Design Economics

Chapter Four: Design rights, an international comparison

BOP Consulting

Intellectual Property Office is an operating name of the Patent Office

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This is an independent report commissioned by the Intellectual Property Office (IPO).

Design Economics Introduction

The design industry continues to make a significant contribution to the UK's growth and innovation. A conservative estimate of £23 billion[1] on spending in design, equating to 1.6% of GDP, demonstrates the value that it brings to the economy. However, we believe that this is not the true picture and if all design activity was included it would be much higher. Various entities define what is included in the "design industry" in different ways, for the purpose of this report the design industry is defined in Table 1 of Chapter 1. To maintain and build on this success, policy makers need to better understand how the Intellectual Property (IP) framework supports this dynamic sector. Policy makers need to know:

- How has the UK built up such a successful design sector with such a low level of registered rights?
- Is the design sector successful because it does not register rights?
- Is the intellectual property work framework too complex?
- Why is the number of domestic design rights issued each year about a quarter of the number of patents or trademarks?

The propensity for UK businesses to register designs rights both domestically and through Office for Harmonization of Internal Markets (OHIM) seems to be significantly lower than its EU counterparts. Yet the Government has no evidence to explain this. One of the barriers to understanding this is that gauging the aggregate number of unregistered design rights is difficult, as by their nature they are not on any official registry. It is very possible that many businesses are consciously protecting their designs using an unregistered intellectual property right.

The current Intellectual Property Right (IPR) framework for design is perceived to be something of a patchwork, with many different options for protecting designs in the UK. An overview of the routes available and how they differ is provided in the table of rights below. Each user will value every option differently, depending upon their makeup. Each right covers different dimensions including time, geographical area and the features of a design it will protect, as well as being priced differently. Most bodies who issue registered design rights do not examine for prior art or novelty, this includes the UK Intellectual Property Office (IPO) and OHIM.

The Hargreaves Review of Intellectual Property and Growth and the subsequent Government Response identifies a gap in the knowledge base and calls for more research in this area to ensure that government policies to support UK design are based on evidence. As a first step towards answering these questions the IPO and the Design Council have commissioned Imperial College and BOP Consulting to research specific areas and create this report.

1 Nesta

This research has been commissioned in four chapters, which can be read individually or together:

- **Chapter One provides a map of where design activity takes place in the UK, how it is purchased (bought externally or created internally) and how registered rights are used.**
- **Chapter Two analyses the impact registered design rights have on business performance, given a UK or EU design registration.**
- **Chapter Three is a survey looking at the reasons for the behaviour of firms when interacting within the IP framework for design.**
- **Chapter Four is an international comparison of design systems in the UK, France and Germany.**

The IPO and Design Council would like to thank all of the researchers involved in the project for their hard work in creating this report. We would also like to thank the Trade Mark and Design Rights Expert Advisory Group, and its chair Phillip Johnson, for their input to the research.

Intellectual Property Office, 2011

Table of rights available to design entities in the UK

Name of right	Right Provider	Cover	Term	What's covered?	Cost[1]
Registered Design	UK Intellectual Property Office	UK	25 years (subject to renewal fees)	The overall appearance of a novel design which has individual character (excluding features dictated by function and designs contrary to public policy). No requirement of copying.	1 design: £60 4 designs £180 100 designs: £4,060
Design Right	UK law (unregistered) Some private initiatives such as ACID provide private registries.	UK	15 years from made or, if earlier, 10 years from making available. Last five years subject to licence of right.	An original (and not commonplace) design any aspect of the shape or configuration (whether internal or external) of the whole or part of an article. Excludes must fit, must match and surface decoration). Protection only extends to copying.	Free as copyright, private registries may charge.
Registered Community Design	OHIM	EU	25 years (subject to renewal fees)	The overall appearance of a novel design which has individual character (excluding features dictated by function and designs contrary to public policy). No requirement of copying.	1 design: €350 4 designs €875 100 designs €9125
Unregistered Community Design	EU regulation (unregistered)	EU	3 years	The overall appearance of a novel design which has individual character (excluding features dictated by function and designs contrary to public policy). Protection only extends to copying.	Free as copyright, private registries may charge.
The Hague Industrial design	The World Intellectual Property Organisation	Can designate up to 58 signatories including the EU	Between 15-25 years depending on jurisdiction	The protection depends on the national laws in the respective members of the Hague system.	1 design and all states covered: Sfr[2] 3753 1 design just in the EU: Sfr 503 4 designs and all states covered: Sfr 6912 4 designs just in the EU: Sfr 878 100 designs and all states covered: Sfr 106272 100 designs in just the EU: Sfr 12878

Name of right	Right Provider	Cover	Term	What's covered?	Cost[1]
Copyright (in relation to artistic works – copyright extends much further)	National laws in each country	In every country in the WTO or member of the Berne Convention (artistic works)	At least the life of the author plus 50 years (25 years for industrial articles).	Original artistic works (or works of artistic craftsmanship).	Free
Trade Mark	UK Intellectual Property Office	UK	No limit	Any sign capable of being represented graphically which is capable of distinguishing goods or services of one undertaking from those of other undertakings. A trade mark may, in particular, consist of words (including personal names), designs, letters, numerals or the shape of goods or their packaging (numerous exclusions, in particular functional trade marks are not permitted).	1 registration £170 4 registrations £680 100 registrations £17,000 (plus renewal fees, and extra charges for additional classes)
Community Trade Mark	OHIM	EU	No limit	Any sign capable of being represented graphically which is capable of distinguishing goods or services of one undertaking from those of other undertakings. A trade mark may, in particular, consist of words (including personal names), designs, letters, numerals or the shape of goods or their packaging (numerous exclusions, in particular functional trade marks are not permitted).	€900 for one registration (covers three classes) 4 registrations €3600 100 registrations €90,000 (plus renewal fees, and extra charges for additional classes)

1 The costs can vary in various regions due to the nature of the application for a number of reasons, e.g. number of words in the description, area it covers (for the Hague). Four designs is the average number of rights held by firms. This comparison does not take account of renewal fees. This table is a rough guide to give a broad comparison of the costs involved in protecting a design, they are subject to change.

2 Swiss Francs – these figures were compiled using the WIPO fee calculator.

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4.1 Executive summary

Historical trends

- Historical data shows that the UK has always had lower levels of design registration than France and Germany.
- The differences in legal and cultural traditions help explain the differences in design registration across the UK, France and Germany.

Enforcement costs and regimes

- The cost of enforcement seems to be lower in Germany and France than in the UK, and there is a general perception that courts will be actively interested in protecting design intellectual property (IP), partly because of the greater weight given to the 'author's right' in those two countries.
- Additionally, infringers face more severe sanctions in Germany than in the UK, where infringements are dealt with under civil law. This may influence design owners' perception of the efficiency of the registration system.
- In addition to strong and relatively inexpensive legal enforcement, Germany has multiple private initiatives, such as the Messe Frankfurt and Plagiarius, to enforce design IP rights (IPR).

Sectoral composition

- The importance of the manufacturing sector in the economy could help explain the differences in registration between the UK, France and Germany. 30 out of 32 classes of design in the UK are in the manufacturing sector, and its importance in the UK economy has massively decreased in the last 30 years.

Awareness of IPR

- German design owners, private companies and educational institutions seem to have a greater systematic awareness of design IPR. UK innovators seem to rely on other methods to protect their designs such as confidentiality agreements, secrecy and lead-time advantage.

Administrative procedures

- Short product cycles can deter design owners from registering design. However, the French IP office seems to have successfully tackled this issue by introducing a 'simplified' procedure aimed to the fashion industry, among others.

- Online filing, still not introduced in the UK, is one of the main administrative advantages of the French and German IP offices. Online registration is also available at the World Intellectual Property Office (WIPO) and the Office for Harmonisation in the Internal Market (OHIM). The online filing system simplifies registration but also makes for significantly lower registration costs.

- Consequently, the implementation of an online filing system and a throughout assessment, and possible implementation, of the 'simplified' procedure used in France for short cycle products are the main policy implications of this chapter.

Recommendations

- Implement online filing.

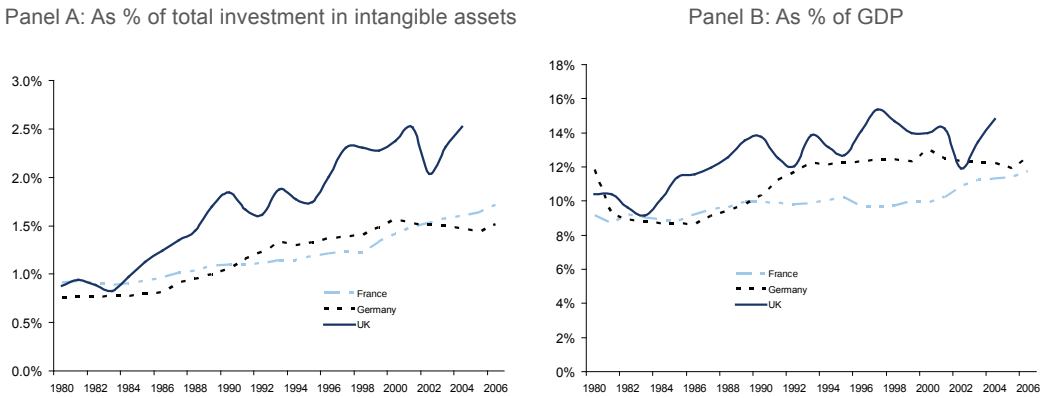
- Consider implementing a "simplified" procedure, but only after a thorough assessment has been made.

4.2 Introduction

As has been noted previously, design activity is a substantial part of the UK's intangible economy, comparable to software and bigger than research and development (R&D) and brand development. NESTA's Innovation Index (2010) found that UK businesses invest about £23 billion per year in design assets. In Chapter 1, we revised this estimate to suggest even greater levels of spending on design of £33.5 billion per year.

The importance of design investment[1] in the intangible economy is greater in the UK than in countries such as France and Germany (Figure 4.1, Panel A.) Furthermore, its importance as a proportion of GDP has substantially increased over the last 25 years and at a faster rate than in those countries (see Panel B).

Figure 4.1 Architecture, engineering and design investment



Source: Coinvest (www.coinvest.org.uk)

However, the number of designs submitted for registration each year in the UK is only a quarter the number of patents and just 15 per cent the number of trade marks. Design registration in the UK is also relatively modest at around 5 per cent of French registration and 9 per cent of that in Germany. According to the Innovation Union Scoreboard (2010), Germany had 7.9 and France 3.8 Community Design applications per €billion GDP (at Purchasing Power Parity), while the UK had only 2.4.

1 Design investment is measured by using a similar methodology of chapter 1. Comparative data is available until 2006 for France and Germany, and until 2004 for the UK.

