind of other industrial countries, specially Japan, that fact is very important because Korean government wanted to overcome or at least to match the level of Japan. So Korean government had this impetus of emphasising policy. So indeed Korea spent more money in design than Japan because of this. So I think that over the last 15 years design has become one of the main trust of the Korean Government policy. This was from my point of view. But in Korea is a very unique country where many pieces of art and from the old ancient history has real value. If you visit some temples of thousand years old you will see real values Koreans consider. In China there are over 50 different tribes and Korea is one of them. Even in China, Korean tribes are considered to be the most playful and joyful people who like to sing and so on. So Koreans are particularly artistic. So I think that underneath our mind there is a yearning for this artistry. So I think that was probably important. And then thirdly Koreans are privileged??, very strong in educating their children. It is second demand in the world. Koreans go to college like 90%, what is world's number 1. Second is United States which is 70%. In Korea 90% of people go to college, which is huge. More importantly parents will sacrifice themselves to send the children to college. Then Korea has a very rigorous entrance exam system. But interestingly enough music and fine arts were exempt from this entrance exam. You can take the entrance exam. That's very low, the level is. If you can draw you can go to good universities. So indeed there are many rich affluent family who's daughters and sons are not very good in exams. So they take the path of taking this music... So indeed there are more people who have more to dispute, so disproportionately more high school graduates go to fine arts and so on.
To elaborate this framework, do you use benchmark studies or internal surveys for example? I have used my own discipline that is business strategy. And welcome that helped me convincing and persuading policy makers is that as a manager, as a manager specialist, we used the same language as the government policy makers, we have the same education, my students go to the Ministries, my friends become Ministers, we use the same language. Designers have very different language. Designers and managers have totally different alien. They don’t communicate even if they speak in English. Name the field, if designers use the term environment, policy makers use the term industry. Although they talk about the same thing, the terminologies are different. They don’t communicate well. So indeed that’s why I emphasise management education along the design schools.
Appendix D: Peer-reviewed publications


In addition to the peer-reviewed publications the papers below are also result of this thesis:


Abstract

For a little more than a century the design sector has progressively gained attention from governments in recognition of its contribution to social and economic development. From the use of design in crafts to the exploitation of design in industrial policy and a recent broadening of scope to include social innovation and user-centred policy-making, the perception of design has gradually evolved. This paper aims to present a historical review of the evolution of design policies, in order to enable researchers and design practitioners to understand how governments have been employing design to promote economic, social and cultural change. The study findings highlight the relation between historical events (e.g. the Industrial Revolution, the post-war period, the recent fall of communication barriers) and the paradigm shift in design policies.

Keywords: design policy, social economic development, design programmes, historical review
A short introduction to design promotion and design policies

Despite many positive statements about the value of design, how design can contribute to the world's development is far from clear, insufficiently exploited and often underestimated (Thenin, 2008). At a micro level, there is the problem of helping companies, in particular small and medium-sized enterprises (SMEs), to understand how to find a designer, and to commission and manage a design project in order to achieve business improvement. At a macro level, there is a need to demonstrate how to use design and designers for the improvement of a nation's competitive advantage and its social and economic growth. Because of the lack of understanding at both these levels, there is a requirement for intervention in many countries. The intervention takes place to inform citizens, companies and governments about the benefits that design can offer and how to take full advantage of them. It can happen in a range of forms, such as design promotion, support programmes for companies and government policies for design.

Policies for design are government strategies that aim to develop national design resources and/or to encourage their effective use in the country. Part of these strategies is the creation of an environment where design and creativity can flourish; where companies are encouraged to develop their own products and services by making use of the expertise of design professionals; and where the public sector works with designers in order to improve its processes and therefore provide good, accessible and inclusive services to the population. The design policies determine a strategic vision and plan for the use of design in a country, which are delivered through design promotion and support programmes. Design Promotion Programmes are planned to raise awareness about the benefits of design. They target the general public through exhibitions, publications, events etc.; or they target groups through conferences, workshops, promotional campaigns etc. Design Support Programmes work directly with businesses and the public sector, providing advice and assisting them to make effective use of design.

Design Education also must be an integral part of design policy, ensuring that the number, quality and expertise of design professionals are sufficient to meet the expectations envisaged by the policy.

Design policies have been practised for many decades across the world, as this paper reports. However, only recently has design policy become a subject of debate, due to the increase in global market competition which has fostered interest in tools for improving countries' competitive advantage, among them innovation and design. As expected for a new subject of debate, there is little material available to guide or challenge practitioners. Thus, there is a need for research in this area, in order to understand the scope of design promotion, to identify references, to question current practice and to develop new thinking that will help in the advancement of this field. This paper is intended to contribute to this advancement.

Historical review of the practice of design policies and design promotion programmes

Stage 1: The beginning of policies for design promotion

Government intervention in design is not a contemporary practice. For centuries government decisions have influenced the development of design, creativity and innovation in both positive and negative ways. Heskett (2010) highlights aspects of design policy in ancient history, noting that 'the interference of rulers in economic affairs, however, was to prevent innovation, which was widely regarded as dangerous in that it undermined existing skills and the stability of society' (p.3). This author cites the early Pharaohs of Egypt and the Mogul shahs of Northern India, who held workshops with highly skilled workers in an attempt to control the production of icons symbolising their power. Early examples of the positive promotion of design are presented from the 18th Century, when measures were adopted by governments in Europe
to protect their national domestic manufacturing industry. Among them were tax incentives, incentives for the development of local production, support for international trade and investments in the education of craftsmen.

It was in 1798, incited by the emerging Industrial Revolution, that the first event for the promotion of national industry took place. France began the first in a series that would become a frequent activity in the 19th Century: the great exhibitions for industrial promotion. The pioneer event was held in Paris in 1798 to encourage improvements in progressive agriculture and technology in France. The exhibition proved so beneficial to French industry that the event was repeated, increasing in size each time, in 1839, 1844 and 1849.

At the time the initiative was copied around Europe: Berne and Madrid (1845); Brussels (1847); Bordeaux (1847); St Petersburg (1848); and Lisbon (1849).

...the experience of foreign countries has proved that great national advantages have been derived from the stimulus given to industrial skill by bringing the manufacturers of different establishments into competition with each other, and by presenting Honorary rewards...

...cheapness of production and excellence of material, both in execution and durability, being assumed as the criteria of superiority. (Declaration, Council of the UK Society of Arts, May 1845 cited by Hobhouse, 2004, p.4)

In response to this competition, the rival British nation responded with the ‘Great Exhibition of the Works of Industry of all Nations’, in 1851. Although this was not the first event of its type, it was the largest and the first to invite contributions from all over the world, confident that British manufacturers could stand up well to competition. There were 100,000 exhibits from all across the globe. The objective was to encourage art and science together in order to stimulate industrial design. The Great Exhibition was a celebration of contemporary industrial technology and design (Gibbs-Smith, 1964).

The Great Exhibition of 1851 and the modernisation it exemplified impressed Napoleon III, during his exile in London. Back in France, he set the objective of modernising Paris and launched an exhibition in 1855 to celebrate the consolidation of his empire. Thirty-four nations exhibited in a specially built Palais de L’Industrie in the Champs Elysées, covering 168,000 square metres. Technical novelties included aluminium sheets and Goodyear waterproofs (British Library, 2008).

Unfortunately, the French exhibition had a negative financial result, as the amount invested could not be recovered. In contrast, the British exhibition was extremely profitable. The Royal Commission for the Exhibition of 1851 was responsible for managing its revenue under the duty of ‘increasing the means of industrial education and extending the influence of science and art upon productive industry’. Eighty-six acres of land were purchased in London, where a unique cultural hub was built including three museums, one theatre and some of the most important educational institutions, including Imperial College and the Royal Colleges of Art and Music. Subsequently, in 1891 the Royal Commission set up an educational trust to give fellowships and grants for research that supports the development of science and technology for the benefit of British industry. Annual charitable disbursements in 2007 were reported to exceed £1.6m (The Royal Commission for the Exhibition of 1851, n.d.).

Besides the promotion of industry, design also found promotional channels through its association with the arts. At the end of the 19th Century, two important institutions were founded in Scandinavia: the Swedish Society for Crafts and Design (1845) and the Finnish Society of Crafts and Design (1875). Both societies were created with the same objective – to encourage crafts skills in industries that were gradually ‘progressing’ towards cheap manufacturing production – and had the same core activity – supporting a Sunday school for teaching manual skills. Both developed into promotional activities in the organisation of international exhibitions and publications, and the establishment of museums and support programmes for industry and academics. The Sunday schools evolved into important contemporary educational institutions: the University College of Arts, Crafts and Design (Konstfack) and the University of Art & Design Helsinki. The societies themselves became important national design promotion organisations: the Svensk Form and the Design Forum Finland (Design Forum Finland, 2006; Stenros, 2007; Svensk Form, 2005).
At the beginning of the 20th Century the demand for products, the availability of machinery and the rise of mass production encouraged the establishment of the design profession. In 1913 the title ‘industrial designer’ was first registered at the US Patent Office, used as a synonym for the then-current term ‘art in industry’, and the American Union of Decorative Artists and Craftsmen (AUDAC) was founded with the objective of organising a legal framework for design patenting and protection (Gantz, 2008).

Stage 2: The foundation of national design programmes

The two world wars are important to mention here as a period when design was demanded to support the industry of war, including products and propaganda. However, it was not a period of government incentive programmes for the use of design by industry. This happened after World War II, when design promotion and government strategies for the support of design in industry flourished, stimulated by the demand for consumer products and opportunities for export and trade. In this post-war era design and architecture played a major role in the reconstruction of countries and the improvement of citizens’ quality of life around the globe. As a result, many design events took place in individual countries as well as on the international scene:

1. The founding of national promotional bodies: the Design Council in the UK (1944); the German Design Council (1953); the G-Mark Award in Japan (1957); the Norwegian Design Council (1963); the Design Institute in South Africa (1965); and the Japan Industrial Design Promotion Organisation, JIDPO (1969).
2. Biennial exhibitions of design at the Museum of Modern Art in the USA (from 1950 to 1955).
4. The publication of the first ‘modern’ design policy in 1958: the ‘India Report’, also known as the ‘Eames Report’ (Eames & Eames, 1958). This document established the foundations for a design education institution in India, which culminated in the opening of the National Institute of Design in 1961.

