



A framework for understanding international demand for the Creative Industries

A REPORT PREPARED FOR DCMS

August 2007

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Executive summary

Frontier has been asked by the Department for Culture Media and Sport (DCMS) and UK Trade and Investment (UKTI) to analyse international demand for the UK's Creative Industries. In particular we have been asked to examine the following:

- Where are the opportunities for UK Creative Industry firms to sell their goods and services internationally?
- How successful are UK firms at exploiting these opportunities?

Our evidence base for undertaking this study is existing secondary sources such as international trade data from the United Nations, OECD and UK National Statistics and third party industry reports. In addition, we consulted with stakeholders in DCMS, DTI and UKTI throughout the study.

A key conclusion of this study is that there is no comprehensive data for international trade in the Creative Industries. International trade data define Creative Industry activities under an 'other services' category. In addition, we found very little qualitative information on overseas markets for Creative Industry products.

We have therefore focused on establishing a framework for collecting and analysing international demand data from a wider range of sources. This could include primary data collection. The framework should ensure that the right type of data is collected and that it is robust and comparable.

Our approach to doing this is as follows:

- **identify** contestable product markets and key export countries;
- **develop** data templates for gathering essential data to evidence international demand; and
- **review** the evidence on international demand to identify gaps in the evidence base.

1.1 IDENTIFYING CONTESTABLE PRODUCT MARKETS AND EXPORT COUNTRIES

We have employed a 3 stage process to identify contestable product markets. The process requires Creative Industry products to be:

- **defined** using 5-digit Standard Industrial Classification (SIC) code definitions¹;

¹ Our approach to defining the Creative Industries was set out in an earlier study for DMCS. Details of our approach and the SIC code definition of each of the Creative Industries are provided in Annexe 1 and Annexe 2 of this report.

- **assessed** for their export potential on the basis of the likely transport costs, language barriers and cultural barriers that would be faced during the export process; and
- **shortlisted** from a list of around 80 products to 10-20 products through a consultation process with project stakeholders.

Once products have been identified key markets must also be identified. To do this we consulted with project stakeholders, including UKTI.

The overall result of the identification process is shown below in Figure 1.

Creative Industry/ product	World market					
	France	Germany	China	Japan	US	India
Advertising						
Design of advertising campaigns						
Architecture						
Building design						
Design						
Industrial process and product design services						
Graphic design services						
Film Video and Photography						
Feature films						
Publishing						
News syndicate services						
Journals and periodicals						
Software and computer games						
Computer games software						
Other bespoke software						
Television and radio						
TV programmes						

Figure 1: Product/ market matrix for analysing international demand for Creative Industry products

Source: Frontier

Figure 1 above displays the 11 short listed Creative Industry products. These have been defined at a relatively high level. The figure also shows the six key export countries that were identified through consultation with stakeholders.

1.2 DEVELOPING DATA TEMPLATES

We have developed two data templates for establishing a robust, comparable and comprehensive evidence base on Creative Industry demand:

1.2.1 Template One – quantitative evidence

The first template establishes the quantitative evidence which is essential for answering our two research questions:

- What do international opportunities for Creative Industry products look like?
- Where is the UK in terms of exploiting opportunities in these markets?

This template is shown below.

CREATIVE INDUSTRY	Country						
	US	France	Germany	China	India	Japan	ROW
Opportunities							
Overall revenues							
<i>current</i>	●	●	●	●	●	●	●
<i>past 5 years</i>	●	●	●	●	●	●	●
<i>next 5 years</i>	●	●	●	●	●	●	●
Revenues by product							
<i>current</i>	●	●	●	●	●	●	●
<i>past 5 years</i>	●	●	●	●	●	●	●
<i>next 5 years</i>	●	●	●	●	●	●	●
UK position							
Overall export revenues							
<i>current</i>	●	●	●	●	●	●	●
<i>past 5 years</i>	●	●	●	●	●	●	●
<i>next 5 years</i>	●	●	●	●	●	●	●
Export revenues by product							
<i>current</i>	●	●	●	●	●	●	●
<i>past 5 years</i>	●	●	●	●	●	●	●
<i>next 5 years</i>	●	●	●	●	●	●	●
Key							
	●	Essential data					
	●	Highly valuable data					
	●	Useful but not essential					

Figure 2: Data template for establishing an initial evidence base on international demand

Source: Frontier

The template in Figure 2 is structured as follows.

- The top half of the template sets out the data required to identify the size and growth trends of the six key international markets for each Creative Industry product. A red point indicates essential data. This includes trend data establishing the size of the product markets for each of the key countries. It is important that this information matches the product definitions set out in Figure 1.
- The bottom half of the template sets out the data that would be required to assess the UK's current position in these markets. As the red marks in the template indicate, this would require trend data setting out the size of UK exports to each of the countries. Again this data must be sufficiently detailed to encompass the product definitions shown above in Figure 1.