The main objective of this chapter is to identify the factors that could explain these differences. We also outline the potential relationship between design IPR and competitiveness. As there is not enough data available to conduct an econometric analysis, our conclusions are based on data collected from:

- Intellectual Property offices in the countries of study;
- World International Property Office (WIPO); and
- Office for Harmonisation in the Internal Market (OHIM).

The data is supported by information gathered from 26 interviews with representatives of the private and public sector in the UK, France, Germany as well as with representatives of international organisations (see Appendix 4A for a list of interviewees).

The remainder of the chapter is organised as follows: section 4.3 explains the history of design IPR in the UK, France and Germany and shows trends in registration. Section 4.4 explains the factors that are likely to contribute to the differences in design registration in those three countries. This section also includes an overview of design registration in the US, Japan and China. Section 4.5 outlines the relationship between design registration and competitiveness. Finally, our conclusions are presented in section 4.6.

4.3 Trends in design registration

As we explained in the introduction to this report, there are many design IPR options. These are imperfect substitutes as they offer a similar degree of protection, although they apply to different regions or countries. For this reason, registration trends across countries have to be analysed across the main registration systems: (i) national offices, (ii) OHIM, and (iii) WIPO (Hague Agreement). Unregistered designs arise automatically once a design is made available to the public. It is therefore not possible to include them in this analysis. In this section, we give a history of design rights in the UK, France, Germany and some other countries, and show design registration across the three main registration systems.

Registration of Community Designs (administered by OHIM) and the Hague system (administered by WIPO) are made according to applicant's country of residence. This means that statistics on registration for France, for example, at OHIM only correspond to French nationals or residents. By contrast, registration at national offices, (UK, France and Germany) can be made by applicants of any nationality who are seeking protection in that particular territory. Hence, statistics on registration do not necessarily reflect registration by nationals. However, in the three countries examined here, nationals are heavy users of their corresponding offices. In fact, 94 per cent, 97 per cent, and 82 per cent of design applications in UK, France and Germany in 2009 respectively are by national applicants.[2]

2 There is no information available on design registration for France in 2010.

Finally, it is important to note that the statistics in this chapter correspond to the number of designs contained in the applications submitted each year rather than the number of applications.

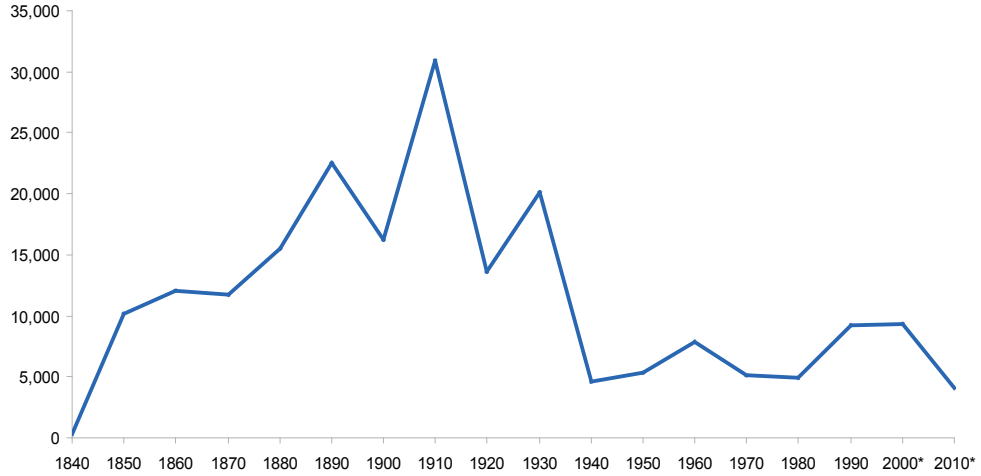
4.3.1 UK

Design IPR in the UK foreshadowed the pattern followed in many other countries: an initial stage of copyright protection; the introduction of a registry; and the formalisation of a unique right. Throughout, according to lawyer Michael Flint, the former chairman of Denton Wilde Sapte, design protection has been based on an interaction between copyright protection and registration.

Design IPRs were introduced in 1787 Designing and Printing of Linen Act which extended copyright to textile designs for a two month term. Copyright in design thus predated copyright in sculpture (1814), music performance (1833) and paintings (1862) showing design's greater importance to the British economy as well as the greater ease with which it could be copied. Registration was introduced in 1839 as part of a national campaign to protect British designers against the better quality of French design (Cornish, 2004), and it has been successively strengthened, especially in the Registered Designs Act 1949.

Bently (1996) collected data on design registration in the UK between 1840 and 1990. As Figure 4.2 shows, design registration peaked in the decade after 1910. There was a decline in registration after World War II, reflected in the six fold decrease between 1930s and 1940s, after which the level of design registration remains lower than in 1850. This decline is not explained by the emergence of an alternative registration system. Although the Hague Agreement was established in 1925, the UK was not a signatory so only got access in 2008, when the EU – and, consequently, all its member states - joined the Agreement.

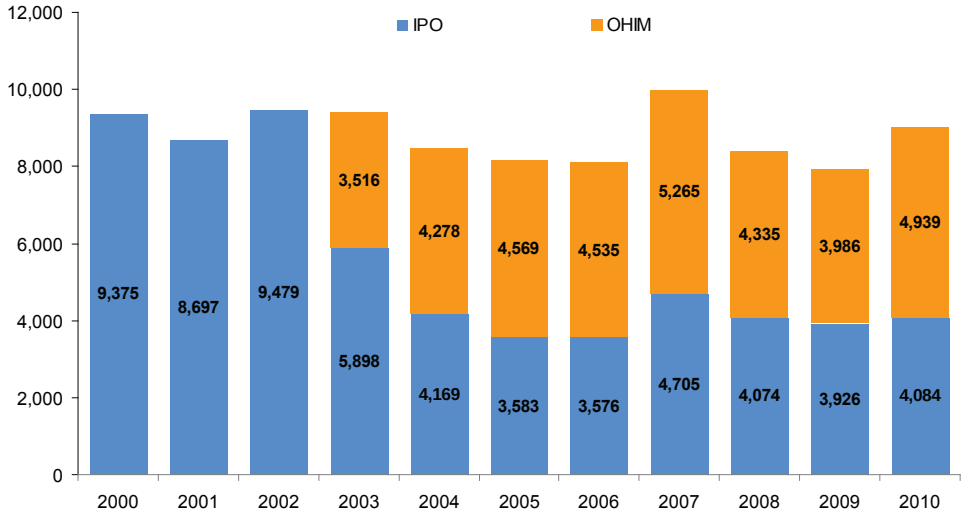
Figure 4.2 UK: Number of designs contained in applications, by year of submission (1840-2010)



Source: Bently (1996)

During the last decade, registration at the IPO has declined even further, from 9,375 in 2000 to 4,004 in 2010. However, when Registered Community Designs are included, the overall level of registration has remained relatively constant as designers have switched to the Community system which gives protection in 27 EU member states, including the UK, albeit at a higher cost.

Figure 4.3 UK: Number of designs contained in applications, by registration system and year of submission (2000-2010)



Source: IPO, OHIM, WIPO

4.3.2 France

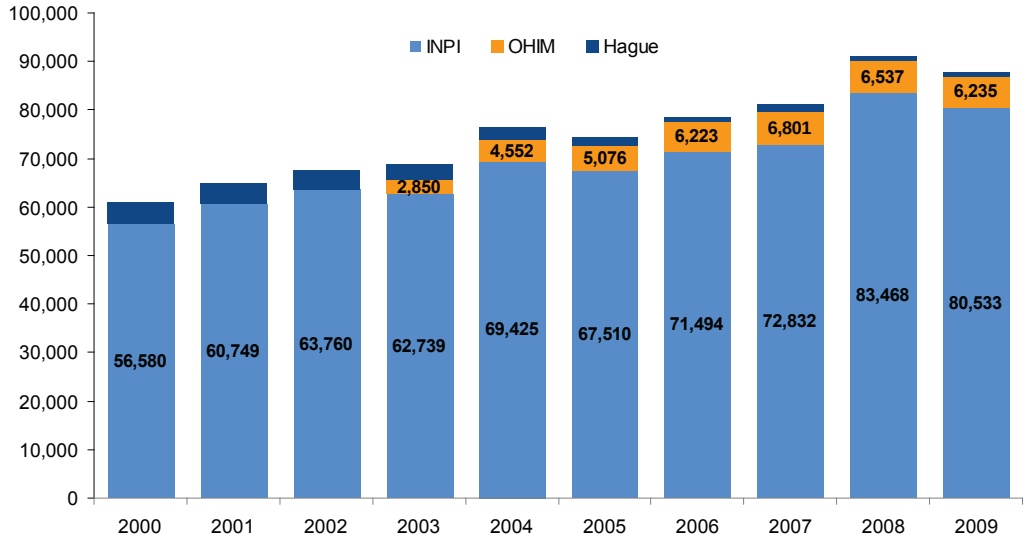
France's first legal instrument (*arrêt*) to protect designs was introduced in Lyon in 1711 to protect the ornamental designs used by the city's textile weaving industry. Copyright law was extended to weavings, garments and furniture in 1787, the same year that copyright was extended to textiles in the UK. French design continued to develop and in the 1840s was one of the main reasons for the strengthening of UK design protection. The Intellectual Property Code protects all designs (*dessins*) and models (*modeles*) under the principle of the 'unity of art' (*l'unité de l'art*). This requires all art to be protected regardless of any functional attribute (Industrial Property Code, Book 5, Articles 511-1 to 521-7).

Before 2003, there was no unregistered design right in France apart from copyright, as the principle of *l'unité d'art* was felt sufficient; the ownership of designs could be defended under copyright law. This has changed since Unregistered Community Designs became available through the EU.

Between 2000 and 2009, design registration at the Institut National de la Propriété Industrielle (INPI) has shown an upward trend (see Figure 4.4). The national route is mainly used by French applicants (who constituted 97 per cent of applicants in 2009). Furthermore, France's strong tradition of registering designs at INPI has not been diminished by the use of Community designs among French designers. Registration at OHIM is higher among French than UK residents. However, registration through OHIM represents barely 9 per cent of the volume of registration at INPI, as is shown in Figure 4.4. Similarly, registration through the Hague Agreement is much less significant than registration at the national office.[3] Our research confirms that French companies and lawyers are reluctant to move to the Community Design system.

3 Registration under the Hague Agreement could be underestimated from 2008 onwards, since countries such as France and Germany –and the UK- can opt to register as EU nationals. Registration of 'EU nationals' is relatively low in comparison with the level of registration at the national offices in France and Germany (4,601 designs in 2010). Nevertheless, the 'EU' accounts for 43% of all registration under the Hague Agreement.