From the 1950s the link between design, style and industry started to be recognised as an asset for commercial advantage and exports. With this idea in mind, many governments invested in the establishment of industrial design organisations.

Stage 3: The rise of design promotion in Asia and Eastern Europe

During the 1980s and 1990s two important ‘groups’ of design promotion organisations emerged: the Far East Asian countries (e.g. Japan, South Korea, Taiwan, Hong Kong) and the Eastern European countries (e.g. Estonia, Slovenia, Hungary, Slovakia).

The Far East engaged in design promotion with the challenge of changing the perception that it produced cheap products, which copied others’ designs, to those reflecting excellence in design, innovation and use of technology. With this clear goal aligned with exports and economic development, East Asian governments were keen to make large investments in the promotion of design. Besides specific programmes for industry, competitions and seminars, their investments also included the opening of Design Centres. Usually these investments followed well-planned policies, normally revised after a period of five years, as with the five-year plans in Korea and Taiwan (Blaich & Blaich, 1993; Cho, 2004). The scale of investments, the size and number of centres, the ability to develop policies successfully and the results accomplished became characteristics of design promotion in the Far East.

Eastern Europe faced important political reforms in the 1980s, with the fall of Communism, the dissolution of the Soviet Union and the consequent opening up of markets. This
change was directly reflected in the use of design by industry, which faced international competition and a need to export goods. Interestingly, this change of scenario (from a protected and controlled market to open competition) and subsequent implementation of design programmes in Eastern Europe has caused great challenges for design in these countries. The testimonials below describe the situation in the Czech Republic (then Czechoslovakia) and Hungary:

...at this time (before 1989) of total planning, the design was planned as well. Companies had to apply design to production and in many there were even so-called ‘creative committees’ that were in charge of assessing the aesthetic quality of the production. ... The first years after 1989 caused problems in the world of design. Many producers considered design redundant, regarding it as something that made products more expensive and caused only more trouble. (Interview - Z.Vokrouhlicky,” 2007, p.12)

Contrary to expectations, designers have not all benefited from the market economy. Product design is an example. During the Communist era, social programmes, such as housing development, and large, centralised industrial enterprises provided good employment for industrial designers. Following the political and economic changes, the previous large, centralised industrial conglomerates were broken up into smaller companies, which were sold or closed. The in-house design teams were thus disbanded. (Interview - J.Varheyl,” 2007, p.5)

To face these problems, design promotion has been emerging strongly within these countries. Sometimes with strong government support, and sometimes by the initiative of the design sector itself, there is great interest in raising the profile of design in Eastern Europe. European funds have also been used to finance the implementation of programmes. Another characteristic of the Eastern European countries is the strong network and mutual support between them, which stimulates the flow of information and benefits the implementation of design promotion activities. Regional meetings have taken place to incentivise the sharing of information and a directory of design-related organisations in Central and Eastern Europe has been maintained by the Hungarian Design Council. With mutual support and trying to learn from the experience of Western European programmes, these countries are developing their own national design programmes: the Estonian Design Centre, the Design Your Profit programme by the Institute of Industrial Design in Poland, and the Slovak Centre of Design, to name a few.

Stage 4: Broadening the design agenda

At the beginning of the 21st Century, design was starting to be recognised as a strategic tool and not only as a stylistic asset. This was reflected in design programmes and their approach to companies. The Danish Design Centre was at the forefront of this idea, launching the Danish Design Ladder, a framework employed to assess the level of design activity adopted by a company. The framework consisted of four stages: no use of design; design as styling; design as process; and design as strategy (Ramlau & Melander, 2004). The Design Ladder presented a clear framework for its application to companies in practice. Besides providing an easy explanation of the design process, the Ladder also allowed design support programmes to measure the impact of their intervention. For these reasons, the approach was also adopted by other countries in Europe (Sweden, Austria, the UK).

In the first decade of the 21st Century, Asian countries were also continuing their high level of investment in design promotion, in particular in international campaigns targeting Western countries. Korea had the most prominent policy. The Third Comprehensive Plan for Industrial Design Promotion, running from 2003 to 2007, included the construction of regional design centres in the country, in addition to the Korea Design Centre in Seoul, which was opened in 2001. Another strategy for promotion adopted by the Far East was the organisation of international events, such as biennial conferences and International Council meetings (ICSID and ICOGRADA).

As design became strategic, design promotion and support programmes evolved. The need for better planning also became apparent. In consequence, design policies grew in importance. Besides the examples of Korea and Taiwan, which had the practice of following five-
year plans, other countries published policy documents: Finland (Design 2005!) in 2000; the UK (The Cox Review) in 2005; Denmark (Design Denmark) and India (National Design Policy) in 2007.

Stage 5: Design integrated into government policies

The first decade of the 21st century was one of remarkable advancement for design policies. At the end of the decade most of the advanced economies in the world were developing programmes for the promotion of design (Raulik, Cawood, & Larsen, 2008). As just a few examples we can cite the Design 2005! Policy from Finland, the many programmes implemented by the Design Council in the UK and by the Danish Design Centre in Denmark, the consecutive 5-year design plans implemented in South Korea and the Better by Design Programme in New Zealand, among many others. The topic of 'design policy' grew in importance as a result of a myriad of converging factors, not least of which is the increasing number of success stories where design has been part of a government strategy to help the economy grow.

The increased experience has also led to improvement of the practice as well as diversification. Moreover, the scope of design policies tends to broaden as the design discipline evolves. The use of design solely for industrial and economic benefits starts to be questioned by an increasing recognition of the potential of design promotion strategies for the improvement of people's quality of life, public services and countries' infrastructures as well as the political process itself (through the facilitation of participatory democracy, e-government and co-creation for example). This concept follows the principles presented in programmes such as Design of the Times (DOTT, UK) and Design for All Europe (EIDD). It has been recently emphasised in the debate over a design policy for Europe (Thenint, 2008) and also the North American design policy (e.g. Thorpe, 2009).

This broadening of understanding – from the application of design in manufacturing to include its strategic use among private and public services – was further accentuated as countries faced financial crises and recession in the second half of the decade. As a consequence, the search for alternative ways out of economic and social problems became inevitable. In Europe, two key issues identified by policy-makers to address Europe's competitiveness and social development were innovation and sustainability. The traditional drivers of innovation (R&D and product development) were being supplemented by a broadening of the scope and depth of the innovation remit. The shift required new policy measures based on new complementary tools for innovation: tools capable of addressing broader societal needs, such as environmental and social concerns, as well as competitiveness. Design emerged as one of these innovation tools deserving greater attention at policy level.

At this stage of integrating design into government policies, there is an emerging trend towards the inclusion of design as a cross-disciplinary discipline rather than as a standalone entity requiring its own specific policy. There is a realisation that design can be a key component in the innovation and sustainability policy domains; and that this new positioning can be more influential and relevant than creating policies solely dedicated to design. This new scenario has the potential to integrate design as a fundamental part of socioeconomic policies, rather than its remaining an independent – but inevitably weak – discipline. This constitutes a substantial paradigm shift in the perception of design in policy-making.

Conclusion

It is difficult to define when the practice of promoting design started, but it is possible to study its roots in government intervention and the promotion of national industry. Nowadays this practice is widely spread across the globe. This paper only mentions a few countries, but many more could be acknowledged for their recent design initiatives, including Canada, Australia, Colombia, Mexico and China (for a more complete review of design programmes across countries, see Raulik et al., 2008).
This review suggests that the great exhibitions of the 19\textsuperscript{th} Century were the first important series of events for the promotion of industry and industrial design. With large government investments, these events aimed at encouraging competition among industry and therefore its improvement.

In Scandinavia towards the end of the 19\textsuperscript{th} Century the first design organisations were established based on design associated with arts and crafts. Svensk Form and Design Forum Finland are two of these organisations which are still in operation.

The next important time for the establishment of design centres was the post-war period, when the design sector was playing an important role along with architecture in the reconstruction of countries and the improvement of citizens’ quality of life around the globe. It was a time when industry benefited from the combination of optimism, consumerism and demand for products. Many national design programmes were established in this period.

In the past three decades the fall of physical, political and communication barriers has also encouraged design programmes. Eastern European and Asian countries invested in their own design programmes, aiming to enhance the competitive advantage of their products in the worldwide market.

The expansion of design policies and programmes across the world was characterised by the exploitation of design for economic development and market competition. In this context, design policy emerged from industrial policy. Government intervention was justified in cases of market failure.

Recently, however, this focus has been questioned. The broadening of the use of design, the better understanding of design’s strategic role for businesses and the example of successful government policies for design have had an impact on the perception of design policies. There is an increasing interest in design policies as opposed to isolated design programmes. Moreover, the industrial focus has tended to shift towards the use of design for the improvement of national infrastructures, services and systems. The current most important paradigm shift in the field of design policies is its integration into cross-disciplinary policies for innovation and sustainability.

This paper has examined the history of design promotion policies. The most important conclusion from this study is the interrelation between historical facts and the evolution of design programmes. It is indicative that some key events (e.g. the Industrial Revolution, the post-war period, the recent fall of communication barriers, economic crises) have generated a demand for design, which, in turn, stimulated the implementation of design programmes and policies across the globe. This understanding confirms the relevance of national contexts for developing design policies and promotion programmes; and for developing the ability to interpret the economic and social context in order to drive the advancement of design promotion strategies.