1.2.2 Template two – qualitative evidence

Template two sets out data which would be required for understanding the market characteristics and potential barriers to entry that UK firms may face. At this point it may be necessary to refine the product definitions to allow data to be collected at a relatively detailed level. Template two is shown below in Figure 3.

CREATIVE INDUSTRY	Country						
	US	France	Germany	China	India	Japan	ROW
Market characteristics							
Characteristics of firms already serving the market							
<i>how many firms serve the market?</i>	●	●	●	●	●	●	●
<i>how large are these firms?</i>	●	●	●	●	●	●	●
<i>how concentrated is the market?</i>	●	●	●	●	●	●	●
<i>what activities do these firms carry out?</i>	●	●	●	●	●	●	●
<i>are they vertically integrated?</i>	●	●	●	●	●	●	●
<i>are they locally or foreign owned?</i>	●	●	●	●	●	●	●
<i>how have local/foreign owned firms been performing?</i>	●	●	●	●	●	●	●
<i>how have foreign owned firms established themselves through organic growth?</i>	●	●	●	●	●	●	●
<i>through acquisition?</i>	●	●	●	●	●	●	●
<i>how does the locally sold product differ from the UK product?</i>	●	●	●	●	●	●	●
<i>what are the characteristics of the customer base?</i>	●	●	●	●	●	●	●
<i>are customers local or international? (to face)</i>	●	●	●	●	●	●	●
Barriers to entry							
Supply chain characteristics and other resources							
<i>How important is fluency in the local language?</i>	●	●	●	●	●	●	●
<i>Is there a well established local supply base?</i>	●	●	●	●	●	●	●
<i>Is there a well established local distribution network?</i>	●	●	●	●	●	●	●
<i>Is the local workforce adequately skilled?</i>	●	●	●	●	●	●	●
Key							
	●	Essential data					
	●	Highly valuable data					
	●	Useful but not essential					

Figure 3: Data template for establishing a more in-depth understanding of overseas markets

Source: Frontier

Figure 3 considers first the structure of the overseas market and the characteristics of the firms already operating in it. It also considers the extent to which a UK firm investing overseas could rely on overseas skills and other supply chain resources such as distribution. As before, essential data is marked in red. For market characteristics, essential information includes the number of firms in the market and their size. For barriers to entry this includes information on local supply and distribution facilities.

1.3 REVIEWING THE EXISTING EVIDENCE

To populate the two data templates we have examined UK and international data bases on international trade and UK exports. This initial review showed there to be no quantitative evidence on Creative Industry trade. In most cases, Creative Industry products are categorised with other goods and services in the 'other services' category. In other cases, data was not publicly available.

We have also reviewed third party reports. One source - 'Global Entertainment and Media Outlook' by PWC - contained some evidence on the size of international Creative Industry markets. A key drawback with this data for the purposes of our analysis is the nature of the product definitions. These tend to

be high level. As a result these definitions do not coincide with the product definitions we set out above in Figure 1. Third party reports provide some evidence on the characteristics of individual markets. However this is largely anecdotal and further consultation would be required with industry experts to allow this to be assessed for robustness and the information placed in context.

As a result there are significant gaps in the evidence base. A summary of the gaps is shown below in Figure 4.

	Country						
	US	France	Germany	China	India	Japan	ROW
Overseas market data							
Advertising	?	?	?	?	?	?	?
Architecture	x	x	x	x	x	x	x
Computer Games	?	?	?	?	?	?	?
Design	x	x	x	x	x	x	x
Film	?	?	?	?	?	?	?
Publishing	?	?	?	?	?	?	?
Software	x	x	x	x	x	x	x
Television	x	x	x	x	x	x	x
UK position							
Advertising	x	x	x	x	x	x	x
Architecture	x	x	x	x	x	x	x
Computer Games	x	x	x	x	x	x	x
Design	?	?	?	?	?	?	?
Film	?	?	?	?	?	?	?
Publishing	x	x	x	x	x	x	x
Software	x	x	x	x	x	x	x
Television	?	?	?	?	?	?	?
Firm level market data							
Advertising	x	x	x	?	x	?	x
Architecture	x	x	x	?	x	x	x
Computer Games	x	x	x	?	x	x	x
Design	x	x	?	?	x	?	x
Film	x	x	x	?	x	x	x
Publishing	x	x	x	x	x	x	x
Software	x	x	x	x	x	x	x
Television	x	x	x	?	x	x	x
Key							
✓	Robust data viewed and collected						
?	Data collected but does not correspond to precise product definition						
?	Data (or source) in public domain - requires consultation with industry						
x	No or low quality data publicly available						

Figure 4: Summary of data availability

Source: Frontier

1.4 RECOMMENDATIONS

Our research and analysis has revealed substantial gaps in the evidence base for international demand. To address the gaps we recommend extensive consultation with industry experts. In particular, we would recommend a series

of face to face discussions with each of the UK trade associations for the key Creative Industries. These discussions could be guided using the data templates described above.