Figure 4.4 France: Number of designs contained in applications (line), by year of submission (2000-2009)



Source: INPI, OHIM, WIPO

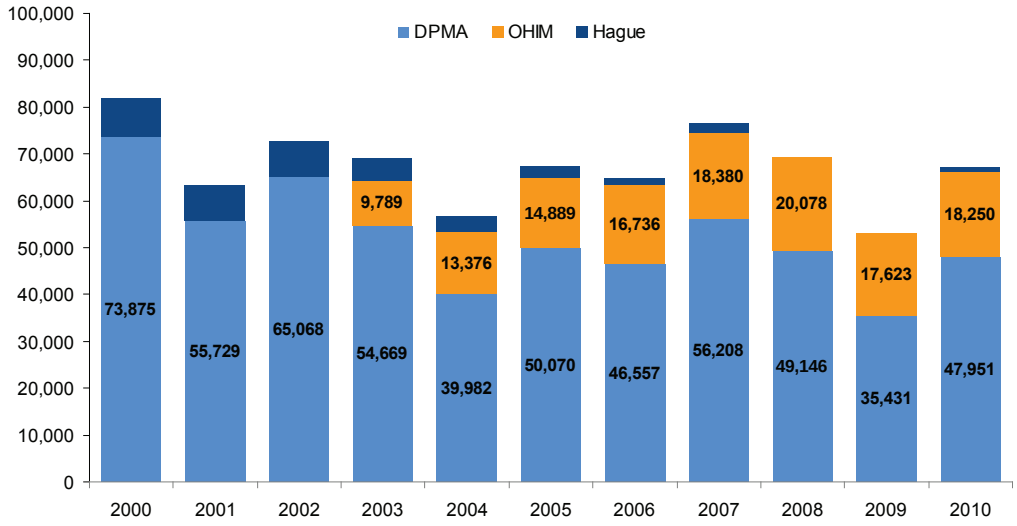
4.3.3 Germany

Germany enacted its first comprehensive Patent Law (*Patentgesetz*) in 1877 following unification. The law covered patents and trade marks (although a separate trade mark law was passed in 1894) and was based on the principle of mandatory examination, the first such system in the world. Some of this legislation was used to protect design.

Design registration in Germany showed no clear pattern between 2000 and 2010. As Figure 4.5 illustrates, the switch towards Registered Community Designs after 2003 – measured as the proportion of registration in the national office and OHIM - has been faster than in France, but slower than in the UK. The decline between 2008 and 2009 may reflect the recession; registration started to grow again in 2010.

Figure 4.5 Germany: Number of designs contained in applications, by year of submission

(2000-2010)



Source: DPMA, OHIM, WIPO

4.3.4 Other countries

USA

The USA does not have a specific design law and thus does not have any design rights, registered or unregistered, on the European model. However, it has an array of other IP instruments including a design patent, trade dress and copyright.

Congress passed its first design patent statute in 1842 to fill the gap between copyright and utility patents. The current US Code states that “whoever invents any new, original and ornamental design for an article of manufacture may obtain a patent” (35 USC #171).

The standard three-fold test of patentability for utility patents is changed in one respect. The test for technical effect is replaced by a test of ornamental value or non-functional design. It can be invalidated if the design depends upon practical utility (such as the shape of a gear). However it is possible for both design and utility patents to apply to the same product as long as the design patent only protects its non-functional aspects. The application process is similar to other patents but costs are lower. Design patents are valid for 14 years from the date of issue. There are no maintenance fees.

Trade dress covers a product's packaging or presentation rather than the product itself. The notion of 'trade dress' refers to an object's visual appearance, such as its packaging or shape. To receive protection, the trade dress must be either inherently distinctive or have acquired some distinctiveness, and must serve no utilitarian function.

Though the 1946 Lanham Trade Mark Act does not refer to design specifically, designers use its provisions to protect trade marks that include designs.

Copyright law may apply. The design (work) has to be fixed in a medium and be a qualifying work. However, if a design has a substantial functional element, it will not qualify for copyright. This criterion has been used by the courts to exclude clothing, textiles, etc, even when they contain a copyrightable (artistic) work.

Japan

The first design protection in Japan was a design by-law adopted in 1888, in the Meiji Era, to protect textile designs. The 1959 Design Act enables designs to be registered. It states: 'This law is designed to protect and utilise designs and to encourage the creation of designs in order to contribute to industrial development' (#1). A qualifying design is defined as 'the shape, patterns or colours, or any combination thereof, of an article which creates an aesthetic impression through the eye'.

The term is 20 years from the day of registration (extended from 15 years in 2007) with annual renewal fees. The 1959 Utility Model Act, revised in 2006, protects 'items having a short cycle, characterised by the potential of early implementation, and a creative idea relating to a product's shape' (Japan Patent Office). The JPO gives the example of a grip at the top of a pen which would qualify for a utility patent and a 'smart grip' which would qualify for a design right.

China

China uses patent laws to protect designs on the US model. It has invention patents, utility patents and design patents.

A design may be registered at the State Intellectual Property Office (SIPO) as a design patent (2000 Patent Law, updated 2009). Like other Chinese patents, the design patent is a monopoly right. Its term is ten years.

The utility patent can be used to protect a technical solution or function that is related to an object's appearance but the design patent, which focuses on appearance alone, is used more often. The former focuses on shape that follows function, the latter on shape that has its own aesthetic. Both patent types are aimed at three-dimensional designs. A design patent used to be fully available for both two- and three-dimensional designs but the 2008 amendments restricted its availability for two-dimensional designs. Under the current law, a pattern or colour used in a logo is protected by trade mark rather than patent law, and a two-dimensional textile design is protected by copyright.

China has very high levels of registration partly because the government strongly promotes IPRs and partly because city and district officials are given quotas for registering intellectual property assets within their area. As a result, the Pudong district of Shanghai filed more design registrations in 2009 than the UK.

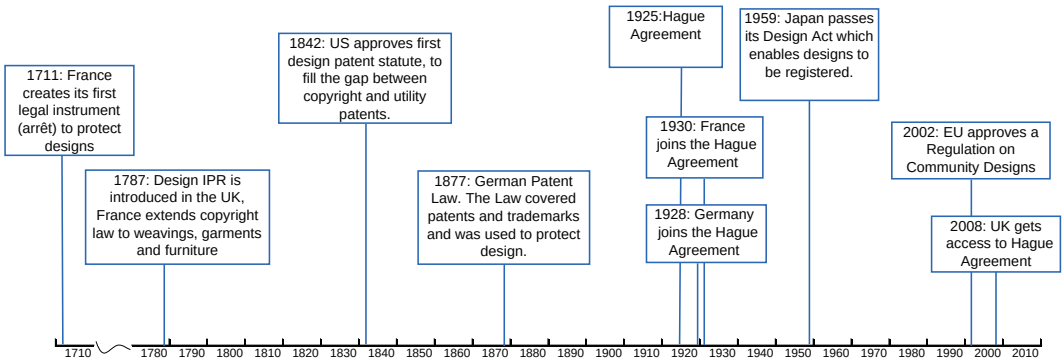
Another reason is the growth through the 1990s of China's textile industry, and companies' recent determination to control more of the textile and garment value chain so they can undercut foreign competition.

China also has a number of private agencies along the lines of the UK's ACID (http://acid.eu.com) that register copyright and design rights.

4.3.5 Summary: History of trends in design registration

Figure 4.6 summarises this history. France and the UK were among the first adopters of design IPR. However, the UK never signed the Hague Agreement and consequently had no access to this international registration (which entails protection in 57 signatory states) until 2008 when it became EU-wide. Early signatories to the Hague Agreement (such as Germany in 1928 and France in 1930) are more likely to be familiar with registration processes.

Figure 4.6 Design IPR history line



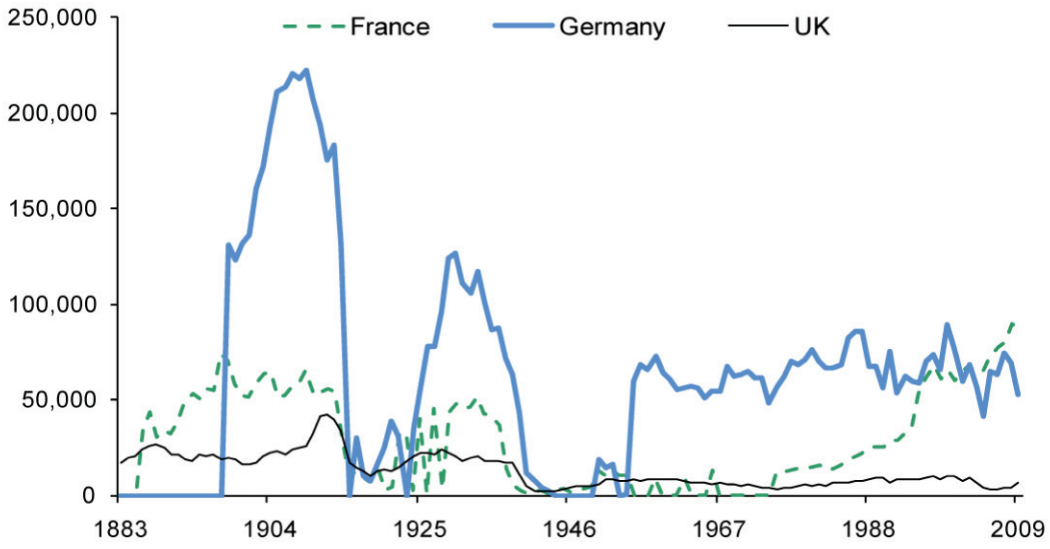
Source: BOP Consulting 2011

Traditionally, France and Germany have had a higher level of registration of design rights than the UK. Figure 4.7 below shows the evolution of design registration at each national office, according to WIPO data. Design registration in Germany reached over 215,000 entries in 1908, while France and the UK were below 60,000. Even in 1913, when UK registration peaked at 39,275 designs, 183,426 designs were registered in Germany and 53,713 in France.

There is massive decline in registration in Germany around the two world wars, but a fast recovery followed both wars. Design registration also declined in France and the UK after the Second World War, taking more than 40 years to recover pre-war levels of registration. UK registration remained low.

Recent stagnation in design registration by UK nationals and residents with both the IPO and OHIM is at odds with an upward trend internationally since 1994 (WIPO, 2010). According to the latest WIPO report (2010), the total number of industrial design applications filed in all offices at national, regional and international levels was 656,000 in 2008, almost three times the number in 1994. The 2008 figures represent a 5.7 per cent increase over 2007, primarily explained by the substantial growth in applications made in China –which now represent 7 per cent of all industrial designs applications (WIPO, 2010). Applications for international registrations filed through the Hague Agreement grew by 27 per cent in 2010, although the total level of registrations under this system remains relatively low (11,238 designs).