References

18. Thorpe, A. (2009). Design policy, more thoughts, long-ish: PhD-Design@jiscmail.ac.uk.
National Design Strategies and Country Competitive Economic Advantage

Gisele Raulik, Gavin Cawood and Povl Larsen
University of Wales Institute, Cardiff

ABSTRACT This paper investigates the association between economic competitiveness and the existence of strategies for the promotion of design in different countries. It presents the findings of a survey that identified where design programmes, support schemes and national design policies have been adopted. Conclusions are developed comparing this map of design strategies with countries’ economic sophistication and geographical position. Evidence shows that more advanced economies have been exploiting design as an asset for their economic advantage and for the international promotion of their image. In contrast, developing countries – with very
few exceptions – have disregarded design as a tool for economic and social development.

KEYWORDS: design policy, design strategy, economic development

Introduction

For many years a number of countries have invested in the promotion of design with the objectives of promoting the image of the country internationally, raising awareness among local consumers about the value of design and quality of products, and to increase interest from local industry about the benefits that design can bring to business performance. Since the end of the 19th century, when the oldest programmes were implemented in Scandinavia (Sweden in 1845 and Finland in 1875), these schemes have evolved in scope, complexity and accomplishment. Most of this development was a consequence of a natural evolution. However, in recent times, there has been an increasing pressure on design programmes to show meaningful results, not only in raising interest for design, but also in making a significant contribution to national economic development.

To date, the activities within design promotion programmes have included seminars, exhibitions, awards, and publications. However, there is now a move to develop business support programmes which focus on directly assisting companies to produce better and more innovative products and services. Such programmes tend to target small companies who are recognized as directly contributing to the development of local economies (Ayyagari et al, 2000). These new initiatives are being enabled by a greater recognition for design policies and a better understanding of the need for a holistic approach in the implementation of design strategies.

An example of this holistic approach and use of design for economic development purposes can be taken from Finland. Despite Finland’s long tradition in design, the Finnish government has recently adopted a refreshing strategy for the exploitation of design in the country. The policy Design 2005! (Saarel, 2000) was launched with the important focus of improving the competitiveness of national industry. One of the programmes among the series of actions had the challenging task of making industrial design (and not only technology) part of the companies’ competitiveness (Valtonen, 2005).

New Zealand is another country where design has been exploited by the government to enhance the country’s competitiveness. For this country, positioned in geographical isolation and with quite a small internal market, exports are a crucial business for the national industry’s survival. Therefore, the policy for design in this country included the implementation of the design support programme called
Better by Design. It was set up with the target ‘$5 \times 50 \times 500 \times 5$’ within 5 years, help 50 businesses to reach international markets, generating an additional $500m in export earnings, growing at five times the targeted GDP (New Zealand Design Taskforce, 2003). The programme started to be implemented in 2003.

**Objective of the Paper**

This paper investigates the design schema (promotion and support programmes and policy) present in different economies, using the results of a survey developed to collect data about design initiatives around the world. The objective is to provide evidence of the association between competitiveness and a healthy national design schema.

**Background**

The business environment has been transformed by developments in communications technology and human capital improvements (for example, education and training) as shown by the rapid creation of new knowledge and the fast global exchange of information (Forey, 2003). This has had a profound impact on the opportunities open for the development of national economies and is reflected in the desire and need for countries to compete aggressively. Countries now have to be able to exploit knowledge for wealth creation across all industries and sectors in order to remain competitive. The fall of communication barriers has resulted in two challenging consequences for national industries: from one side, companies have access to alternative means of production and to information about competitors; on the other side, consumers, who also have wider access to information, have become more demanding for good quality and innovative products. This means that although companies have more resources at their disposal, they are now facing a tougher marketplace in which to sell their products and services.

Another aspect is the fall of barriers for commerce, resulting in unprecedented market competition (Teece, 1998). Some countries have the advantage of lower costs for labour and easier access to resource materials. They therefore have been emerging as manufacturing powers in the competition for low prices (for example, Eastern European countries, China, India). It is undeniable that only one product can win on price and all the others have to fight on the basis of other aspects such as functionality, features, quality and/or design. This scenario demands that companies have to constantly innovate and promote their products and services.

On this new economic wave, ideas are constantly shared and spread and therefore innovative products and services can have a very short lifespan. They may become obsolete as soon as they are launched (Cooper, 2001).

Countries must not only produce goods that are competitive in price, but must also produce goods and services that are
competitive in quality. Failure to do so would mean that domestic markets are eroded both by cheaper goods of higher quality and better designed products from abroad. Therefore, if a company cannot place its product or service in the market for the lowest price, there will be a need to invest on non-price factors. In order to compete successfully, a company will have to pay close attention to its creative skills and ability to innovate (Porter, 1998). In order to innovate, companies need to make investments in areas such as research and development (R&D), market research and design. However, these areas are often perceived as an additional (and worthless) cost for the business, despite being a potential important cause of their failure to remain competitive.

Many authors (Roy, 1994; Lorenz, 1986; Walsh et al, 1992) have been discussing and presenting arguments that support the idea that design is a crucial tool for remaining competitive. However, a large number of companies, in particular small- and medium-sized enterprises (SMEs), still lack the knowledge, skills and resources that would enable them to use design to develop innovative products and services (Bruce et al, 1999; Cawood, 1997; von Stamm, 2004). In order to help companies and ensure a national competitive industry, governments have developed programmes for promotion and support in design that have encouraged companies to be creative, to exploit knowledge and be innovative (Riley, 2003).

The success of national industry (both service and manufacturing sectors) is crucial for the development of a country's economy; their market failure has been identified as an underpinning rationale for providing support to the development of SMEs, in particular the provision of State Aid (European Commission, 2002). A key driver for the development of support programmes for businesses, especially for SMEs due to their limited financial and human resources, is that such programmes can help companies exploit design as a tool to innovate and improve performance in global markets.

Design support and promotion programmes are schemes implemented to assist businesses to use design in order to improve themselves (Raulik, 2004; Sung et al, 2007). Support programmes differ from design promotion schemes, which are more likely to attract other funding sources or even sponsorship and generate some income. A support programme is usually incapable of generating income and therefore is largely reliant on government funds. Whilst support programmes are specifically focused at businesses, promotion campaigns are targeted at the wider public, usually with the objective of raising awareness about the benefits of design through many different ways (such as exhibitions, awards, conferences, seminars, publications, and so on). Design support programmes usually have specific and more tangible outcomes than promotion schemes and work closely with businesses to achieve the objectives. As an example, these programmes build ‘bridges’ between design and industry (Dahlin and Svengren, 1996).
Support and promotion schemes are two of the ways of encouraging the use of design, however to gain maximum advantage the implementation of these schemes should be determined by strategic plans or policies. Design policy is gaining increasing recognition from countries as they begin to understand the need for a long-term plan that will coordinate and maximize the benefits of programmes and actions in design, within their country or a region. Consequently, the main research subjects of this study concentrate on promotion, support and strategic policies.

Methodology
The aim of this research was to investigate the relationship between a country’s competitiveness and whether it had a design promotion, support, or policy in place. It was achieved by identifying countries where:

- Design support has been delivered as part of an economic development plan.
- Design promotion programmes are in place.
- Design policies are in place or in development.

The findings were then compiled as a database for the analysis of the design schemes existent in the different countries, regions and economic blocs.

The method chosen for this investigation was a structured questionnaire distributed to design support organizations and agencies throughout the world. The target group chosen for the survey were professionals involved directly or indirectly in the development, establishment and delivery of design initiatives and national policies for design. Respondents had to meet at least one of the two eligibility criteria: position and evidence of knowledge or experience in the field.

The sampling aimed to obtain the largest number of countries as possible with at least one response from each of the six world macro regions, as defined in World Macro Regions and Components (United Nations, 2000): North America, Latin America, Europe, Africa, Asia and Oceania; and at least 16 responses from the subgroups European and Non-European countries.

The collection of data started in December 2006. Questionnaires were first distributed by email to a selected mailing list and also circulated on the PhD online discussion list, phd-design@jiscmail.ac.uk (Raulik, 2006). In order to reach the minimum quota established for the research, further actions were taken to obtain feedback from certain regions, in particular Asia and South Africa. Snowball sampling controlled by the criteria was used, requesting participants to forward the survey to personal eligible contacts. Delegates at relevant professional meetings and conferences (for example, the 4th Conference on the Challenges of Design Promotion in Europe, Paris, January 2007) were also asked to complete the questionnaire.
The questionnaire was intended to be short and objective with five closed questions and one open enquiry. Participants were asked to answer the questionnaire relating to their country of expertise. In total, 83 responses were collected from 44 countries around the world. World macro regions were represented as follows: 8 North America, 7 Latin America, 52 Europe, 3 Africa, 11 Asia, and 2 Oceania.

Occasionally, one country had contrasting answers for the same question from different respondents. In these cases, the answers were double-checked with other representatives of the same country or with direct information collected from reliable sources.

Statistical analysis was employed to compare a country's profile and their position based on different rankings published in the Global Competitiveness Report 2006–2007 (Lopez-Claros et al., 2006), in particular, a country's stage of development and general rank of global competitiveness.

The sample of 52 European countries and 31 non-European countries was used for statistical analysis through Chi Square, a technique used for the analysis of categorical variables. A series of chi square tests of independence were used to compare the European and non-European respondents in terms of the yes/no questions with any p values of less than 0.10 being taken as significant. Ninety per cent confidence was considered acceptable due to the limited sample size possible with such a specialized population. Note that this technique could not be used validly for question 5, which related to the existence of design policies.

The research method proved appropriate for this study, obtaining a good spread representation of countries' data and allowing the use of methods of comparative analysis. However, due to limitations in communication (for example, language) and limited published sources, it was difficult to identify design initiatives in some parts of the world, mainly in the African continent. Further investigation targeting this specific group of countries is needed in order to overcome the limitations faced by this study, such as communication, and identify if any design initiatives have taken place in these nations.