Once relevant trade associations had been consulted with and all available data gathered, we would recommend road testing our findings with the UKTI sector teams and contacts within each of the Creative Industries – some of which have been established through earlier research into the Creative Industries.

A wider issue for DCMS is identifying where there is a role for Government in identifying export opportunities for UK firms.

- The process described above is likely to be resource intensive as all analysis must be carried out at the individual product level. In addition, our review has shown there to be no robust public data. This implies that any future research will need to be targeted as a comprehensive review is unlikely to be possible.
- A further consideration is the fact that many trade associations themselves are conducting similar reviews of the export opportunities for their members. Once again this points to the need for a targeted approach to ensure DCMS research does not overlap with that being provided by the market.

2 Introduction

Frontier has been asked by the Department for Culture, Media and Sport (DCMS) and UK Trade and Investment (UKTI) to explore international demand for UK Creative Industry outputs. To our knowledge, this is the first piece of work to be conducted on this issue at an aggregate level in the UK. Our key focus has been therefore to establish a robust analytical framework and identifying the extent to which the information required for the study is available and where significant gaps may exist.

Our study approach is set out below in Figure 5.

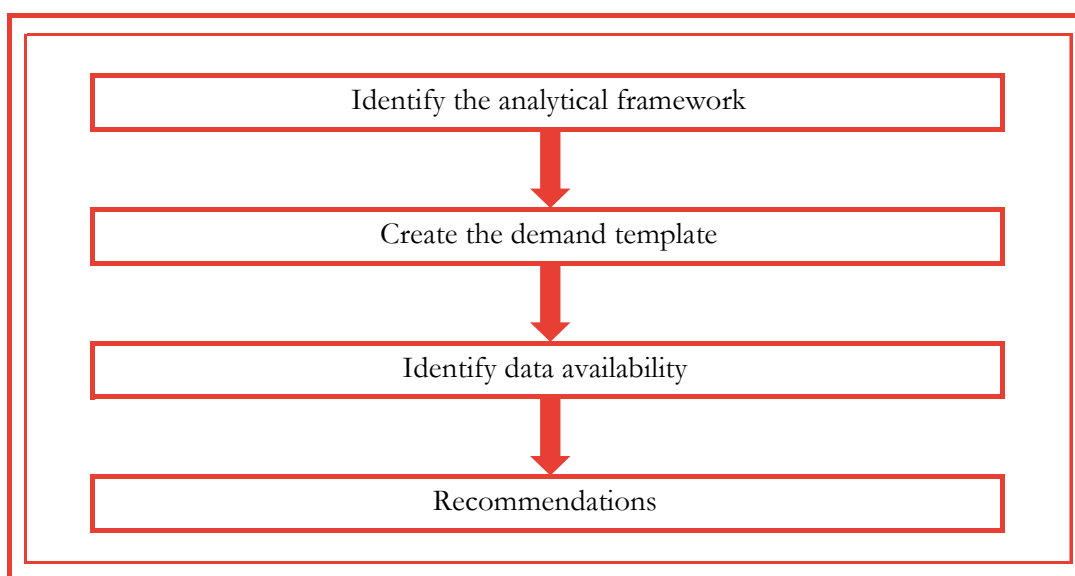


Figure 5: Our study approach

The four key stages to our analysis can be described as follows.

- *Identify the analytical framework:* Our earlier analysis of Creative Industry definition and performance shows the Creative Industries to be large and diverse in terms of the products they produce. Our analytical framework enables key Creative Industry products and markets to be identified.
- *Create the demand template:* There is no comprehensive evidence base for international Creative Industry markets. Key issues which we need to address are the size of the market for each product and country and the UK's current position in contributing to these markets. This stage develops a template for gathering the data which would be required to address these issues.
- *Identify data availability:* This stage reviews the publicly available data to identify where there are significant gaps in the evidence base.
- *Recommendations:* The final stage of this project considers the steps that would need to be undertaken to produce a comprehensive database on international demand for the Creative Industries.