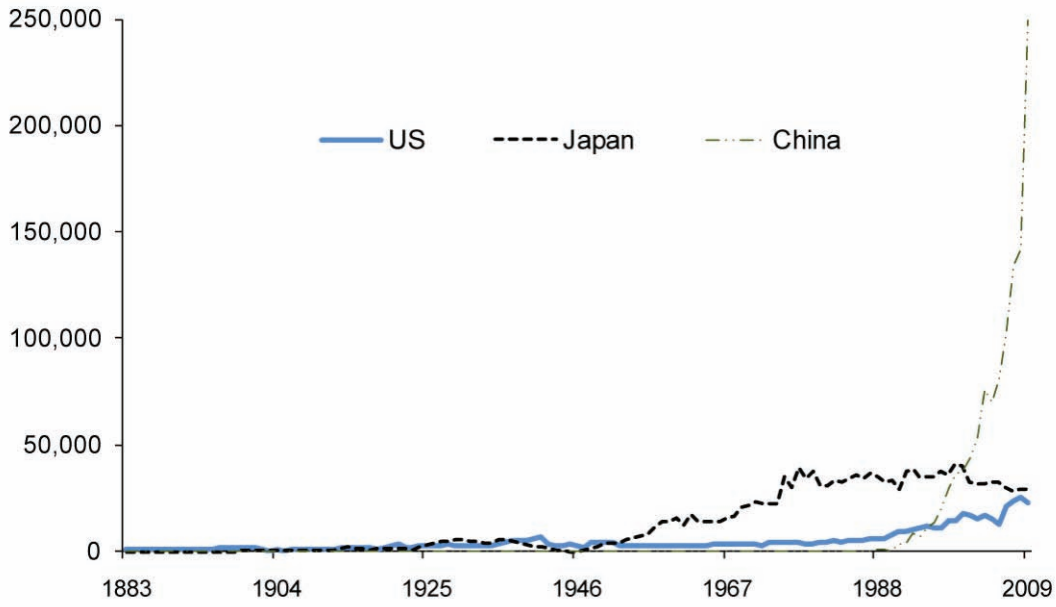
Figure 4.7 Evolution of design registrations per national office



Source: WIPO Statistical Database, June 2010

Figure 4.8 shows a highly accelerated increase in registration in China after 1990, in line with the evolution of its textile industry. As China moves to strengthen the upstream value of its textile exports, which make up about 20 per cent of its total exports, it is also strengthening its IP protection. It has recently opened special tribunals in several textile markets for instant decisions on 'cease-and-desist' orders. Registration in the US and Japan is higher than in the UK, but lower than in France and Germany.

Figure 4.8 Evolution of design registrations per office



Source: WIPO Statistical Database, June 2010

4.4 What causes the differences?

Why does the use of design rights, especially registered rights, differ from country to country? This section explores the multiple interplays between industrial, legal and administrative factors that could explain differences in registration across the UK, France and Germany. Table 4.1 summarises the factors that will be discussed in this section.

Table 4.1 Factors likely to explain differences in registration across countries

Factors likely to explain differences between countries	Explanatory factors that need more research to determine if they explain country differences	Factors likely to explain why there might be low take-up (but not why this differs across territory)
Industrial		
Sectoral composition		Shorter product lifecycles
Industry structure		
Awareness and knowledge of design IPR		
Legal		
Legal traditions	Legal strength of unregistered rights	Wide range of IPR options
Enforcement regimes		Diffuse qualification
Existence and efficacy of competing private databases		Rise of open source collaborations (FOSS)
Administrative		
Simplicity and ease of application procedure		
Registration cost		

Source: BOP Consulting 2011

4.4.1 Factors likely to explain differences between countries

4.4.1.1 Industrial

A Sectoral composition

According to OHIM, “a design is the outward appearance of a product or part of it, resulting from the lines, contours, colours, shape, texture, materials and/or its ornamentation.” This definition restricts design rights to product design and makes it particularly relevant for design products within manufacturing activity. As we saw in the previous section, most countries - including France, UK and Japan - introduced or strengthened their design rights to protect their textile industry.

The UK's textile industries became the country's biggest export through the 19th century. Data collected by Bently (1996) shows that for over 100 years the majority of its registered designs were for textiles: reaching around 10,000 registrations a year in the 1910s. As the country's textile industries declined, the need for design rights appears to have declined (Bently, 1996). Textile registrations fell to fewer than 100 in the 1990s. British lace used to be another important category back in 1910s and design registrations under this category have fallen from 6,762 at their peak to close to zero.

Table 4.2 shows design registration by class for national offices in the UK, France and Germany, WIPO and OHIM, sorted by order of importance (see Appendix 4B for a full list of the 32 classes contained in the Locarno classification). Across all these systems, Class 2 (Articles of clothing and haberdashery) and Class 6 (Furniture) are among the most popular. Fewer than 20 per cent of designs registered in France and Germany belong to categories other than those listed in the table. In Germany, 52 per cent of design registration in 2010 belongs to textile and furniture, while in France almost 50 per cent of design registration in 2009 fell under the categories of 'articles of clothing' and 'graphic design'. These two countries have a similar class distribution of design registrations and coincide in seven out of the 11 most important classes.

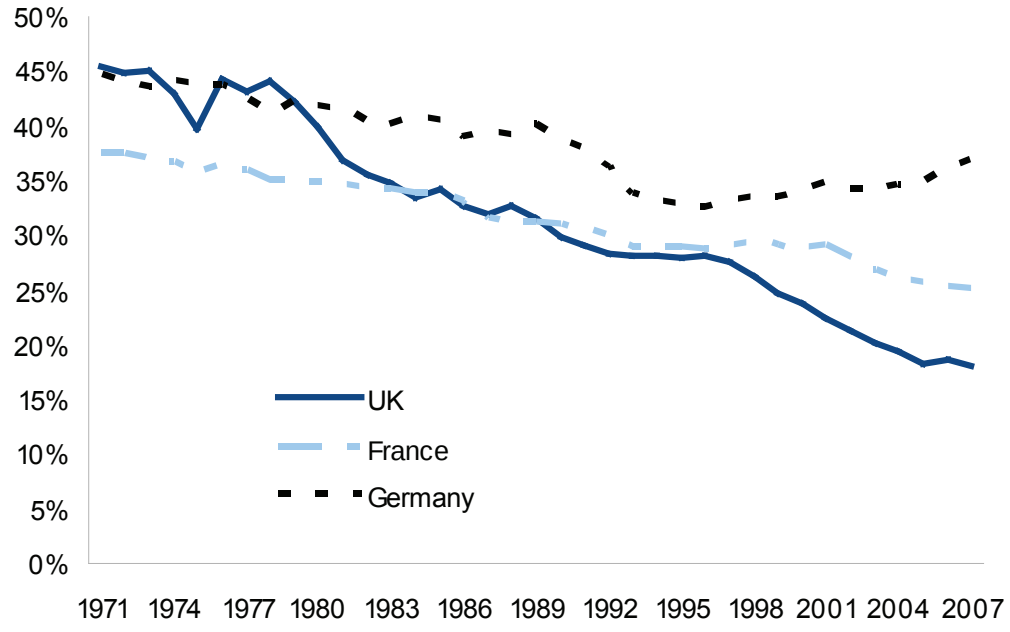
By contrast, UK registration is not so concentrated, with eight per cent of design registration belonging to the group 'others' - the second most popular class used by applicants.

Table 4.2 Design registration by class

UK (IPO) 2010	%	Germany (DPMA) 2010	%	France ((INPI) 2009	%	WIPO (overall registration) 2010	%	OHIM (overall registration) (2003/2010)	%
Furnishing	15.6	Articles of clothing and haberdashery	23.5	Articles of clothing and haberdashery	19.1	Furnishing	10.7	Furnishing	12.9
Other	7.9	Furnishing	15.7	Graphic symbols and logos, surface patterns, ornamentation	15.7	Articles of clothing and haberdashery	9.8	Articles of clothing and haberdashery	9.8
Articles of clothing and haberdashery	7.7	Textile piece goods, artificial and natural sheet material	12.7	Furnishing	13.9	Packages and containers for the transport or handling of goods	7.3	Packages and containers for the transport or handling of goods	7.3
Games, toys, tents and sports goods	6.8	Articles of adornment	7.2	Building units and construction elements	7.8	Recording, communication or information retrieval equipment	6.8	Fluid distribution equipment, sanitary, heating, ventilation and air-conditioning equipment, solid fuel	6.7
Building units and construction elements	6.0	Stationery and office equipment, artists' and teaching materials	6.9	Articles of adornment	6.9	Fluid distribution equipment, sanitary, heating, ventilation and air-conditioning equipment, solid fuel	5.7	Recording, communication or information retrieval equipment	6.1
Household goods, not elsewhere specified	5.5	Building units and construction elements	4.3	Lighting apparatus	4.3	Articles of adornment	5.5	Lighting apparatus	6.0
Packages and containers for the transport or handling of goods	4.9	Lighting apparatus	3.3	Packages and containers for the transport or handling of goods	3.9	Household goods, not elsewhere specified	5.5	Household goods, not elsewhere specified	5.9
Travel goods, cases, parasols and personal belongings, not elsewhere specified	4.7	Graphic symbols and logos, surface patterns, ornamentation	2.9	Stationery and office equipment, artists' and teaching materials	3.2	Means of transport or hoisting	5.1	Building units and construction elements	4.7
Tools and hardware	4.5	Games, toys, tents and sports goods	2.9	Games, toys, tents and sports goods	3.2	Clocks and watches and other measuring instruments, checking and signalling instruments	4.6	Tools and hardware	4.6
Stationery and office equipment, artists' and teaching materials	4.4	Means of transport or hoisting	2.8	Household goods, not elsewhere specified	3.1	Building units and construction elements	4.5	Means of transport or hoisting	4.5
Articles of adornment	3.7	Packages and containers for the transport or handling of goods	2.6	Travel goods, cases, parasols and personal belongings, not elsewhere specified	2.9	Tools and hardware	4.3	Articles of adornment	4.3
Others	28.4	Others	15.2	Others	18.9	Others	30.2	Others	27.2

Only two design registration classes do not belong to the manufacturing sector: 'graphic design' and the 'others' category. Hence, France, Germany and other countries that have maintained their manufacturing and product design sectors have a greater need for registered designs than the UK. Figure 4.8 shows the evolution of the manufacturing industries -as a proportion of total output- for the UK, France and Germany. Over the last 35 years, there has been a decline in the importance of the manufacturing sector in all three countries. However, this decrease has been more pronounced for the UK, which had a higher level of manufacturing production – as a proportion of total output - at the beginning of the 1970s than France and Germany and is now below them.