Findings

The relationship between competitiveness and design

The research aimed to analyse the results of the survey in comparison with each country's competitiveness potential. For this purpose, the Competitiveness Rank by the World Economic Forum was an appropriate source and therefore was used as reference for comparison. This biennial rank is published in the Global Competitiveness Report 2006–2007 (Lopez-Claros et al., 2006). It uses a combination of indicators, such as total Gross Domestic Product (GDP), population, GDP per capita, inflation, government debt, imports, utility patents, and so on, to calculate the general index. The
2006–2007 edition also lists the 125 most competitive economies and classifies them into stages of development according to GDP per capita (GDP p.c.):

- Stage 1 (GDP p.c. < US $2,000): factor-driven stage.
- Transition from 1 to 2 (GDP p.c. US $2,000–US $3,000).
- Stage 2 (GDP p.c. US $3,000–US $9,000): efficiency-driven stage.
- Transition from 2 to 3 (GDP p.c. US $9,000–US $17,000).
- Stage 3 (GDP p.c. > US $17,000): innovation-driven stage.

The stages above are relevant for this research as they indicate the needs of a specific economy in relation to development policies. According to the level of development, economies need to prioritize different aspects. For example, advanced economies do not need to address problems such as basic infrastructure, health system or corruption as do nations at the lower levels.

Policies in factor-driven stage countries (first level) should be focusing on building a stable system for the economy to operate, which includes improving public and private institutions, infrastructure, education, health and the macro economy. Typically companies in these countries compete mainly on the basis of price and sell basic products or commodities.

On the second level of development, the efficiency-driven stage, policies can address processes and products more directly, focusing on improving their efficiency and quality. This can be achieved through targeting better exploitation of higher education resources and available technology, in order to improve competitiveness.

The third level is the innovation-driven stage. With higher costs for production, these countries cannot afford to compete on price alone. In order to remain competitive they must focus on innovative products of the highest level of technology or design. Indeed, the survey results show that countries on stage 3 of development are the most likely to include policies for design in their system.

The results of the survey, which shows where support, promotion and policies are practised, were compared to the list of countries in each stage of development. This comparison is presented in Figure 1. The evidence clearly demonstrates that countries positioned higher among the stages of development tend to also be the countries where design policies and programmes are in place:

- Design promotion programmes are present in 77% of the more sophisticated economies (stage 3) compared to 4% of countries with less developed economies (stage 1).
- 48% of countries in stage 3 of development have design support programmes in place compared to only 2% of countries in stage 1.
- Design policies are present in 16% of countries in stage 3 compared to 2% in stage 1.
- Countries on the transitional stage 2 to 3 perform particularly well in comparison to other stages: 56% of countries run design promotion programmes, 44% of them run design support schemes and 22% have policies for design. It shows their willingness in increasing their performance and consequent investment in initiatives that can be relevant in achieving this objective.

![Figure 1: Presence of design promotion, support and policy in countries in each stage of development.](image)

This evidence suggests that more competitive economies are conscious about the need for innovation and design in order to remain competitive. Whereas, countries in the higher transition stage invest in design programmes in order to enlarge their competitive advantage. Countries in the lower stages of development are usually not prepared to use design as part of their economic, culture or trade programmes as they have priorities other than industry improvement. It is important to note that design contribution is ignored as a contributor for the improvement of basic systems such as health infrastructure, crime prevention, education and transport, as previously identified by Bonslepa (1973, cited by Er, 1997).

Looking at two exceptions, India has recently published the document National Design Policy aiming to have a "design enabled..."
Indian industry" which could impact both the national economy and the quality of life in a positive manner (National Institute of Design (NID), 2007); while South Africa is an example of a developing nation where design is often used to meet the country’s specific needs, such as mining engineering (Viljoen, 2007), water supply and sustainable rural transport (Amir, 2004; SABS Design Institute, 2005).

Using the general Global Competitiveness Index (Lopez-Claros et al., 2006), this study has also identified a relationship between the position of countries in this index in comparison with their use of policies and programmes for design. This relationship can be seen in Figure 2. There is a clear presence of policies and design programmes at the top of the table, showing that the most competitive countries are the ones more likely to have design support, promotion and policies in place. Note that no strategies for design (promotion, support, policy) were identified in countries with index positions below 70 and, for this reason, they are not included in the figure.

The Mann-Whitney U test was used to show that the international competitiveness of countries offering design support was significantly

![Figure 2](image-url)
higher than that of those that did not offer design support. The mean rank was 28.0, while the ‘no design support’ mean rank was 72.2. The mean rank of international competitiveness of countries with a design policy was 17.1, which was significantly higher than the 66.6 for those countries without a design policy.

Comparing European and Non-EU countries
This survey has also compared the two groups, European and non-European countries through the method Chi Square in order to look for relevant contrasts in this field of research. The analysis of the results has shown that there is a difference in the approach for design strategies in these two groups:

- Design museums are significantly more frequent in European countries.
- Design promotion programmes find more alternatives for funding in Europe. EU fund and regional development funds are often quoted as the financial source for the establishment of programmes.
- Design professional associations are significantly more active in supporting design in European countries than in Non-European countries.
- It is statistically significant that departments for Economic Development are more often in charge of the design agenda in Europe than in the rest of the world.
- It is also significant that outside Europe, the departments for Trade and Industry are more often in charge of the design agenda.

Comparing the World Macro Regions
Looking for other patterns, the survey also searched for relevant contrasts between the different parts of the world. This part of the research used the United Nations’ world macro regions as reference (United Nations, 2000). Findings revealed that there is a larger concentration of design support programmes in Europe, followed by Asia. However, Asia leads in the number of design policies in the world, as shown in Figure 3.

This survey collected information from 44 countries and design support programmes were identified to be in place in 27 of these countries, 41 had design promotion programmes and 8 of them had design policies on a national level (see Figure 4).

Design promotion is widely practised by countries, while design support and policies do not have the same presence. This phenomenon may be explained by the fact that the implementation of promotion programmes is easier than support programmes. It demands less training of personnel, and investment in terms of time and finance. Design promotion programmes also tend to be more attractive initiatives as they can reach a larger number of individuals, even though in a more superficial intervention (Tether, 2006).
The only countries that maintain four levels of design strategies (promotion, support, education and policy) are: Finland, Singapore, Japan, The Netherlands, New Zealand, South Korea and the Czech Republic. This research assumes that design education (to at least graduate level) is in place in all of the participating countries. Moreover, eight countries have declared that policies for design are in development in their countries, which constitutes an optimistic picture.

It is important to note that design policies were considered only in countries where proposed policies were actually adopted at government level at the time of the closing of the survey. However, there are a number of countries where plans have been developed towards national policies for design. Estonia, Latvia and the UK have documents published as design policies, but have not been included on the survey as their policies are not fully adopted by the national government. In the UK, the Cox Review of Creativity in Business: Building on the UK’s Strengths (Cox, 2005) commissioned by the British Government in 2005, highlights the need for an efficient
design support programme that would help national industry to remain competitive in facing global market challenges. This was one of the report's five key recommendations. However, it was not fully adopted as a government strategy — it remains as a direction for action, having been implemented in parts and by different institutions.

Moreover, countries have their policies implemented in different ways. For instance, in the Czech Republic, the government implements its actions on design through a single national organization, the Design Centrum of Czech Republic (DCCR). The mission and objectives set for the DCCR are the national strategy for design. In contrast, Finnish design policy coordinates actions from various organizations in the country towards common objectives for national economic development (Valtonen, 2005). South Korea is a country that stands out for its capacity of planning in direct cooperation with the national government. KIDP (Korea Institute of Design Promotion) works directly with MOCIE (Design and Brand Policy Division in the Ministry of Commerce, Industry and Energy) on the preparation of annual and five-year plans (Choi et al., 2007; Kim, 2006), which are released annually at the National Convention on Design Industry Promotion (KIDP, n.d.).

Conclusion
This research paper has reported on the findings of a survey that investigated design strategies in individual countries and the relationship with national competitiveness.

The survey collected data from 44 countries about their design programmes, support schemes and national design policies, and information about sources of funding and stakeholders. The information was analysed with several techniques and compared with data from The Global Competitiveness Report (Lopez-Claros et al., 2006).

The findings suggested that programmes and policies for design are present mainly in the most competitive countries. In a comparison of the use of these strategies with the stage of a country's development, it was possible to identify a strong willingness to invest in such initiatives amongst countries on the transition to the highest stage of development. These countries (for example, South Korea) consider design as an integral part of their strategies for the development of national industry. Besides the creative input that design can bring for the development process of products and services, design is also used strategically as the link between R&D and the market. In other words, design is able to transform ideas generated from research into products that will meet consumers' needs.

It is well known that SMEs lack skills and resources for the development of innovative products, which is often the reason for their market failure. For such reasons, design support programmes
are mainly targeted on the enhancing of economical advantage of the small business sector and are present in 48% of the most competitive countries (stage 3 of development). These programmes are an important part of a national design policy.

Design is also considered a strategic element for a country’s promotion on the international market. In the past, international fairs such as the Great Exhibitions in Britain and France at the end of the 19th century, and Scandinavian countries with the joint exhibition ‘Design in Scandinavia’ which toured the United States between 1954 and 1957 have reached more than a million visitors (Hawkins, 1998) and now other countries such as, South Korea (KIDP, n.d.) and India (NID, 2007) are concerned in internationally promoting their country’s image through design.

The awareness of the benefits that design can bring for a national economy is not enough. There is a need for coordinated action which will maximize this contribution. Various organizations within a country should be involved and design should be taken as part of a strategy, rather than just an isolated programme. Unfortunately, this is the scenario in most countries. As shown in this survey, the number of countries with design policies in place is much lower than the number of countries delivering design programmes. This is evidence of a lack of forward planning and preparatory studies before the implementation of support and promotion programmes. The common practice nowadays is the use of benchmark investigation in advance of the launch of design initiatives (Chung, 1998). This kind of investigation provides an overview of international practices, but does not replace the need for local diagnosis. This practice constitutes a risk that design programmes can be implemented ad-hoc, not following a holistic and tailored strategy. This risk is also highlighted by Giard (1996): ‘any government contemplating a future national design policy must reflect the context of the state—economic, political and cultural. Not to do so will most likely jeopardize the potential effectiveness of the policy’.