2.1 REPORT STRUCTURE

The remainder of this report is set out as follows:

- Section 3 describes our analytical framework.
- Section 4 sets out a template for developing a comprehensive evidence base. This template is used to indicate where there are significant gaps in the evidence base (from publicly available sources).
- Section 5 sets out our recommendations for developing a comprehensive international demand evidence base.

The Annexes contain a detailed review and analysis of the most comprehensive and publicly available data sources on International Demand for the Creative Industries: 'Global Entertainment and Media Outlook, 2006-10' by PWC.

3 The analytical framework

This section sets out our analytical framework for assessing international Creative Industry demand. A key issue that we have had to address is the potential scale of such a study. The 13 Creative Industries collectively produce over 80 broad product types². Each of these represents 10 or more individual products which have the potential to be sold in around 50 countries³.

Addressing the issue of demand for every Creative Industry product in every potential market would require tens of thousands of individual pieces of data. A key element of the framework is therefore to systematically identify the products and markets which are most relevant to UK Creative Industry firms looking to export their products. It does so by identifying those products and markets which are most relevant to the UK's Creative Industries and the export opportunities they face.

Our analytical framework consists of two key stages:

- **product analysis** – to identify the most exportable Creative Industry products; and
- **market identification** – to identify where UK Creative Industry firms may find the greatest opportunities.

We describe these below.

3.1 PRODUCT ANALYSIS

The aim of the first stage of our analytical framework is to define a relatively small set of Creative Industry products to focus on. To do this we need to:

- define the full set of Creative Industry products;
- assess each of these products for their export potential; and
- prioritise the most exportable products for further analysis.

3.1.1 Defining the full set of Creative Industry products

Previous analysis has defined the Creative Industries in terms of 5-digit Standard Industrial Classification (SIC) codes⁴. This analysis has defined the Creative Industries in terms of layer one and outer layer activities:

- layer one activities are those which produce the creative content for an industry (for example, music composition); and

² Based on analysis of the descriptions of the layer one Creative Industry SIC codes.

³ See the Annexe 4 for a list of the largest 50 countries by GDP.

⁴ Frontier Economics, Creative Industry performance – a statistical analysis for DCMS, 2007, forthcoming.

- outer layer activities are labelled as either a layer two, three, four or five activity. Layer five contains the least creative activities at the base of the supply chain (for example the retail sale of CD players for the music industry).

Full details of our approach to defining the Creative Industries and the 5-digit SIC codes that describe each industry are contained in Annexe 1 and Annexe 2.

However, these definitions do not set out the products they cover. Moreover, for many Creative Industries, there is not a one-to-one relationship between the activities the SIC codes describe and the product or group of products these relate to. The first stage in the analytical framework is therefore to define what we mean by Creative Industry products.

Our framework extends the methodology we used to define the Creative Industries in terms of 5-digit SIC codes. To define Creative Industry products we employ the following process:

- Step One – we list the SIC codes which define each Creative Industry⁵;
- Step Two - we consider the official definitions and accompanying notes that accompany each of these SIC codes.
- Step Three - we analyse the definitions and notes to draw up a list of products for each Creative Industry.

An example from our analysis of the Advertising industry is illustrated below in Figure 6.

⁵ Previous analysis has defined the Creative Industries in terms of layer one and outer layer activities. In brief, layer one activities are those which produce the creative content for an industry (for example, music composition). Outer layer activities are labelled as either a layer two, three, four or five activities. Layer two is closest to layer one and layer five is furthest from layer one. Layer two activities are therefore the most creative of the outer layer activities and include publishing, and distribution activities.