Figure 4.9 Manufacturing (as a percentage of total gross output)



Source: EU Klems

B Industry structure

Industry structures also affect the propensity to register, in several ways. Home-based inventors and designers who fund their own work, often on a part-time basis, will keep their IPR and will often register at a national register. Trained and professional designers who work on a commercial basis will usually be required to hand over their IPR to the company which funds them and carries the risk. Their designs may be registered, but not by them. A minority of companies will fund and develop their own projects and so can initially keep their IPR. Companies that operate in this way tend to be bigger, although there is no minimum size. Size matters less than the structure of the particular sector and the terms of trade between the designer, the investor and the distributor.

According to the 4th Community Innovation Survey (which covers 2002-04 in the 27 EU member states) larger enterprises are more likely to register their designs (Eurostat, 2007). The data shows that, on average, only 11.2 per cent of innovative companies with 10-49 employees used industrial design registration as a method of innovation protection, whereas 19.9 per cent of companies with 50-249 employees and 29.3 per cent of companies with more than 250 employees did so.

This progression is observed in France and the UK, but is more evident for Germany. In the UK, registration increases with the size of the enterprise, but remains very low across the three business sizes, according to the UK Innovation Survey (2009). Just 2.7 per cent of small enterprises (10-49 employees) registered an industrial design, while 4.7 per cent and 6.9 per cent of medium and large enterprises respectively did so. Consistent with the figures on design registration shown in section 4.3, the proportion of innovator firms that registered an industrial design as a method of innovation protection is higher in both France and Germany. In Germany, large innovator firms are 3.6 times more likely than small firms to use design registration while this ratio is 2.6 in the UK and 1.9 in France (see Table 4.3).

Table 4.3 Industrial design registration enterprises engaged in innovation activities, as a percentage of innovative enterprises, by enterprise size and by country

	Size of the enterprise		
	Small (10-49 employees)	Medium (50-249)	Large (250+)
UK (2009)	2.7	4.7	6.9
France (2007)	15.9	20.6	30.6
Germany (2007)	11.6	25.3	41.3

Source: BIS, Eurostat

These differences between the UK and France and Germany may arise for two different reasons: either French and German entrepreneurs are more business savvy than British entrepreneurs or the British perceive that their business is not hampered by lack of design protection. Evidence shown in chapter 2 and 3 of this report supports the second statement.

C Awareness and knowledge of design IPR

It is difficult to measure industry awareness without a detailed check of what, precisely, people know. Some designers interviewed were 'aware' of the existence of design rights but their knowledge seemed limited when probed.

David Stone at Simmons & Simmons - one of the country's leading design lawyers – believes that awareness is not a problem among British designers and that they do understand the benefits of registering their designs. Surveys by ACID - a private organisation that provides the opportunity to record designs in its member-only database - suggest a large proportion of its members rate IPR highly.

However, this high level of general awareness does not always translate into knowledge and use. Many designers interviewed do not know how much protection they get from a registered over an unregistered design. This is consistent with the findings of Chapter 3: respondents' awareness of the existence of design rights 'does not translate into knowledge about what is protected and for how long, or the process and cost of protection'.

Additionally, Stone reports that designers are likely to opt not to pursue registration given the perceived imbalance between costs and benefits. This also reflects the findings in chapter 3: design intensive firms perceive that registered designs are difficult to defend.

As further examples of how UK firms view the importance of registered designs, the British Fashion Council's 'The Value of the UK Fashion Industry' (2011) does not mention IP rights at all, even in its SWOT[4] analysis. Meanwhile, the founder of Britain's Brompton Bicycle Ltd says he has never discussed registered design rights in 30 years and, on the advice of his lawyers in London and Brussels, prefers to use copyright.

Nadia Danhash, Co-Director of Innovation, Royal College of Art, commented on students' lack of awareness and understanding of intellectual property rights in general. Many students have little interest in the commercial exploitation of their work and a general scepticism of business and money. Many do not know the difference between copyright and design rights and IP is generally (sadly) not covered in design teaching. She said the UK does not start early enough to educate young people into valuing enterprise and innovation (innovation here meaning the effective exploitation of new ideas). When they leave school they think business is a 'dirty' word and switch off when anyone mentions intellectual property.

Awareness and knowledge seems to be relatively higher in Germany than in the UK. This is a view shared by different people interviewed including representatives of the Design Council and DPMA, and design owners themselves. This may reflect the existence of German organisations that actively promote the importance and relevance of design protection.

4 Strategic planning method use to evaluate Strengths, Weakness, Opportunities, and Threats.

According to Helge Aszmoneit, Head of the Information Centre at the German Design Council, these private and public initiatives have largely contributed to strengthening the level of knowledge and awareness of IPR among German design owners over the last 30 years.

1. Design Magazine *Form*[5] is one of the most important publications among German industrial designers. The magazine was established in 1956, since then it has become an 'obligatory' reference source. According to Aszmoneit, almost all the magazine issues during the 1980s and 1990s covered IPR-related topics.

2. ***Aktion Plagiarius*** (http://www.plagiarius.com) was initiated in 1977 by Prof. Rido Busse, a German designer and entrepreneur, to "inform the public about the problem of fakes and plagiarisms and the negative impacts they have on not only the economy as a whole, but also on small companies and designers."[6] Through an annual negative 'award', awareness has been raised not only among designers but also among the general public. Every year, articles about the year's 'winner' are published in design magazines, and national newspapers, while the event is often covered on TV news. Understandably, being exposed at national level creates strong incentives among designers not only to avoid plagiarism, but to have the instruments to demonstrate the novelty of their designs. Hence, the positive effect that it may generate on levels of design registration.

Finally, it is a common practice among German colleges and institutions to provide information about IPRs to their students. All this means that knowledge and awareness is higher in Germany than in the UK. France may also score higher than the UK on knowledge and awareness, but none of the interviewees could provide evidence that this is the case, so more research is needed.

4.4.1.2 Legal

A. Legal traditions

As mentioned in the introduction, a registered design is a monopoly right and should be more defendable than an unregistered design, which only prevents copying. However, as the substantial claims made in the registration are not assessed, the application is not tested for defensibility**,** not even for the factors that are most likely to be contested in court. This keeps the costs of registration low, but may be a fundamental weakness of design protection in general. Most design laws refer to what someone might 'notice', 'expect' or find 'commonplace'. Assessing an application's validity in court involves assessing whether two designs create the same 'overall impression' of an 'informed user'. All these concepts are open to interpretation: who is the 'informed user', what is the overall impression of a design, and how should it be assessed?

5 http://tinyurl.com/3cz246x

6 http://www.plagiarius.com/e_index.html

The complexity of the defensibility of a design right is an issue across all systems of design registration; hence differences in legal traditions can have an effect on the ability of owners to defend their rights.

In natural law traditions, such as in France and Germany, author's rights and moral rights are more highly regarded in law and by the courts than they are in common law traditions, like the UK and the USA. In the first case, an author's right may be seen as separate from economic rights and cannot be easily waived. Both principles tip the balance of power between the designer and the infringer.

For instance, in Germany if a product is not protected by an IPR– be it a registered or unregistered design, a trade mark or copyright – Germany's laws against unfair competition can be used to protect designs. In 2005, the Supreme Court granted protection to some 'designer' jeans on the basis of Section 4(9) of the German Act against Unfair Competition (Case I ZR 151/02 – "Jeans", September 15 2005) (Jonas and Budde, 2008). Competition laws enable designers to ask that infringers cease-and-desist, and to claim compensation and reimbursement of costs if a rival product imitates the overall appearance, trade dress, get-up or other visible features.

In France, according to French lawyer Yvon Gris, of Cabinet Gris, "the subject of design right and an author's right are exactly the same. For example, the French Court of Appeal has ruled that a basic salad strainer can be protected by the author's right. For both author's right and for design rights, French law is very favourable to the author and to the creator."

UK courts, by contrast, are not seen as 'design right friendly', perhaps because they perceive design rights as an unfair monopoly.

B Enforcement costs and regimes

Design IPR is used as a 'Keep Out' notice to would-be infringers as well as a legal tool. Most enforcement cases are between businesses. UK lawyers David Stone and Phillip Johnson reported that enforcement in the UK seemed more expensive and complicated than in Germany, although enforcement costs are extremely difficult to compare across systems. This perception of the high cost of enforcement in the UK is shared by other interviewees, such as ACID's director Dids MacDonald. These interviewees explain that in the UK 'infringement letters' – a step before going to court - have a high cost which probably deters design owners to initiate a legal action to defend their rights. This is not the case in Germany.

In the UK, infringements are dealt with under civil law. ACID has launched two e-petitions calling for stronger penalties (2009-10), in line with the penalties for copyright infringement, including criminal penalties but the petitions were not successful. In contrast, German design laws have always included criminal sanctions and these have some applicability to the infringement of Community Designs in this country.

Additionally, Germany also has out-of-court initiatives to enforce design rights. The 'Messe Frankfurt against copying' is an initiative started in 2006 by the German trade fair organiser Messe Frankfurt against brand and product piracy. According to their website, "this initiative aims to ensure that exhibitors and visitors are fully informed about the registration and assertion of intellectual property rights."[7] They are present at almost all of the trade fairs around the country and visit every stand to identify whether they are displaying products with a design already registered by a third party. Once a 'counterfeiter' has been identified, the custom duty police intervene. The 'counterfeiter' has to pay a fine, and remove the product or remove even the whole stand. Similarly to Plagiarius (explained in section 4.4.1.1), these interventions also receive a lot of national publicity. On their fifth anniversary, Messe Frankfurt produced a press release stating that due to their initiative "the number of products confiscated by Customs has decreased by up to 95 per cent at certain fairs."

In summary, defensibility is difficult across all countries, but the cost of defending a case in court is lower in Germany and France than in the UK. Furthermore, the courts are not seen as design IPR-friendly. In the UK, these perceptions decrease an owner's expected value of defending a design right, and ultimately reduce the incentive to register at all in the UK.

C Existence and efficacy of competing private databases

In the UK, ACID provides a private database for unregistered designs. One British design lawyer said that he welcomed ACID because it provides a user-friendly registration system. He added that the ACID Code of Conduct, which all members must sign, is likely to inhibit members from mistreating or infringing other members' designs. The ACID database is not an official registration so does not establish monopoly rights. However, it does establish priority, and when a company produces the ACID logo it shows that they are IP-savvy, discouraging copying.

Another interesting initiative has been launched by Maxine Horn, the founder and CEO of British Design Innovation (BDI) (http://www.britishdesigninnovation.org). Creative Barcode (http://www.creativebarcode.com) allows members to create unique barcodes for a broad range of projects including documents, concept visuals and illustrations. Annual membership costs £30 and includes five barcodes. The Creative Barcode's partners include WIPO and ACID though not the IPO.

In Germany, DesignPublisher.com (http://www.designpublisher.com) offers a private database like ACID, but it also provides a 'disclosure' service to help design owners to meet the conditions under which Unregistered Community Designs are created. It also provides an online database search facility. No similar or comparable initiative has been identified for France.