The survey results also showed that countries are unprepared to use design policies to address issues in less sophisticated economies. With very few exceptions, programmes for design are not considered a tool for economic or social development in developing countries.

Finally, in comparing the design strategies of groups of countries (world macro regions and European and non-European countries), this research shows that Europe has the largest number of countries running design programmes—both support and promotion—not only on a national but also on a regional level. It is also in Europe where design is part of the agenda for Ministries of Economic Development. In contrast, it is in the Asian countries where policies for design are more often ratified and implemented.

The presence of a comprehensive design strategy cannot be considered a guarantee of economic success. However, this research
demonstrates, through comparative methods, that strategies for design are part of successful economies.

Further research
This field of research (and practice) would benefit from further investigation in specific countries, evaluating the impact of design policies in their national economies. This kind of investigation would, however, require a long-term analytical process in order to compare scenarios before and after the policy implementation. Although there are many difficulties in measuring this process, this further step has to be taken in order to obtain credible data that will prove the economic effectiveness of design strategies.

References


Biography

Giselle Raulik is a senior researcher at the University of Wales Institute Cardiff (UWIC), with PDR/Design Wales. She graduated from the Federal University of Parana, Brazil, and has a Masters from Brunel University, UK. Besides her experience as a graphic designer, she has worked for design centres in Brazil and the UK. Her research interests lie in the study of national design policies and design organizations with an emphasis on design support serving the SME sector and economic development. Giselle is currently undertaking a PhD at UWIC as well as coordinating the SEEdesign programme – Sharing Experience on Design Support for SMEs.

Gavin Cawood co-founded an industrial design consultancy at the start of his career that found work with clients as varied as Swatch, Marconil and the Early Learning Centre, as well as producing several award-winning speculative projects. His experience of large-scale new product development projects and processes came from leading the industrial design team at Xerox. In exploring how design fits into a wider business context, he completed an MBA and since 1994 has developed Design Wales to be one of the best models for regional design support in the world.
Dr Povl Larsen is Senior Research Officer in design and innovation management at the National Centre for Product Design and Development Research. His research interests cover barriers to innovation, decision support systems, smart clothes and wearable technology, and design and management accounting processes in micro, small and medium-sized enterprises. He has published over 40 papers in these and related areas.

Addresses for Correspondence
Gisele Raulik, Design Wales, Western Avenue, UWIC, Cardiff, CF5 2YB, UK.
Tel: +44 (0)29 2041 7016
Fax: +44 (0)29 2041 6970
Email: graulk@designwales.org.uk

Gavin Cawood, Design Wales, Western Avenue, UWIC, Cardiff, CF5 2YB, UK.
Tel: +44 (0)29 2041 7016
Fax: +44 (0)29 2041 6970
Email: gcawood@designwales.org.uk

Dr Povl Larsen, PDR – The National Centre for Product Design and Development Research, University of Wales Institute Cardiff, Western Avenue, UWIC, Cardiff, CF5 2YB, UK.
Tel: +44 (0)29 2041 6725
Fax: +44 (0)29 2041 6973
Email: plarsen-pdr@uwic.ac.uk

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A comparative analysis of strategies for design in Finland and Brazil

Gisele Raulik-Murphy, University of Wales Institute Cardiff, Design Wales
Gavin Cawood, University of Wales Institute Cardiff, Design Wales
Dr Povl Larsen, University of Wales Institute Cardiff, PDR
Professor Alan Lewis, University of Wales Institute Cardiff, PDR

Abstract
This paper reports on work in progress and initial findings of a research project that is comparing existing strategies for design (in promotion, support and policy fields) in four selected countries: Finland, South Korea, Brazil and India. For this specific paper, Finland and Brazil are the case studies compared. The paper explains the criteria for selection of these subjects, based on their stage of development and position on the Global Competitiveness Index (World Economic Forum). The objective of the research project is to investigate how countries with different national contexts adopt different strategies for design in coherence with their positions, weaknesses and strengths.

Keywords
Design Policy, Design Strategy, Case Study/ies, Brazil, Finland, Economic Development.

Advances in technology and greater access to the global economy have had a profound impact on national economies. This is reflected in the pressure for countries to compete aggressively. To compete they now have to be able to exploit knowledge for wealth creation across all industries and sectors. In this scenario, design is a powerful tool in helping economies to remain competitive, in particular when exploited by companies interested in adding value and differentiating their products and services in the market.

However, the benefits of design are not yet fully recognised by businesses, in particular small and medium-sized enterprises (SMEs), who remain skeptical in relation to the cost-benefit of investments in this area. It is also well known that they lack resources (both human and financial) to invest in creative and research areas. Investments in design are often seen as extra costs that can be avoided using internal capability. The result is usually poor quality of products/services and ultimately business failure. As SMEs represent typically over 95% of all businesses in a country, this failure impacts directly on a nation’s economic health (Bruce, Cooper & Vazquez 1999; Larsen & Lewis 2006; Raulik 2004).

Understanding this shortfall is of crucial importance to appreciate the need for developing design support and promotion programmes. The weakness of the SME
sector; the lack of awareness about the benefits and use of design; the importance of competitive businesses for national/regional economy; and the potential benefit of the use of design justify the need for encouraging companies to invest in design (Enterprise Directorate General of the European Commission 2000). A stronger focus on the development of products and services would help SMEs to become more competitive, strengthening the industry and consequently the economy. This is the reason why some countries are willing to invest in support programmes that will help SMEs to exploit design for their business competitiveness. The commercial success of individual SMEs will contribute to the economic advantage of the country.

A previous study (Author 2007) has identified design strategies in 44 countries around the world, including programmes for design promotion, support for local companies, design education and government policies for design (Figure 1). Design support programmes are schemes implemented to assist businesses to use design in order to improve their businesses (Sung et al 2007, Raulik 2004). As an example, these programmes build “bridges” between design and industry (Dahlin & Svengren 1996). Design promotion initiatives are targeted at the wider public, which includes businesses, usually with the objective of raising awareness about the benefits of design through many different ways (e.g. exhibitions, awards, seminars, publications). Design Education includes the formal education system (e.g. foundation courses, degrees, masters and post graduate courses) and further education (e.g. professional training). The effective implementation of both promotion and support schemes are dependent on a quality design education system. A country or a region must form good design professionals in order to meet the demand that can be raised by promotion campaigns and support schemes.

![Figure 1: Presence of design promotion, support and policies in the countries](image)

Support, promotion and education are the main axis for fostering the use of design for competitiveness. However to gain maximum advantage, the implementation of these schemes should be determined by strategic plans or government policies. These four elements (support, promotion, education and policy) are the fundamental elements of a country's design system (figure 2).
This paper reports on work in progress and initial findings of a PhD research project that is comparing existing strategies for design (in promotion, support, education and policy fields) in four selected countries. Finland, South Korea, Brazil and India were identified through criteria that intended to select subjects that would provide meaningful insights on how countries with different national contexts adopt different strategies for design in coherence with their positions, weaknesses and strengths. This is the objective of the PhD research project, which will be demonstrated in this paper through the comparison of design strategies adopted in Finland and Brazil.

Methodology

This study has started with an exploratory survey that intended mainly to identify where (1) design support had been delivered as part of an economic development plan, (2) design promotion programmes were in place and (3) design policies were in place or in development. The survey was conducted between December 2006 and May 2007 through a structured questionnaire distributed to design support organisations and agencies throughout the World.

From the results of this survey, it was possible to compile a database for the analysis of the design schemes existent in different countries, regions and economic blocks. Statistical analysis was employed to compare a country’s profile and their position based on different rankings published on the World Competitiveness Report 2006-2007 (Lopez-Claros et al. 2006), in particular, a country’s’ stage of development and general rank of Global Competitiveness.

Criteria was then established for the selection of subjects for a qualitative study. Four case study subjects were selected by criteria that:

- identified countries where design strategies (promotion, support and government policies) were in place in each stage of economic development (World Economic Forum) (Lopez-Claros et al. 2006) (see figure 3);

- among the subjects meeting criteria 1, identified the country in the highest position in the Global Competitiveness Index in each stage of economic
development (the number in front of the name of the country in figure 3 shows the index position);

- defined a group of subjects that represented the different stages of development and the different World Macro regions (United Nations 2000) in order to have a rich variety of national contexts.

<table>
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<tr>
<th>World Macro Regions (United Nations)</th>
<th>Stage 1 (GDP p.c.-US$2,000)</th>
<th>Transition from 1 to 2 (GDP p.c. US$2,000-US$52,000)</th>
<th>Stage 2 (GDP p.c. US$52,000-US$85,000)</th>
<th>Transition from 2 to 3 (GDP p.c. US$85,000-US$17,000)</th>
<th>Stage 3 (GDP p.c. &gt;US$17,000)</th>
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**Factor-Driven Economies** ↔ **Efficiency-Driven Economies** ↔ **Innovation-Driven Economies**

**KEY:**
- design promotion in place
- design promotion and support programmes in place
- design promotion, support and policy in place
- design promotion and support in place, policy in development
- design promotion in place, policy in development

Figure 3: Countries and Stages of Economic Development

Figure 3 shows the method that was used to identify the subjects. The table includes only countries where strategies for design are in place, according to the responses collected during the survey. The most interesting subjects for this study are the ones that contain the three levels of strategy (promotion, support and policy). Below stage 2 no country met the criteria. However, Brazil declared to have a policy in development and India, although has no design support in place, already has a policy that can be evaluated in this study.

The case studies presented in this paper were developed through data collected by means of interviews, literature review and document analysis between June 2007
and February 2008. Semi-structured interviews were conducted with representatives of the institutions responsible for the conception and implementation of design strategies in Finland and Brazil. Mindmapping was used to visually illustrate the system of organisations involved in the delivery of design strategies in the countries.