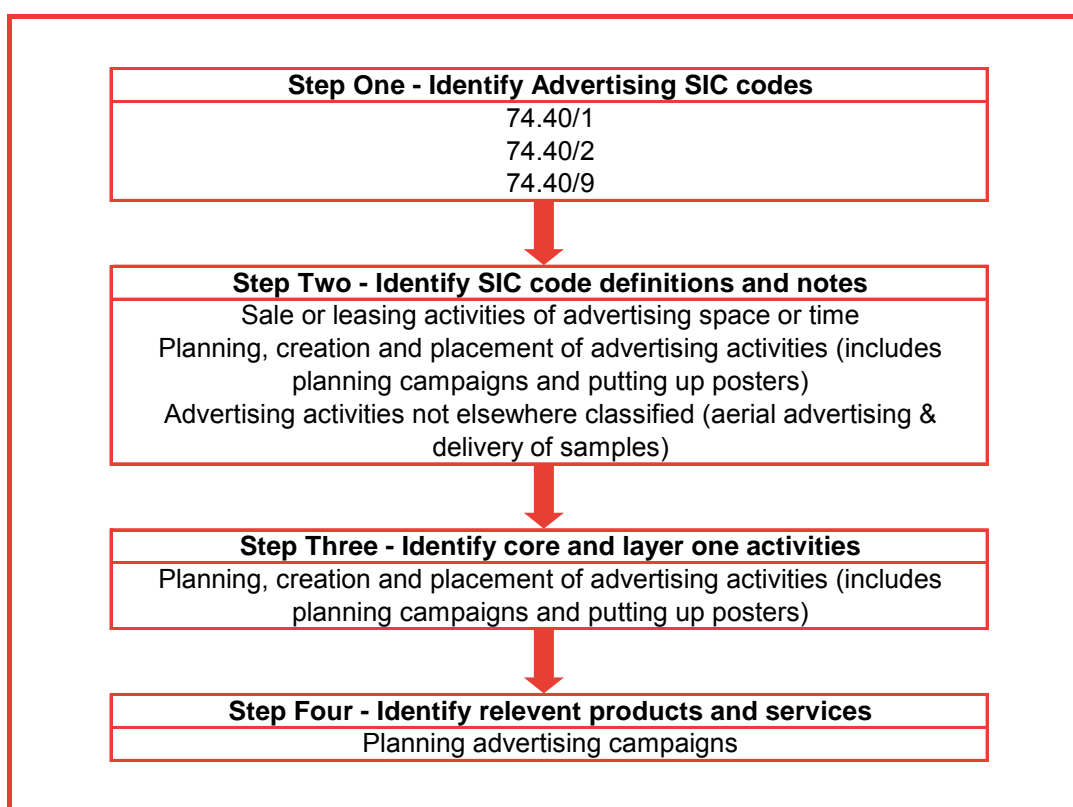


Figure 6: Defining Advertising products

Source: ONS and Frontier analysis

Figure 6 shows that:

- the first step in identifying Creative Industry products is to list the three SIC codes which describe the most creative activities of the Advertising industry;
- the second step is to describe the activities these SIC represent using the official definitions and notes that accompany the codes. These include the sale and lease of advertising space and planning and creating advertising.
- the third step considers each of these activities in turn and identifies 'planning, creation and placement of advertising activities' as the relevant creative activity; and
- the final stage translates the activity of planning, creation and placement of advertising activities into the service, 'planning an advertising campaign'.

We have applied this process to devise a product short list for all of the Creative Industries. This is described in Annexe 3.

3.1.2 Assessing products' export potential

The next stage of the analysis focuses on identifying exportable products. We have employed two criteria to do this:

- the extent to which they can be transported; and
- contestability - the extent to which products have the potential to enter new markets.

We describe these criteria below.

The extent to which products can be transported

It is important that a product that can be produced competitively in the UK remains competitive in the global market. This will be to some extent affected by the extent to which the product can be transported overseas. We use the following indicator to assess the extent a product's transportability:

- **transport costs** - the total transport cost associated with exporting a product from the UK to overseas consumers, relative to its sale value.

For example, pre-recorded music is highly transportable because it can be delivered to consumers cheaply and fast online. Conversely, furniture has a high transport cost because it is bulky, heavy and has a relatively low sales value.

Table 1 below presents the general assessment criteria for assessing transport costs.

Low transport costs
The service or product can be produced remotely (e.g., games software)
There is no need for significant investment in the country of sale
Delivery is costless, or very low – e.g., product can be delivered electronically, or the service can delivered quickly with limited effort (e.g., pre-recorded music)
Moderate transport costs
The service requires significant local resources over a period of time (e.g., firms in the architecture industry may require a significant local presence to oversee construction supervision)
High transport costs
The product is a physical good whose relative cost of transportation is high and significant investment would be required to produce this locally (e.g., designer furniture)

Table 1: Assessing the extent to which a product can be transported

Source: Frontier

Contestability

Contestability is a necessary pre-requisite to ensure that our shortlist of products will be considered as valid substitutes by overseas consumers for domestically produced goods. We use the following indicators to assess a product's contestability:

- **language barriers** – the extent to which comprehending and using the product relies upon the written or spoken word; and
- **cultural barriers** – the extent to which the product is likely to have global appeal.

For example, a Mike Leigh stage production would fail the contestability criterion. Language barriers are likely to be high because of the slang that is employed. In addition, the humour may be lost in translation. Cultural barriers are also likely to be high as Mike Leigh's modern day UK setting may limit its appeal to overseas audiences.

Table 1 below presents the general assessment criteria for analysing contestability.