7 http://heimtextil.messefrankfurt.com/frankfurt/en/aussteller/messeplanung/against-copying.html

These initiatives help to raise awareness and promote the cause of design rights, though not necessarily of *registered* rights. In fact they can be seen as a cheaper and less complicated substitute for registration. More research is needed to understand the extent to which design owners prefer to use this method instead of applying for registration. However, given the lower level of registration in the UK than in Germany, it is sensible to hypothesise that German designers prefer 'formal' registration while UK designers prefer 'informal' registration or not to pursue any action at all.

4.4.1.3 Administrative

A. Simplicity and ease of application procedure

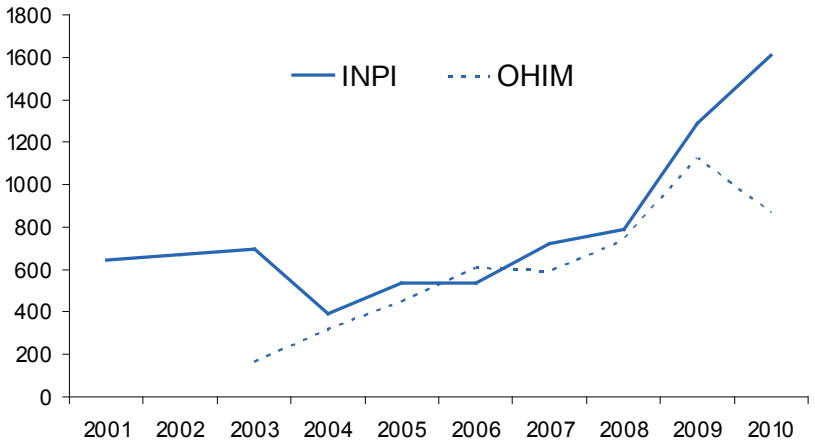
Online filing

One of the main differences between the registration process in the UK and other IP offices is the use of online registration. France's INPI allows online filing of design applications as does Germany's DPMA (via DPMAdirek). The IPO does not allow this yet and is unlikely to do so before 2012/13.

Portugal's Instituto Nacional da Propriedade Industrial (INPI) is a pioneer in the use of online registration. The institute has put considerable resources into online filing and has an impressive online shop front.[8] This application method may explain a recent resurgence in the number of applications (expressed as the number of designs included in those applications) made through the Portuguese INPI in the last two years (as is shown in Figure 4.10 below.) However, it seems that the system still has room for improvement since the system seems to collapse when using the multiple designs application route.

8 http://www.marcasepatentes.pt/

Figure 4.10: Portugal: Number of designs registered (2001-2010)



*Applications made to OHIM for which Portugal has been state as the country of origin.
Source: INPI Portugal

Elsewhere, the majority of the larger national offices accept online filing including about a third of Hague signatories (WIPO, 2008). WIPO has accepted both paper and online applications for Hague since 2008. In 2010, over 60 per cent of applications to Hague were filed electronically.

Since November 2010, OHIM has only accepted online applications for Community Designs. It introduced online certificates to help reduce registration times and costs and no longer issues paper certificates. The new online certificates have the same appearance as the old paper certificates and the same legal value. Turnaround can be as short as one or two days.

Simplified process

Simplified or shortened application process may also help to incentivise registration. In some industries, product cycles have become very short. In particular, fashion seasons which were once six-monthly cycles are now just three or four weeks. The usefulness of design IPR is limited by these short product cycles. In such markets, designers may rely more on trade mark, copyright and unregistered designs, or even non-IP protection methods such as branding.

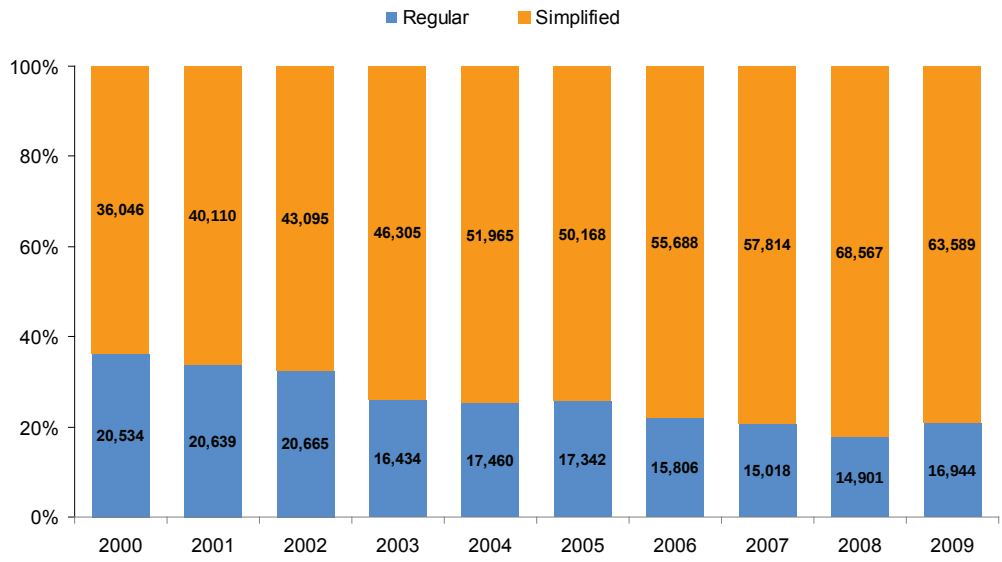
In France, INPI established a 'simplified' process (*dépôt simplifié*) in 1994, which is specifically aimed at companies with short product cycles. INPI says "this procedure is reserved for industries that regularly renew the shape and decoration of their products, as is the case of the fashion industry." The key features are:

- Filing conditions: applications have fewer requirements of size, etc. Applicants pay a flat registration fee of €38 for up to a maximum of 100 reproductions and a publication fee (€22 per black and white reproduction, €45 per colour reproduction).

- Publication: unlike 'regular' applications, whose designs are automatically published, a simplified application does not involve automatic publication. The designs may be published up to three years later if the applicant wishes.

Applications through 'simplified' applications usually contain a large number of designs. In 2009, the average was 36, ten times more than the average number of designs contained in 'regular' applications. The popularity of the 'simplified' procedure reflects the fact that around 19 per cent of the total designs registered in the country belong to Class 2: 'Articles of clothing and haberdashery.' As is shown in Figure 4.11 most designs registered at INPI between 2000 and 2009 were filed through the 'simplified' procedure. The success of this process – which explicitly acknowledges the reality of shorter product cycles and lead times - is at present restricted to France, as no comparable system is available in the UK, Germany, OHIM or the Hague Agreement.

Figure 4.11 France: Number of designs registered through the 'simplified' versus the 'normal' procedure (2000-2009)



Source: INPI

Other process-related differences across countries

In addition to the differences in online filing and the French simplified procedure, there are some other minor differences in procedure between UK, France and Germany regarding delays in publication and classifications.

Flexibility in delaying publication can incentivise registration. A delay in publication does not provide monopoly protection, only protection against copying, until a design is fully published. As explained by OHIM, "this period of confidentiality allows the applicant an opportunity to further develop his marketing strategy or to finalise the preparations for production without competitors being aware of his design." The German DPMA, French INPI ('simplified' procedure) and OHIM, allow an applicant to delay publication for up to 30 months. The IPO allows for publication of a design to be delayed for up to 12 months.

Finally, the UK is also lagging behind in the adoption of commonly used international industrial classifications. Britain joined the Locarno Agreement in 2003, some time after France (1975) and Germany (1990). Nowadays, the IPO uses the older Edition 7 whereas most other countries use Edition 8 (which entered into force in 1971) or Edition 9 (2009).

To summarise, the availability of online filing and a shortened process for designs with short product cycles are both factors that are likely to incentivise registration and for which the French and German offices seem to outperform the UK national office. The existence of a 'simplified' procedure seems to be a key factor in explaining higher levels of design registration in France, which increased by 50 per cent between 1994 and 1995, its biggest growth rate in the last 20 years. The existence of this 'simplified' procedure could also explain why there has been resistance to move towards the use of Registered Community Designs among French companies.

In addition, there is scope to further improve the service provided by IPO such as the adoption of worldwide used classifications (Locarno Edition 9) or by lengthening the time for delaying publications of designs.

B. Registration cost

Registration cost varies widely across all registration systems. In all cases, applicants must prepare their material, which may have a cost, and then pay an application fee and a reproduction fee. In cases where applicants may defer publication fees are reduced slightly. Furthermore, national offices give discounts for multiple applications and multiple designs. It is difficult therefore to make strong comparisons but, in general, costs at the national offices are broadly similar when it comes to applying for one design, but differs significantly when it comes to applying for multiple designs in one application.

The difference in costs between national and international registration systems for single and multiple designs are shown in Table 4.4. It contains the information shown in the introduction of the report and it adds information on France and Germany. Registering one design has a similar cost in the IPO (UK), INPI (France) and DPMA (Germany). However a major difference arises if a design owner scales up its application from 1 to 100 designs. Then registering at IPO becomes around twice the cost of registration in France, and almost six times higher than Germany.

Table 4.4 Registration cost[9]

System	Costs breakdown	Examples
IPO (UK)	It costs GBP £60 to apply to register a single design or the first design in any multiple design applications. For every additional design in any multiple design applications it costs GBP £40 (€45.20) per design.	1 design: £60 (€67.80) 100 designs: £4,060 (€4588) (=£60+£100x40)
INPI (France)	Fixed cost of €38 (€50 if designer wants protection for a period of 10 years). €22 per reproduction in black and white. €45 per reproduction in colour.	1 design and 1 b/w reproduction: €60 100 designs and 1 reproduction of each: €2,238 (=€38+€100x22)
DPMA (Germany)	Individual application (including a term of protection of 5 years): €70. Multiple applications (up to 100 designs can be filed in one application): €7 per design, a minimum of €70.	1 design: €70 100 designs: €700 (=€70x100)
WIPO	Largely dependent upon which member states are applied for.	1 design and all states covered: Sfr[1] 3753 (€3182) 1 design just in the EU: Sfr 503 (€426) 100 designs and all states covered: Sfr 106272 (€90108) 100 designs in just the EU: Sfr 12878 (€10919)
OHIM	A basic fee for a single design or the first design of a multiple application. A reduced fee for the 2nd to 10th design. A further reduced fee per design from the 11th design onwards.	1 design: €350 100 designs: €9,125

Source: IPO (UK), DPMA (Germany), INPI (France), OHIM and WIPO websites.

9 Sterling and Swiss Francs converted to Euros on 31 August 2011.

All the designs contained in the application must fall within the same Locarno class chosen by the applicant. Most of the e-filing procedures include drop down menus for class selection - instead of the unavoidable open text used in paper based applications - restricting the margin for error when filing. In some online systems, the applications include the option of uploading one 'best view' of the design to encourage applicants to file a good image that shows the whole product.