Case study 1: Finland

The history of design in Finland started in 1875, when Finland was still under Russian regime. Efforts to start a “systematic action to promote industrial crafts and arts” resulted in the foundation of the Finnish Society of Crafts and Design, responsible for maintaining the ‘Sunday School’ and encouraging manual skills within industry (Stenros 2007). The School of Arts and Crafts remained strong and became an important educational institute, responsible for training many important Finnish designers. In 1973 the School became the University of Art and Design Helsinki, which is currently one of the best Universities for design in the World (Business Week 2007).

Finland became independent in 1917 and this started a process of internal construction, bringing an emphasis and identity to architecture and interior design. The “Finnish style” started with strong influences from Russia and Sweden. In the 1930s, Finnish designer and architect Alvar Aalto started breaking into the international market building a positive reputation for Finnish design.

After the Second World War, the optimistic post-war period was marked by the resurgence of exhibitions. As an initiative of the Finnish Society, Finland was present at the Milan Triennales in the 50s and 60s, winning many prizes for its products. This strategy was successful and soon Finland obtained recognition for its design production.

The image of Finnish design was developed almost at the same time as the other Nordic countries, creating the brand “Scandinavian design”. Together with Sweden and Denmark, Finland undertook some successful strategies of international promotion. The “Design in Scandinavia” exhibition was one of them. The collection was exhibited in twenty-four museums in the United States between 1954 and 57, reaching more than a million visitors. Success was due to a combination of efficient public relations, the political strategy of associating with Scandinavian countries (Hawkins 1998), and excitement about the “Scandinavian style”: democratic design, use of materials, colours, combining crafts with industrial production, organic forms with everyday functionality.

In the 1970s the use of new materials (plastic, fibreglass, synthetic fibres) combined with new manufacturing technologies gave designers the opportunity to exploit new forms and colours in mass production. Soon the debate on the social needs, use of energy and natural resources started. Ergonomics and the environment became relevant issues in the 80s. At this time, industrial design was starting to receive better recognition in Finland with more industries and more sectors employing professional designers in more significant roles within product development and corporate strategy teams.
Design Forum Finland was established by the Finnish Society of Crafts and Design at the end of 1980s with a mission focused on promoting design among small and medium-sized industry as well as internationally (Design Forum Finland 2007).

The 1990s was a decade of transformation for Finland. The country's economic situation at the beginning of the decade was a severe recession characterized by a major banking crisis, rising unemployment rates, accumulation of government debts and inflation among other factors. Moreover, the collapse of the Soviet Union had a strong negative impact on the Finnish industry. The end of the convenient Finnish-Russian bi-lateral trade left companies in Finland with a negative balance on their foreign trade as well as an old-fashioned industry with out-of-date technologies (Dahlman, Routti & Ylä-Anttila 2006).

The country then started a movement that brought Finland to the lead of the list of competitive countries in the World Economic Forum. A unique aspect of this strategy was the investment in measures with long-term impact instead of immediate solutions, as usually chosen by governments at critical moments. One of the most relevant measures for the context of this research was the ambitious aim of building a knowledge-based country and the plan carried on in order to achieve this goal. Investments in R&D were prioritized. As explained by Dahlman et al. (2006) "increasing investments in R&D during times of high unemployment required great political wisdom and courage (...)".

The policy for design was part of this movement. The work started in 1996 when Sitra (The Finnish National Fund for Research and Development) invited a group of representatives of the design community to discuss how design could contribute to innovation, industrial and economic development in Finland. As a result a formal survey was conducted and the report Designed Asset II – Design, Industry and International Competitiveness was published in 1998. The establishment of a national system of design to operate with the system for innovation was an important and visionary recommendation in this report. Based on this survey, a second important report was published in 1999, serving as the basis for the Finnish design policy. The report was "a large part a vision of what the Finnish design system should be in 2005. It clearly defined what the impact that the policy should have in quantity and quality of Finnish industrial design" (Valtonen 2005). The official policy, called Design 2005! was ratified by the government and published in June 2000. Three main goals: to improve design quality; to promote extensive use of opportunities inherent in design with a view to improve competitiveness and employment; and to develop the quality of the living environment and promote a distinctive national culture.

Thanks to the government policies, Finland ended the 20th century having left an essentially natural-resource based industry to become a competitive knowledge-based economy with the highest investment rate in R&D in Europe – 3.5% of GDP (Dahlman et al. 2006) – and specialised high-tech industry (important global brands were established in Finland in the 90's (e.g. Nokia, Suunto, Metsopaper, Ponsse and Polar).

Figure 4 represents the design system in Finland, as it stands in June 2007. It shows the main stakeholders, categorized according to their role in the system.
In the Finnish design system it is interesting to note the strong presence of R&D institutions, a characteristic that is not expected to be found in other countries. The Committee for Design and Designium, a research centre for innovation in design, are also unique elements to the Finnish model. Designium, part of the University of Art and Design Helsinki, is an important source of information for the Finnish Government (mainly for government’s policy implementation like ministries and funding institutions like Tekes), organising surveys, gathering data and benchmarking design strategies from other countries, information that will support decisions and the development of strategies for the promotion of Finnish design.

DesignStart Programme (ongoing) and Design 2005 (2002-2005) are the main programmes on design support for Finnish companies.

Case study 2: Brazil

Brazil was the fifth nation in the world to have a dedicated patent legislation, developed as an “effective protection system for the development of the national industry” (Rodrigues 1973 in Rezende 2005). This was in 1809. In 1875 a system for registration and protection of names and images (e.g. logos) was also developed. In 1882 the visionary Brazilian politician Ruy Barbosa delivers a speech entitled “Design and Industrial Design”: “...It is design my dear sirs, simply design, this modest and gentle discipline that is purifying, communicative and affectionate of all disciplines, such as the drawing classes taught to children and adults from kindergarten to university, as a mandatory foundation for all social strata...". These
were the early steps of the development of design activity in Brazil. Unfortunately, this vision did not have much impact in Brazil for the following decades.

Industrial design education also had its start in the nineteenth century. This discipline started to be taught in the country in 1850, as part of the evening course at the Imperial Academy of Fine Arts in Rio de Janeiro (Cardoso 2005).

In the 30s and 40s, design emerged among the art movement "modernists" when artists/designers produced specially commissioned objects" (Leal 2007). Recognition of design as professional activity happened a few decades later with two important events: the opening of the Contemporary Art Institute (IAC) of the Art Museum in 1950 and the launch of the Superior School of Industrial Design (ESDI) in 1963 (Cardoso 2005).

The 1950s was a particular progressive decade for Brazil. In 1955 Juscelino Kubitschek was elected national president with the slogan "Fifty years of progress in five". Brasilia, the national capital, was built during his mandate and the country witnessed many ambitious projects and an economic boom. This favourable economic scenario fostered the opening of many new companies and also increased consumerism. "Some companies commissioned designers to develop their products, including the automotive industry, which was quickly expanding. (...) This time was also ripe for the emergence of the first initiatives in design." Brazilian design was starting to be internationally recognized through awards (e.g. Armchair Mole by Sergio Rodrigues). The 60s was the decade when important Brazilian brands and design icons emerged (Leal 2007).

The 60s was also the decade when the first design promotion programmes established in Brazil: the Brazilian Association of Industrial Design (ABDI) in 1963 and the International Design Biennials in Rio de Janeiro in 1968, 1970 and 1972.

In 1975 the Federation of Industries in Sao Paulo established the first design centre in this state with the objective to disseminate design to companies in this area. This initiative was called Industrial Design Centre NID until 1982 when it became part of the Department of Technology (DETEC). The centre developed quality design work in the field of orthopaedic and hospital equipment (Leal 2007) and was effective in the creation of the "Museu da Casa Brasileira" and its award in 1986 in partnership with the State Secretary of Culture. This remains until today as one of the most respected awards in the country.

In the 80s, as well as the Brazilian Ergonomics Association (Abergo), important design centres were also opened in Brazil by the Federal government research institution CNPq. Three 'Associated Laboratory of Product Development/Industrial Design' (LBDI) were established in South, Southeast and Northeast. However, only the first one prospered. Associated to the university's technological centre, this LBDI became one of the most important research institutes in product design of Latin America. The main activities were services to the industry, training and research in design (Rede Design Brasil 2008a). It was closed in 1997.

The transition of the 80s and 90s decade were marked by hyperinflation and economic stagnation. Several economic plans had been tried before, but another one was needed in order to bring the country to stability in a global economy. The first post-military-regime elected president, Fernando Collor de Mello, introduced
policies aimed at removing restrictions on free enterprise, increasing competition, privatizing public enterprises, and boosting productivity. He did not succeed in stopping inflation, but his policies helped Brazil to be introduced on the global market. Suddenly the national industries were facing international competition and needed to seek its products' commercial advantage. Design became an important asset for business competitiveness.

The Brazilian Programme for Design (PBD) emerged in this context. It was created in 1995 by the Ministry of Industry, Commerce and Tourism based in the Federal capital Brasilia but regional programmes were also established in some federation states in the following years. Some institutional and private initiatives also found a favourable time to set up activities. Brasil Faz Design and Objeto Brasil were two of the initiatives for the promotion of Brazilian design both in the country and abroad (Leal 2007).

A design policy for the State of Sao Paulo was launched in 1995 under the title "Programa Sao Paulo Design". This policy was establishing a base for co-operation between various stakeholders in the state and also included the establishment of the Sao Paulo Design Centre which is still in operation (CSPD 2008).

Many other states in Brazil launched their own design policies in the same period. The policies evolved in different ways, depending mainly on the support available from local government, professional associations and leadership. In some states the policy resulted the creation of regional design centres.