Language barriers
<i>Low</i> - no communication in either written or oral form is required to comprehend the product or service (e.g., designer fashion); or the product or service is likely to be purchased by an international firm (e.g., architectural services). The service or product can be produced remotely (e.g., games software)
<i>Moderate</i> – some characteristics of the product or service are in written or oral form (e.g., brochure publishing)
<i>High</i> - all characteristics of the product or service are in written or oral form, or can be easily translated
Cultural barriers
<i>Low</i> - the product has universal appeal (e.g., live music performance - arguably true for UK bands and some musical genres); or the service is likely to be purchased by an international firm
<i>Moderate</i> - the product or service has some universal appeal (e.g., feature films).
<i>High</i> - the good is designed around the tastes or needs of a particular market (e.g., radio programmes)

Table 2: Assessing contestability

Source: Frontier

Assessing products' export potential

This section road tests our framework for assessing products' export potential. To do this we have taken each of the 80 Creative Industry products in turn and

have assessed the degree to which they can be transported overseas and the degree to which they are likely to be able to enter other markets. To facilitate comparability across indicators and products, we have graded each product as high (H), moderate (M), or low (L) for each indicator, in accordance with the assessment criteria set out above in Table 1 and Table 2 above.

Applying these indicators to each of the 80 different product types produces a matrix of product exportability characteristics. A full summary of this analysis is contained in Annexe 10. Figure 7 below shows an example for the Music and Performing Arts industry.

Product/service	Transport costs	Language barriers	Cultural barriers
Music and the performing arts			
Live theatre performance	H	H	H
Live opera performance	H	L	L
Live band performance	H	L	L
Printed music publishing	M	L	L
Publishing pre-recorded sound recordings	L	L	L
Theatre and concert hall operations	H	L	L
Casting for film, tv and theatre	H	H	H
Printed music	M	L	L
Pre-recorded music (digital, CD, vinyl etc.)	L	L	L

Figure 7: Assessing the exportability of Music and Performing Arts products

Source: Frontier

Our assessment of the exportability of the Music and Performing Arts products showed that the majority of products we had identified had high transport costs but low language and cultural barriers. In other words, most products appear to be difficult to transport but belong to markets that are contestable. We set out examples of how we assessed some of these products below.

- *Live Opera Performance:* We have graded transport costs as high because of the need to physically transport the stage set, costumes and performers to wherever the performance is held. Language barriers and cultural barriers on the other hand are likely to be low as part of the appeal of Opera is the fact that it will be sung in for example Italian and will describe a particular culture.
- *Pre-recorded music:* Transport costs are graded as low because the product can be distributed to intermediaries and final consumers electronically. English is widely held as the universal language for most genres of music (e.g., pop music) and so UK firms are unlikely to face language barriers when exporting their products. Finally, English rock and pop music has universal appeal, therefore cultural barriers should also be low.

3.1.3 Prioritising products for further analysis

The final stage of our analytical framework is to shortlist the transportable and contestable products that were identified in the earlier stages of the framework. This requires consultation with stakeholders and Creative Industry experts. To do this we consulted with project stakeholders at DCMS, UKTI and DTI.

The results of the short listing process are show below in Figure 8.

Creative Industry/ product	Transport costs	Language barriers	Cultural barriers
Advertising			
Design of advertising campaigns - poster/print	L	M	M
Design of advertising campaigns - tv & cinema	L	M	M
Architecture			
Building design (Architecture)	L	M	L
Design			
Industrial process and product design services	L	L	L
Film Video and Photography			
Film production	M	M	M
Feature films	L	L	M
Publishing			
News syndicate services	L	M	M
Journals and periodicals	M	M	M
Software and computer games			
Computer games software	L	L	L
Other software (bespoke)	L	M	M
Television and radio			
TV programmes	L	M	M

Figure 8: Short list of tradable Creative Industry products

Source: Frontier, DCMS, UKTI, DTI

One of the main criteria for selecting the products for the shortlist was high export potential. For this reason only products with low or moderate transport costs, language barriers or cultural barriers were selected. In addition, products which are produced by the larger Creative Industries were selected. As a result designer fashion, music and art, antiques and crafts products were excluded from the list.

It is important to note that this final stage is subjective and is intended to demonstrate how the framework could be applied. It is not intended to be read as stipulating which products should and should not be included in any further analysis of the Creative Industries.

3.2 IDENTIFYING KEY MARKETS

In addition to reducing the range of products considered as part of this study we need to limit our analysis to a few key markets. This was also achieved through consultation with stakeholders in DMCS, DTI and UKTI.

The key markets that were suggested to us were:

- France;
- Germany;
- China;
- Japan;
- United States; and
- India.

As before, this market analysis is intended to demonstrate where further study could focus. It is not intended to prescribe or limit the scope of any future analysis.