In the UK, however, the designs included in an application can be of any class making classification a decision made by IPO examiners later. Furthermore, given that paper-based filing is less restrictive by nature, designers tend to send additional material that is not relevant to the application instead of the whole product itself.

For all these reasons, electronically filed same class applications vastly reduce examiner and administrative time when multiple designs are submitted, making it less labour-intensive and hence cheaper.

It is true that fees for single designs are higher in WIPO and OHIM than in the UK, but paying those fees may seem more attractive to design owners given WIPO's and OHIM's wider geographic spread and consequent 'lower cost per country'. This is even more cost-effective if the applicant hopes or intends to export the design or is concerned about foreign competition at home.

In that sense, a one-off British designer is more likely to register with the IPO while a larger company will go directly for a Registered Community Design or WIPO. The main factor that leads a UK designer to choose a UK registration over a Registered Community Design is the lower cost and low expectations of foreign sales.

4.4.2 Other factors

The strength of unregistered rights The UK's unregistered design rights can be powerful enough to protect designs. In 2006, Dyson Ltd successfully used its unregistered design right to defend itself against Qualtex UK Ltd in the High Court and the Court of Appeal. Qualtex had been manufacturing spare parts for Dyson cleaners. The Court of Appeal found the UK unregistered design was sufficient to protect Dyson's design rights in its spare parts on four separate grounds. In commenting, law firm Ashurst said Dyson was able to rely on the UK unregistered design and did not need to refer to Registered Community Design even though they have a much broader scope of protection and fewer exceptions.

Since unregistered design rights emerge automatically once a design has been made available to the public, it is not possible to compare what proportion of design activity in the UK, France and Germany *actively* relies on that form of protection. In addition, there is no systematically collected data available to analyse the extent to which unregistered design rights have been used successfully to litigate in the three countries.

4.4.3 Factors that could deter the use of design rights across all countries

A. Free and Open-Source Software (FOSS)

According to Brenda Sanderson, CEO of the International Council of Graphic Design Association (Icograda), "the tide is turning against legislation" because of international collaboration, especially online, and the growth of open source initiatives. Strictly speaking, collaboration does not militate against registration, but it makes the allocations of credit and reward more difficult.

The growth of share-and-share-alike networks and user-generated design, especially in process design, has led to an increasing interest in FOSS principles. The interest lies more in the general philosophy than in specific practices – for instance, there are no equivalents of the General Public Licence (GPL) and Creative Commons (CC) licences for design. But many designers working on social design and sustainable design have more collaborative relationships with other designers (as well as with users) and there is common cause with the FOSS community. This was mentioned as a factor in the UK and France and may also operate in Germany. It seems likely to be strongest amongst students and young designers.

B. The wide range of IPR options

Design IP is unique amongst IPR systems in offering such a wide range of options. To protect their designs, companies can make use of registered and unregistered designs, copyright, patents and trade marks. And it seems that industry awareness of these other rights is stronger. For instance, from the interviews it seems that branding and trade marks are seen as essential whereas design rights are optional. In general, businesses and designers tend to be more familiar with copyright than with design IPR, partly because design rights have less media exposure than copyright, patents and trade marks in the UK.

As the EU paper, *Design as a driver of user-centred innovation* (SEC,2009:501) noted, "it is difficult to truly measure the magnitude of the problem [of piracy and counterfeiting] in a specific area, as many designers opt to use a combination of intellectual property rights and other forms of protection."

Moreover, in companies with a commercialisation strategy based on technology leadership, patents are the most common method of innovation protection. An INPI/APCI report, *Design & Patents: When Innovation Hinges on Design* (2011), surveyed over 200 French design agencies and companies to discover the overlaps between innovation, design and patents. It reported that in 2006-2010:

- 40 per cent of design agencies worked on a project based on a patent;
- 25 per cent of design agencies took part in the filing of a patent application; and

- 20 per cent of design agencies filed their own patent application.

It found that the sectors most likely to use patents were:

- industrial equipment, machinery, tools;
- decoration, furniture, furnishings;
- sport and outdoor activities; and
- health and medical equipment.

It is sometimes possible to use more than one form of IPR because a product's brand, shape and function are often closely related ('form follows function'). In some countries, a patent covering an invention in its general form and a registered design protecting a specific embodiment may coexist to good effect, although not for exactly the same elements (as in the USA). Design registration can be a good complementary form of protection to trade mark protection if the trademark has a graphic element. However, interviewees suggest that most designers do not bother with double applications. Jo Hulf, Creative Director of Jasper Conran Ltd, reported that they rely almost exclusively on trade marks and branding and that 'any infringement of this by passing off is very important.' She said, "Copying designs is not a problem for seasonal products. By the time someone has copied it, we have moved on." The only exceptions are 'continuity' designs, where a design continues over several seasons, but these are rare.

Finally, unlike patents and trade marks, the lack of a single mainstream design right may lead to confusion, as was evident in several interviews. The co-existence of three completely different systems, and the choice between unregistered and registered rights, may inhibit designers and managers from feeling confident about making the right choice. A similar confusion over copyright and patents would probably be observed if they were also available in registered and unregistered forms.

The wide range of IPR options is a significant factor in designers' use of design rights but it does not explain the observed differences between the UK, France and Germany as the situation is broadly similar in all EU countries.

4.5 Design registration and competitiveness

In light of this analysis, the question arises as to whether the UK's relatively low level of registered designs has any effect on international competitiveness. This can operate in two directions: how British design competes in other countries and how foreign design competes in the UK.

There are numerous ways of measuring competitiveness. The most popular indicators are efficiency, productivity and innovation, although the definitional boundaries between these and other factors such as price and creativity are often unclear. Many attempts to measure competitiveness get around this problem by having a large number of variables. The UK Department of Business, Innovation and Skills (BIS) scorecard, for instance, has about 35 indicators.

The World Economic Forum (WEF) focuses on productivity and defines competitiveness as the set of institutions, policies, and factors that determine a country's productivity. On this basis, it compiles a Global Competitiveness Report based on 12 main pillars and a total of 111 factors. The WEF's first pillar, 'Institutions', includes intellectual property protection as a factor; while the twelfth pillar, 'Innovation', includes utility patents per population as factor. Table 4.5 shows countries' overall ranking as well as countries' ranking per factor. France and Germany score high in Intellectual Property, while USA and Japan take the lead when looking at Utility Patents.

Table 4.5 Global Competitiveness Raking 2010/11, by indicator

Country	Overall ranking	Ranking according to: Intellectual property protection	Ranking according to: Utility patents per million population
United Kingdom	12	17	20
France	15	6	21
Germany	5	9	9
USA	4	24	3
Japan	6	21	2
China	27	49	51

Source: WEF Global Competitive Report 2010/2011

By treating competitiveness as productivity the WEF presumably believes that, as productivity rises, so does competitiveness. This may often be true, but it seldom applies in industries where creativity is more important than innovation and novelty more valuable than repetition. In these industries, while it is beneficial to produce something with fewer resources and thus increase productivity, especially downstream, it is more competitive to produce a one-off experience that people want, regardless of the production process. Designs, media, art and culture seldom achieve competitive success because of productivity improvements; they are more likely to do so because of creative talent. It is notable that there are no competitive rankings that include copyright.

The first edition of the EU's 'Innovation Union Scorecard' (IUS) 2010, compiled by INNO-Metrics[10], includes registered design rights. The IUS is composed by three pillars and eight innovation dimensions, capturing a total of 25 indicators. Box 1 explains how these scores are calculated.

Box 1: How is the Innovation Union Scorecard calculated?

A. **Determining Maximum and Minimum scores:** The Maximum score is the highest score for each indicator found for the whole time period within all countries. Similarly, the Minimum score is the lowest score.

B. **Normalising scores**: After determining minimum and maximum scores across countries for each indicator, the normalised scores for all years are calculated by using the min-max normalisation approach. The minimum score is subtracted from each indicator, and the result is divided by the difference between the Maximum and Minimum score. The maximum normalised score is thus equal to 1 and the minimum normalised score is equal to 0.

C. **Calculating composite scores at pillar level:** The indicators within each pillar are aggregated linearly with equal weights.

D. **Calculating composite innovation scores:** the SII is calculated as linear aggregation with equal weights of the scores for the three pillars.

Source: Innovation Union Scoreboard 2010 – Methodology report (2011)

Table 4.6 shows the composite innovation score for the EU, UK, France and Germany. Germany performs well above the EU27 average and is classified as an 'Innovation leader' (along with Denmark, Finland and Sweden). It also shows strong growth between 2006 - the first time the score was published - and 2010. France and the UK, in turn, perform closer to the EU average and are considered 'Innovation Followers'.

Table 4.6 Innovation Union Scoreboard

Country	Composite innovation score		Composite score: growth rate (2006-2010)
	2006	2010	
EU27	0.505	0.516	2.2%
UK	0.600	0.618	3.0%
France	0.493	0.543	10.1%
Germany	0.639	0.696	8.9%

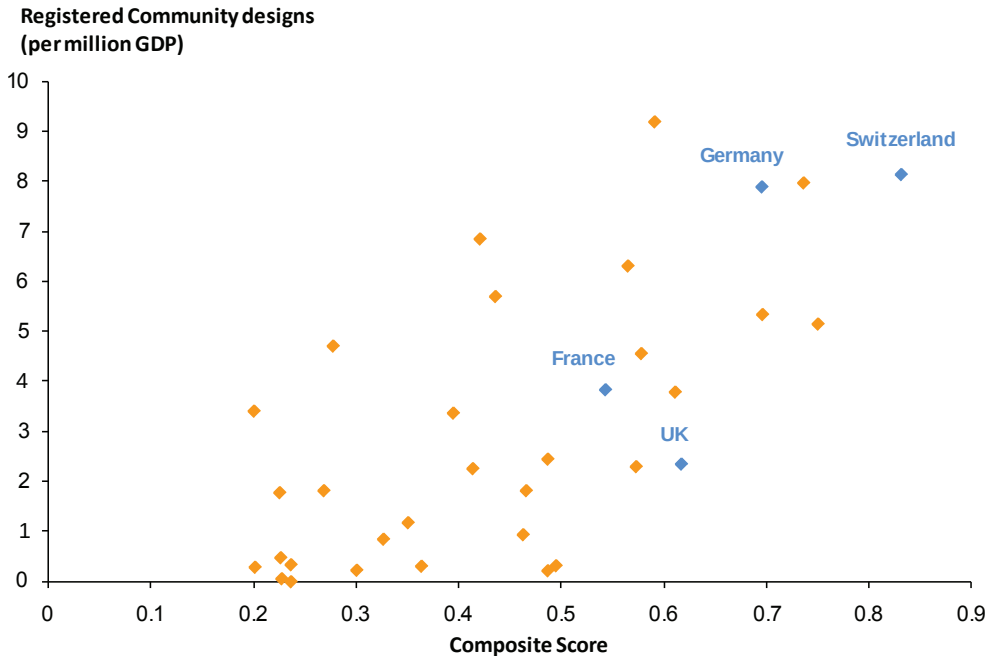
Source: Innovation Union Scoreboard (2011)

10 This publication replaced the EU European Innovation Scorecard, launched in 2006.

The IUS scorecard includes the number of Community Designs applications and trade marks per € billion GDP (in PPP€). It shows the UK registers more trade marks than France but fewer design rights. Germany ranks first on both. Figure 4.10 shows the relationship between Community Designs and the overall Innovation Score for the 27 member states. Even though this figure does not show a definitive relationship between design IPR and innovation, the most innovative countries tend to have a higher level of registration.