This was also the case of the Design Centre Parana created in 1997 with full support from the State government. The centre was established under the umbrella of the State's Institute of Technology. This association was key for the initial focus on product development and innovation. Its main activity was services to the industry, as a bridge between designers and companies. In 2000 this organisation launched the Criação Paraná programme, which was an important design support programme in Brazil, providing a tailored advice programme for manufacturing industries, taking them from the initial stage of the design process to the prototype stage. The programme had two editions which were closed with exhibitions (in 2002 and 2005) of more than 40 products developed during each programme. The programme was based on the experiences of the Glasgow Collection, developed in Scotland/UK from 1997 to 1999. Although the two editions of the programme were successful, the third edition was jeopardized by lack of funding. The Design Centre is still in operation, however, it no longer receives funds from the State government and has been disconnected from the Institute of Technology.

In 2001, the Brazilian Service of Support for Micro and Small Enterprises (SEBRAE) launched a programme that became maybe the most audacious investment in a design programme in Brazil ever. "Via Design" had three streams: assisting SMEs on the use of design, promoting design among SEBRAE, and strengthening the Brazilian infrastructure of design services for SMEs. The third stream was responsible for the establishment of about 100 design centres and/or units around the country. However, financial support from the Via Design lasted only until 2005. After that, the centres had to find own means for sustaining their operation and about 30% of the initiatives closed their doors. SEBRAE is still one of the most important stakeholders in the Brazilian design system. This organisation takes the lead and
with large investment and operational support, implements its own programmes and provide invaluable contribution to other initiatives such as the PBD and Design Biennial.

The first Brazilian Design Biennial took place in 2006 in Sao Paulo and was an important event for the promotion of design in Brazil. It was organised in co-operation between the Ministry of Development, Industry and Foreign Trade with the Programme Competitive Brazil (MBC).

A Brazilian design identity has been a constant topic of discussion for designers in this country. It is also considered an important issue for Brazil's exports. The Marca Brasil Programme (launched in 2000) was one of the attempts to establish an identity. A special government-aided programme called Design & Excellence Brazil is dedicated to supporting Brazilian products on international competitions in particular the iF award.

Creativity is a strong asset for Brazilians and designers have been educated to use this natural talent to develop products and communication. Although Brazil has 331 graduate design courses (Miasaki et al 2006) not all of them provide quality education and some young professionals can be unprepared for work in the industry.

PBD, the Brazilian Programme for Design is the Federal government design initiative since 1995. However, its operation is limited by budget constrains and it also finds difficulties in acting as a coordinator for the various other design initiatives in the country. The document PBD 2007-12 sets up the current policy for design in the country (PBD 2007). This strategic plan was based on three preparatory documents: international and national benchmarks (Raulik 2006; Miasaki et al 2006 and CDP 2006). The aim is to encourage industrial and technological modernization through design in order to improve quality and competitiveness for Brazilian products and services. However, the policy does not distribute actions among the stakeholders.

Figure 5 represents the design system in Brazil in January 2008. It shows the main stakeholders, categorized according to their role in the system.
The Brazilian design system is characterized by a large and diverse number of initiatives, mainly with a short life. Funding for design initiatives is not mainly from government sources. There are important non-profit large organisations that provide a large part of the investments in design in the country e.g. SEBRAE, SENAI, industry federations.

**Discussion**

This research analyses the case studies in comparison with each country’s competitiveness potential, through the Competitiveness Rank by the World Economic Forum (Lopez-Claros et al. 2006). This Rank uses a combination of indicators to calculate the general index. The 2006-07 edition also lists the 125 most competitive economies and classifies them into stages of development according to GDP per capita (see figure 3).

The stages indicate the needs of a specific economy in relation to development policies. According to the level of development, economies need to prioritize different aspects. For example, advanced economies do not need to address problems, such as, basic infrastructure, health system or corruption as do nations at the lower levels.

Brazil is classified on Stage 2 of economic development, the efficiency-driven stage (see figure 3). In this stage, policies should aim to develop more efficient “production processes and increase product quality” (Lopez-Claros2006). This can be achieved in targeting the improvement of higher education, market efficiency and exploitation of existing technologies in order to improve competitiveness.
Finland is on the third and highest level of economic development, the innovation-driven stage. With higher costs for production, these countries cannot afford to compete on price alone. In order to remain competitive they must focus on innovative products of the highest level of technology or design.

Indeed, there is an overall understanding in Finland about the need for design in order to differentiate goods produced in the country. Exploitation of technologies is high, hence the high investments in R&I and innovation. The Finnish design policy clearly associate design with these subjects.

In contrast, Brazil is underperforming in innovation and it is due partly to insufficient R&I investment (World Bank n.d.). Moreover, links between design, innovation and technology are still very weak in the Brazilian policy. As explained by one of the interviewees, innovation and R&I are part of the Ministry of Science and Technology’s agenda. Design is dealt at the Ministry of Development, Industry and Foreign Trade with almost no dialogue between the two institutions in relation to design initiatives. However, some regional design centres have developed links with institutes of technology. This association can be extremely useful for these regional design support programmes, in particular on the improvement of products and processes' quality. The performance of Brazilian design programmes is also jeopardized by problems in the country’s institutions, an intrinsic problem for Brazilian growth. Red tape and bureaucracy are constant problems in the public institutions (Lopez-Clarios 2006), which has a negative impact on businesses investments and on the implementation of design programmes.

There are many differences between the most recent policies from Brazil and Finland ("Design 2005" and ‘PBD 2007-12’), among them:

- The Brazilian policy does not mention any actions to be taken within the public sector. In contrast, the Finnish policy states “The public sector must set an example in the use of Finnish design and its potential in the construction of work and operational environments in the information society”;
- The Brazilian policy does not include projects within the Arts and crafts sector. The Finnish policy dedicates a topic to the theme “Arts and crafts training – technically trained workers”.
- Although there are no specific actions defined, the Brazilian policy does mention sustainability and social programmes, in contrast to the Finnish policy which does not include these issues.

Continuity is a point of contrast between the two case studies. While Finland has been able to develop long term strategies and maintains organisations in operation for even more than a century, Brazilian strategies are mainly short term initiatives and the institutions rarely accumulate more than a decade of history.

This difference seems to have direct relation with the country’s political stability and programmes' funding sources. To a certain extent, in Finland funds and government support has not suffered instability due to political changes, as common in the great majority of countries around the world (Soikkkanen 2003).

In contrast, Brazilian programmes suffer with frequent changes on the governments' agenda, both on national and regional level. This problem of lack of continuity impact
immensely on the programmes’ results. Design strategies are programmes with impact in long term, in particular when the programme aims for improvement in economic development. Results of the implementation of this policy will only be available in the long-term, as with any other economic plan aiming for sustainable growth.

The Finnish culture and countries’ population profile is regarded as an important factor for the success of Finnish policies. Castells and Himanen (2002) argue that “in contrast to the crisis of legitimacy experienced by many governments throughout the world, which impairs their action, the Finnish state has been able to make bold policy decisions that paved the way for new technological and economic dynamism of the 1990’s.” Häikiö (2002) talks about the Finnish favourable environment for business: "a political system cannot produce technological innovation, but it can do a great deal to prohibit, slow down and create obstacles to it."

"Sustained growth is the major challenge for the Brazilian economy. (...) Despite some advances in microeconomic and institutional reforms, activity by the private sector remains stifled by various barriers and regulations that prevent the country from achieving its growth potential" (World Bank 2007). This context also influences the implementation of design programmes, considering that it provides the foundations for this kind of programme to operate.

**Conclusion**

This paper presents a comparison of design policies in Finland and Brazil, two countries in different stages of economic development and how they should address their specific weaknesses and advantages through design. This study does not wish to advocate the idea that design is responsible for the economic success or failure of a nation. However, it reinforces previous studies on the idea that design can be a strategic tool that will contribute to economic development.

Finland was until recently a country in economic crises and had to create an assertive plan to recover. Design was part of this plan. The result was a staggering growth rate that raised Finland to second position among the most competitive economies in the World. The stable situation and political continuity, government support and investments, quality education, tradition and reputation in design, stimulus to R&D were all factors that have contributed positively to the success of the implementation of design strategies in Finland.

Brazil faced the opening of their markets to international competition in the 90s. Suddenly design became a crucial element to guarantee a competitive national industry. As a efficiency-driven economy, this country should prioritize the quality of its products, higher education and market efficiency. The Brazilian design policy is willing to tackle these issues however it first faces traditional problems such as weak institutions, red tape, bureaucracy and quality of the education. As a result, design programmes in Brazil have had short lifespans, unclear roles and isolated priorities.

Shouldn’t design policies in countries like Brazil also tackle the fundamental issues that create obstacles for the economic growth?
This paper is part of an ongoing research that will also consider South Korean and Indian design policies as case study subjects. The research, a PhD thesis, proposes the two hypotheses below for the data analysis:

HYPOTHESIS 1: Countries in the lower stages of economic development (World Economic Forum 2006) are usually characterised by isolated, disjointed and short term design support initiatives with limited vision about the strategic use of design within public policies.

HYPOTHESIS 2: Countries in the highest stages of economic development (World Economic Forum 2006) have an approach to design support that is characterised by long term strategies, the successful coordination of individual programmes with stakeholders, high investment and the strategic use of design in public policies focused on competitiveness enhancement.

This study will benefit the increasing number of countries that have been developing strategies for design. Design programmes and policies are models that can be duplicated. However, the resources and conditions for their implementation are not transferable and it makes one country succeed while another fails. Hence strategies and programmes for design should be aligned with wider national and/or regional context, focusing on the weaknesses and strengths of the country aiming to improve its competitiveness.

References


Gisele Raulik
Gisele Raulik is a senior researcher at the University of Wales Institute Cardiff (UWIC), with PDR/Design Wales. She is a graphic designer with a postgraduate diploma in Strategic Planning and Business Management, and a Masters in Design Strategy and Innovation from Brunel University. Prior to taking the Masters course she worked for the Centro de Design Paraná in Brazil for six years. After graduating from Brunel, Gisele worked as a research consultant for the Design Council in London. She joined Design Wales in 2003. Between 2005 and 2007 she coordinated the EU funded programme SEEdesign – Sharing Experience on Design Support for SMEs. Gisele is currently undertaking a PhD at UWIC, developing a comparative analysis of strategies for design in different national contexts. Her research is the study of national design policies and the structure of design organisations, with an emphasis on models for design support serving the SME sector and economic development.