3.3 SUMMARY

This section has established an analytical framework for assessing international demand for the UK's Creative Industries. The framework can be divided into two stages – product analysis and market identification.

- the product analysis stage has described how Creative Industry products can be defined and how they can be assessed for exportability;
- the market identification process has described a set of markets which could form an initial focus any future analysis on this subject.

In developing this framework we worked with key stakeholders. This has provided us with a preliminary set of products and markets which any future study could focus on. This matrix is set out below in Figure 9.

Creative Industry/ product	World market					
	France	Germany	China	Japan	US	India
Advertising						
Design of advertising campaigns						
Architecture						
Building design						
Design						
Industrial process and product design services						
Graphic design services						
Film Video and Photography						
Feature films						
Publishing						
News syndicate services						
Journals and periodicals						
Software and computer games						
Computer games software						
Other bespoke software						
Television and radio						
TV programmes						

Figure 9: Product/ market matrix for analysing international demand for Creative Industry products

Source: Frontier

The next step is to populate this matrix with information on the international markets for each of the key Creative Industries and the UK's position in these markets. The next section focuses on this issue. In particular, we set out the information required to provide a comprehensive overview of Creative Industry demand. We also provide a summary of the key publicly available data to illustrate where significant gaps exist.

4 Creating an evidence base on international demand

The previous section established our analytical framework for assessing international demand. In this section we extend this by setting out:

- the evidence required to construct a comprehensive evidence base on the Creative Industries; and
- where there are significant gaps in the publicly available data.

4.1 REQUIRED EVIDENCE

An evidence base on international demand must be characterised by the following key features:

- **comprehensive** – data must be provided for all dimensions, in this case countries and products;
- **comparability** - data should be comparable across products and markets; and
- **rigorous** – data must be from a reliable source and cross checked wherever possible.

To achieve the first two of these aims we have developed a set of data templates for collecting key evidence. To ensure *comprehensiveness* these templates set out all the relevant markets and ensure that product breakdowns are provided, as required. To ensure *comparability* the templates set out precisely the data which should be collected for all markets and all products. To enable the analyst to prioritise within this list of required data we have employed a coding system which indicates whether data is essential, highly valuable or useful, but not essential.

To ensure *rigour* the secondary data that is collected must come from well known and reputable sources. There is a lot of disparate information available on the Creative Industries which, if used could lead to a non-robust evidence base. For this reason, analysts should seek to combine the data gathering process with a series of consultations with industry experts. This issue is dealt with in more detail in the next section of the report.

As noted above, we have developed two data templates. The first specifies the minimum, high level data that would be required. Some of this should be able to be obtained from public sources, though it may require further analysis to ensure comparability with the rest of the data that is being presented. Other parts of the template may be harder to populate. This issue is discussed in the next section.

A generic version of this first minimum data template is shown below in Figure 10.

CREATIVE INDUSTRY	Country						
	US	France	Germany	China	India	Japan	ROW
Opportunities							
Overall revenues							
<i>current</i>	●	●	●	●	●	●	●
<i>past 5 years</i>	●	●	●	●	●	●	●
<i>next 5 years</i>	●	●	●	●	●	●	●
Revenues by product							
<i>current</i>	●	●	●	●	●	●	●
<i>past 5 years</i>	●	●	●	●	●	●	●
<i>next 5 years</i>	●	●	●	●	●	●	●
UK position							
Overall export revenues							
<i>current</i>	●	●	●	●	●	●	●
<i>past 5 years</i>	●	●	●	●	●	●	●
<i>next 5 years</i>	●	●	●	●	●	●	●
Export revenues by product							
<i>current</i>	●	●	●	●	●	●	●
<i>past 5 years</i>	●	●	●	●	●	●	●
<i>next 5 years</i>	●	●	●	●	●	●	●
Key							
●	Essential data	✓	Data collected				
●	Highly valuable data	✗	Data not collected				
●	Useful but not essential		(colour to vary by data type)				

Figure 10: Data template for establishing an initial evidence base on international demand

Source: Frontier

We have also developed a further, more detailed data template. This is intended to provide a greater level of understanding of the overseas product market at the firm level. It considers first the structure of the overseas market and the characteristics of the firms already operating in it. It also considers the extent to which a UK firm investing overseas could rely on overseas skills and other supply chain resources such as distribution. This is shown in Figure 11 below.