However, the UK seems to be an exception: Germany and the UK have similar levels of 'innovation', even though the German level of registration in OHIM is more than three times higher than UK registration. Now, the relationship between design IPR and innovation has a potential problem of reverse causality: design IPR can generate incentives to innovate given it allows appropriation of all the benefits of innovation production. But it could also be the case that more innovative firms are more likely to seek registration because they have already reached an 'innovative status'.

Figure 4.12 Relationship between Innovation Union Score (horizontal axis) and Community designs per billion GDP (vertical axis) (2010)



Source: Innovation Union Scoreboard 2010

In the literature, competiveness and productivity are seldom associated with design IPR. For example, the BIS (former BERR, 2008) report, 'Competitiveness and Productivity of the UK Design Engineering Sector' lists 16 core competitive advantages within the UK Engineering Sector, including the quality and breadth of capabilities and products, speed of service, flexibility, agility and reputation. Intellectual property is not included among these factors. However, the report does stress the potency of design as a competitive weapon in generating product differentiation and stretching profit margins.

Design has been suggested as a competitive factor in French-German competitiveness (Coe-Rexecode, 2011). The report states that the trade gap between the German surplus and the French deficit has increased to €200 billion a year which represents 10 per cent of France's gross domestic product or two million jobs. The gap is attributed to Germany's lower wage costs and France's higher social security costs and inflexible labour market. Interestingly, other structural factors include non-cost-related competitiveness - particularly design, the quality of products and associated services - often lead to German businesses being "price-makers" rather than "price-takers".

4.6 Conclusions

France and the UK were among the first adopters of design IPR. However, the UK's failure to sign the Hague Agreement meant it had no access to this international registration until 2008 when it gained it as part of the EU. Countries that signed up to the Hague Agreement early are more likely to be familiar with registration processes.

From a historical perspective, France and Germany has generally shown a higher level of registration of design rights than the UK. This propensity to register seems to be embedded in their legal tradition and culture.

UK innovators seem to rely on other methods to protect their designs. Using information from the 4th Community Innovation Survey, Hughes and Mina (2010) estimate that confidentiality of agreement, secrecy and lead-time advantage are preferred methods of protection among UK firms. Only a small proportion of firms use design registration to protect their innovation.

In contrast, there seems to be a greater systematic awareness of design IPR among German design owners, private companies and educational institutions. The cost of enforcement seems to be lower than the UK, and there is a general perception that courts will be actively interested in protecting design IP, partly because of the greater weight given to the 'author's right'. In addition to strong and relatively inexpensive legal enforcement, Germany has many private initiatives, such as the Messe Frankfurt and Plagiarius, to enforce design IP rights.

In contrast with Germany, design infringements are dealt with under civil law in the UK and do not include criminal sanctions. Private organisations, such as ACID, have requested stronger penalties for design infringement in the UK, but its petitions have not been successful.

The new Anti-Counterfeiting Trade Agreement (ACTA) recently negotiated by 20 governments which are major IP exporters, including the UK, should in theory increase penalties for infringements of registered designs. But, as it has been negotiated outside the normal channels, it may not be implemented as easily as WIPO treaties have been and it is not clear how it will apply.

The importance of the manufacturing sector in the economy could also explain the differences in registration between the UK, France and Germany. 30 out of 32 (94 per cent) classes of design belong to the manufacturing sector, whose importance in the UK economy has massively decreased in the last 30 years. The reverse is also true: as China moves to strengthen the upstream value of its textiles, which make up about 20 per cent its total exports, it is also strengthening its IP protection.

The short-cycle nature of products can deter design owners from registering design. However, the French IP office seems to have successfully tackled this issue by introducing a 'simplified' procedure aimed at the fashion industry, among others. Around 80 per cent of all design registrations at INPI now come through this 'simplified' route. The existence of this procedure probably explains why French designers have been reluctant to move from local registration to the EU system.

There are other differences in administrative procedures between the three countries in our comparative analysis. The online filing system, still not introduced in the UK, is the main administrative advantage of other systems since it simplifies registration but also makes for significantly lower registration costs per country.

Policy implications

Our analysis shows that there is scope to further improve IPO administrative procedures. The two main areas are:

- Implementation of an online filing system, which will not only facilitate registration, but will help to reduce administrative costs; and

- A thorough assessment, and possible implementation, of the 'simplified' procedure used in France for short cycle products.

Additionally, other administrative procedures can be improved such us expanding the period of deferment of publication and updating the Locarno classification, although these changes are unlikely to have an effect on registration.

It is not clear why the UK has not joined the Hague agreement in its own right. Representatives of WIPO reported that UK membership would require an alignment of IPO and WIPO procedures for the examination of formalities, but it is not clear how the trade off for the government costs (more work) and the benefits (stronger enforcement) would work out.

If the UK were to accede individually to the 1999 Act, the government would probably allow a British company to file an international application designating only the UK as well as allowing non-British companies to designate the UK individually in an international registration (which would help SMEs wanting to export only to the UK). This greater market access might have an impact on competitiveness. In terms of enforcing their rights, UK companies would benefit from WIPO's central management, since all subsequent changes to registrations and renewals would be done in one single request, in one language and with one set of fees in one currency.

Finally, it seems that it is design activity itself, rather than design rights, that could play an important role on explaining UK levels of competitiveness and innovation in the EU.

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Appendix 4A: List of interviewees

Name	Organisation	Position
UK		
Andrew Ritchie	Brompton Bicycle	Founder
Chris McLeod	Squire Sanders Demspey (Hammonds)	Partner
David Stone	Simmons & Simmons	Partner/Design rights specialist
Deborah Dawton	Design Business Association/ Bureau of European Design Associations	Chief Executive
Graham Hitchen	DirectionalThinking	Founder
Jo Hulf	Jasper Conran	Creative Director
Lynda Relph-Knight	'Design Week'	Editor
Max Ackermann	Central Saint Martins College of Art & Desing/Studio Ludopoli	Professor/Creative Director
Mike Foley	IPO	Head, Trade Marks and Designs Classification Policy
Nadia Danhash	Royal College of Art	Co-Director, Innovation
Phillip Jhonson		Barister
Susan Williamson	Shining Red	Founder
Dids Macdonald	ACID	CEO
France		
Anne Marie Boutin	Agency for the Promotion of Industrial Creation (APCI)	President
Harry Hornby	Cartier	Designer
Laurence Joly	Observatoire de la Propriété Intellectuelle, INPI	Economist
Yvon Gris	Cabinet Gris	Partner
Germany		
Helge Aszmoneit	Design Council	Head Information Services
Marcus Kühne	Deutsches Patent- und Markenamt	Head of Designs Unit
Meike Langer	Freelance	Designer
Sarah Böttger	Freelance	Designer
International		
Brenda Sanderson	ICOGRADA	Managing Director
Marcus Höpperger	WIPO	Acting Director, Trade mark and Design Law Division
Päivi Lähdesmäki	WIPO	Head Legal Section, International Designs Registry
Phil Dworsky	Synopsys	Director, Strategic Alliances
Robert Watson	Mewburn Ellis LLP/American Intellectual Property Law Association	Partner/Member

Appendix 4B: Locarno class (Edition 9)

Class	
Class 1	FOODSTUFFS
Class 2	ARTICLES OF CLOTHING AND HABERDASHERY
Class 3	TRAVEL GOODS, CASES, PARASOLS AND PERSONAL BELONGINGS, NOT ELSEWHERE SPECIFIED
Class 4	BRUSHWARE
Class 5	TEXTILE PIECEGOODS, ARTIFICIAL AND NATURAL SHEET MATERIAL
Class 6	FURNISHING
Class 7	HOUSEHOLD GOODS, NOT ELSEWHERE SPECIFIED
Class 8	TOOLS AND HARDWARE
Class 9	PACKAGES AND CONTAINERS FOR THE TRANSPORT OR HANDLING OF GOODS
Class 10	CLOCKS, WATCHES AND OTHER INSTRUMENTS, CHECKING AND SIGNALLING INSTRUMENTS
Class 11	ARTICLES OF ADORNMENT
Class 12	MEANS OF TRANSPORT OR HOISTING
Class 13	EQUIPMENT FOR PRODUCTION, DISTRIBUTION OR TRANSFORMATION OF ELECTRICITY
Class 14	RECORDING, COMMUNICATION OR INFORMATION RETRIEVAL EQUIPMENT
Class 15	MACHINES, NOT ELSEWHERE SPECIFIED
Class 16	PHOTOGRAPHIC, CINEMATOGRAPHIC AND OPTICAL APPARATUS
Class 17	MUSICAL INSTRUMENTS
Class 18	PRINTING AND OFFICE MACHINERY
Class 19	STATIONERY AND OFFICE EQUIPMENT, ARTISTS' AND TEACHING MATERIALS
Class 20	SALES AND ADVERTISING EQUIPMENT, SIGNS
Class 21	GAMES, TOYS, TENTS AND SPORTS GOODS
Class 22	ARMS, PYROTECHNIC ARTICLES, ARTICLES FOR HUNTING, FISHING AND PEST KILLING
Class 23	FLUID DISTRIBUTION EQUIPMENT, SANITARY, HEATING, VENTILATION, AIR-CON EQT, SOLID FUEL
Class 24	MEDICAL AND LABORATORY EQUIPMENT
Class 25	BUILDING UNITS AND CONSTRUCTION ELEMENTS
Class 26	LIGHTING APPARATUS
Class 27	TOBACCO AND SMOKERS' SUPPLIES
Class 28	PHARMACEUTICAL AND COSMETIC PRODUCTS, TOILET ARTICLES AND APPARATUS
Class 29	DEVICES AND EQUIPMENT AGAINST FIRE HAZARDS, FOR ACCIDENT PREVENTION AND RESCUE
Class 30	ARTICLES FOR THE CARE AND HANDLING OF ANIMALS
Class 31	MACHINES AND APPLIANCES FOR PREPARING FOOD OR DRINK, NOT ELSEWHERE SPECIFIED
Class 32	GRAPHIC SYMBOLS AND LOGOS, SURFACE PATTERNS, ORNAMENTATION

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