Gavin Cawood
After gaining a degree in industrial design Gavin became a partner in a product design consultancy with clients as diverse as the Early Learning Centre, Marconi and Xerox. With the opportunity to develop his skills further he took up an offer to work for Xerox where he became responsible for the product design aspects of all Xerox products manufactured in Europe. In order to understand further how design fits into a practical business context he gained an MBA and has subsequently been working in Wales developing the services of Design Wales. Gavin’s current interest lies in how the service sector can make use of design to create innovative and appropriate offerings to customers. Gavin Cawood is currently the Operations Director of Design Wales in the UK.

Dr Povl Larsen
Povl Larsen is Senior Research Officer in design and innovation management at the National Centre for Product Design & Development Research (PDR), Cardiff, UK. His research interests cover barriers to innovation, smart clothes and wearable technology and new design technologies in the craft sector. He is also active in research into design and management accounting processes in medium-sized enterprises. He has published over forty papers in these areas and related fields.

Professor Alan Lewis
Alan Lewis is the Director the National Centre for Product Design & Development Research (PDR) and UWIC’s Dean of Research. He has worked with many companies in a variety of industry sectors helping them to improve their product development processes. He has a particular interest in the management of product design and development processes within the SME sector of the economy and has published extensively in this field of research.
Uma revisão das estratégias de design no Brasil

Review of the strategies for design in Brazil

Raulik, Gisele; Mestre; University of Wales Institute Cardiff
graulik@designwales.org

Fonseca, Ken; Mestre; Universidade Federal do Paraná
ken@ufpr.br

Pougy, Geraldo; Diretoria Superintendente; Centro de Design Paraná
pougy@centrodedesign.org.br

Miasaki, Deborah; Diretora Geral; Ingetech
deborah@centrodedesign.org.br

Resumo

O presente artigo apresenta uma visão em perspectiva das estratégias de promoção e disseminação do design no Brasil com fins de desenvolvimento econômico e aumento da competitividade da indústria brasileira. Com ou sem suporte do governo, programas de design têm sido desenvolvidos com frequência no país, desde o século 19. Este estudo apresenta uma revisão desta história e, a partir dela, um quadro do atual plano estratégico do governo nacional para o fomento do design no Brasil e recomendação para a avaliação do impacto deste plano na economia brasileira.

Palavras Chave: políticas de design; desenvolvimento; gestão.

Abstract

This paper presents a review of the strategies for promotion and dissemination of design in Brazil for purposes of economic development and improvement of industry competitiveness. With or without government support, strategies for design have been taking place in Brazil since the 19th century. This study presents a review of this history and an overview of the current government strategic plan for the promotion of design in the country. The paper concludes with recommendation for the evaluation of impact of this plan on the Brazilian economy.

Keywords: policy, development, management
Introdução

Hoje, a grande maioria dos países dedica esforço para o fomento ao uso do design. As estratégias adotadas variam em cada país: alguns optam por programas isolados, outros desenvolvem políticas para o design em planos mais elaborados. Em muitos países a promoção do design é parte integrante das estratégias de exportação, promovendo a imagem do país internacionalmente e melhorando a competitividade dos produtos (Cawood et al. 2004).

No Brasil, com ou sem suporte do governo, programas de design têm sido desenvolvidos desde o século 19. Este artigo apresenta uma revisão desta história e, a partir dela, uma visão do atual plano estratégico do Governo Federal para o fomento do design no Brasil e recomendações para a avaliação do impacto do design na economia brasileira.

Estratégias de Design

Para facilitar compreensão das estratégias de design este artigo usa as categorias Suporte, Promoção, Educação e Políticas (Raulik 2008), de acordo com abrangência, função e público.

Iniciativas de Promoção são focadas no público geral e empresas, geralmente com o objetivo de fomentar o reconhecimento dos benefícios do design através de exposições, prêmios, conferências, seminários, publicações.

Suporte pode ser resumido em 3 palavras: prática, assessoria e indústria. O objetivo: suprir a deficiência das empresas, principalmente pequenas e médias, que não possuem recursos para integrar design em suas atividades.

Educação inclui ensino formal e treinamento profissional. Um país deve formar bons profissionais a fim de suprir as demandas criadas por programas de promoção e suporte.

Planos estratégicos ou políticas governamentais são necessários para articular e direcionar os diversos programas. Juntos, os 4 elementos formam o sistema de design em um país (figura 1).
Metodologia de Pesquisa


Revisão Histórica das Estratégias de Design no Brasil

Não está claro quando as estratégias ligadas ao design começaram no Brasil, mas é possível levantar fatos relevantes no século 19. Em 1809 o Brasil se tornava a quinta nação no mundo a ter uma legislação dedicada a patentes, desenvolvendo um “efetivo sistema de proteção para o desenvolvimento da indústria nacional” (Rodrigues 1973 apud Rezende 2005). Em 1875 um sistema para registro de nomes e imagens também foi desenvolvido. Cardoso (2005) explica que o ensino do design também iniciou na metade deste século quando uma disciplina correspondente a “desenho industrial” passou a ser ministrada na Academia Imperial de Belas Artes.

No entanto o reconhecimento do design como atividade, disciplina e profissão só aconteceu na metade do século 20, com dois marcos: o Instituto de Arte Contemporânea IAC do Museu de Arte de São Paulo em 1951 e a Escola Superior de Desenho Industrial ESDI (RJ) em 1963 (Cardoso 2005; Niemeyer 2007). A partir destes dois acontecimentos, o design no Brasil passou a se estruturar e iniciativas tomaram força nos estados brasileiros.

Nos anos 80, com a participação de Gui Bonsiepe, o CNPq implementou um programa de apoio ao design e três centros de design foram abertos. O LBDI (1984-97), associado ao centro tecnológico da UFSC, tornou-se um dos mais importantes institutos de pesquisa em design da América Latina.

Um programa de âmbito nacional só surgiu em 1995, quando o Governo Federal lançou o Programa Brasileiro do Design PBD com 5 subprogramas: promoção; informação; capacitação; integração; articulação e fomento.

Iniciativas institucionais e privadas também surgiram na década de 90 como o Brasil Faz Design e Objeto Brasil (Leal 2007).

O PBD também incentivou a criação de programas estaduais de design na década de 90 como em SP, BA e PR. Em alguns estados incluía a criação de centros de design. Este foi o caso do Centro SP Design e do Centro de Design do PR ambos ainda operantes. O centro paranaense destacou-se na assessoria a empresas com o programa Criação Paraná (2002 e 2005).


Em 2004, foi lançado o edital para a indução e operacionalização de Incubadoras de Empresas de Design contemplando 19 projetos em diversos estados.

Em 1990 e 1992, o governo do Paraná organizou a 1ª e 2ª Bienal Brasileira do Design para promover o design brasileiro. Em 2006 uma nova mostra denominada 1ª Bienal Brasileira de Design teve lugar em SP e tornou-se um importante evento de promoção do design brasileiro, organizada pelo MDIC e o Movimento Brasil Competitivo.

Entre 2004 e 2006, um programa de capacitação de unidades de design foi implementado pela Associação Brasileira das Instituições de Pesquisa Tecnológica ABIPTI em parceria com o SEBRAE e o Ministério da Ciência e Tecnologia.

Em 2007 o Programa Brasileiro de Design lançou o documento PBD 2007-12, que estabelece prioridades e objetivos para as estratégias de design no país (PBD 2007).

**Panorama Atual**

As principais instituições de design do país estão representadas na figura 2.
Figura 2: Representação do sistema de design no Brasil (Janeiro 2008)


Dois programas de **suporte** se destacam: o Senai de Gestão do Design e o Via Design. Núcleos estão ligados a Universidades ou entidades de classe para o atendimento de cadeias produtivas específicas. SENAI dispõe de uma rede de 26 núcleos especializados. Alguns incubadores tecnológicos também trabalham em inovação e design. A infraestrutura brasileira para suporte em design também conta com centros nos estados (ex: SP, PR, RJ, PE, RS).

**Educação em design** em nível superior cresce de tal modo que não há informações exatas sobre o número de cursos. Segundo o Ministério da Educação são mais de 300 cursos de graduação ou tecnólogo. Pós-graduação conta atualmente com seis instituições com programas de mestrado e o primeiro doutorado foi lançado em 2002 pela PUC-Rio.

Em 2007 o PBD lançou o **planejamento estratégico** para o período 2007-12. O plano define que o PBD será resultado de diversos projetos conduzidos de forma independente pelas muitas organizações que virem a compor a rede, com dois objetivos: aumentar a capacidade inovadora das empresas brasileiras e aumentar o reconhecimento dos produtos brasileiros no mercado internacional.
Considerações gerais

Este artigo apresenta uma visão das estratégias de disseminação do design no Brasil. A narrativa histórica dessas estratégias teve o objetivo de apresentar uma revisão do que já foi realizado. O quadro atual para o fomento do design no país fornece um panorama do potencial deste setor.

Estratégias de design são estabelecidas para suprir uma deficiência de mercado ou da sociedade. No Brasil ainda é preciso aumentar a percepção de que o design possa ser efetivamente estratégico para benefício do país. Uma das razões para esta deficiência é a falta de avaliação dos impactos desses programas na economia nacional. Sugere-se que este tema seja mais amplamente debatido dentro dos meios acadêmicos, com o estímulo a estudos regionais e setoriais que gerem referências e métodos melhor estruturados de modo a aprimorar a avaliação de impactos econômicos causados por programas de design.

Esse artigo buscou contribuir para a discussão de políticas e programas de design no Brasil. Muito mais do que simplesmente valorizar a profissão “design”, o que se procura é aumentar da competitividade das empresas brasileiras e, ao final, beneficiar toda a sociedade.

Referências