CREATIVE INDUSTRY	Country						
	US	France	Germany	China	India	Japan	ROW
Market characteristics							
Characteristics of firms already serving the market							
<i>how many firms serve the market?</i>	●	●	●	●	●	●	●
<i>how large are these firms?</i>	●	●	●	●	●	●	●
<i>how concentrated is the market?</i>	●	●	●	●	●	●	●
<i>what activities do these firms carry out?</i>	●	●	●	●	●	●	●
<i>are they vertically integrated?</i>	●	●	●	●	●	●	●
<i>are they locally or foreign owned?</i>	●	●	●	●	●	●	●
<i>how have local/foreign owned firms been performing?</i>	●	●	●	●	●	●	●
<i>how have foreign owned firms established themselves through organic growth?</i>	●	●	●	●	●	●	●
<i>through acquisition?</i>	●	●	●	●	●	●	●
<i>how does the locally sold product differ from the UK product?</i>	●	●	●	●	●	●	●
<i>what are the characteristics of the customer base?</i>	●	●	●	●	●	●	●
<i>are customers local or international? (to face)</i>	●	●	●	●	●	●	●
Barriers to entry							
Supply chain characteristics and other resources							
<i>How important is fluency in the local language?</i>	●	●	●	●	●	●	●
<i>Is there a well established local supply base?</i>	●	●	●	●	●	●	●
<i>Is there a well established local distribution network?</i>	●	●	●	●	●	●	●
<i>Is the local workforce adequately skilled?</i>	●	●	●	●	●	●	●
Key							
	●	Essential data					
	●	Highly valuable data					
	●	Useful but not essential					

Figure 11: Data template for establishing a more in-depth understanding of overseas markets

Source: Frontier

4.2 IDENTIFYING SIGNIFICANT GAPS IN THE EVIDENCE BASE

The focus of this study has been to develop a rigorous analytical framework for assessing international demand for the UK's Creative Industries. As part of this process we have carried out an initial review of the publicly available data sources on international product demand and the Creative Industries.

Global demand data

The evidence base is not well established. The one source we have identified is PWC's annual data report on the 'Global Entertainment and Media Outlook'. The most recent version covers the period 2006–10 for all the countries we have identified as being of particular interest. Unlike the other sources we have reviewed there are a number of key advantages with this data, namely its robustness and comparability between the industries covered. In terms of the industries identified in section 3, the PWC report covers the following:

- Advertising;
- Computer Games;
- Film; and

- Publishing⁶.

A key drawback with this data is the level at which products are defined. In general these are defined more broadly than our product definitions. This means that the data is unable to provide precise information on the trends of individual product markets. To illustrate how the data template can be used with such data and to show the nature of the analysis which can be undertaken, we have carried out analysis of the PWC data for these industries. The results of this analysis are provided in a series of Annexes at the end of this report.

For the remaining industries, we have not been able to identify comprehensive and reliable data in the public domain. Where data is available in a comparable form, we have not been able to verify its robustness without committing to purchasing the data. We discuss next steps for completing the ‘opportunities’ section of the data template in the next section.

4.2.1 Data on the UK’s position

The evidence base on the UK Creative Industries’ current ability to compete for global demand is far less well developed. Our research has not revealed any comprehensive data sources for this:

- most international data sources do not focus on the UK and those that do, tend to aggregate data into an ‘other services’ category, or similar;
- UK national statistics are held for UK industry exports at the 5-digit SIC code level, but are not publicly available and potentially would not provide a level of detail that is useful⁷;
- some of the UK’s trade associations do hold data on these issues – for example PACT (for the television industry) and the UK Film Council. This data is not comprehensive or in a comparable form so one would need to consult with these and other relevant bodies to ensure the data is interpreted correctly; and
- other UK trade associations are starting to gather data on these issues – for example, BDI (for the design industry) - again to ensure these data are used appropriately we would recommend consulting with these and other relevant bodies.

We discuss our recommendations for next steps on evidencing the UK’s position in the next section.

4.3 SUMMARY

Our final step in this study has been focused on creating two data templates that could be used by analysts to compile a comprehensive and robust evidence base on international demand for UK Creative Industry products.

⁶ In addition, it provides information on the music industry (not included in our shortlist).

⁷ We provide a summary of our data request to the National Statistics office in the Annex 6.

The first data template sets out the high level data which would be required to gain an initial understanding of overseas market characteristics markets and the UK's position in these markets. In terms of the available evidence base, our initial review of publicly available sources shows this to be weak:

- *Overseas markets:* Some data exists for the advertising, computer games, film, music and publishing industries. To provide a guide as to how such data should be used and analysed, in conjunction with the data template we have carried out an in-depth review and analysis of this data. The results of this review are contained in the Annexes. There are still however significant gaps in the evidence base for the other key Creative Industries.
- *The UK's position:* There is little available evidence on the UK's current position in serving overseas markets. We address this issue with recommendations for next steps in the next section.

The second data template establishes a more detailed set of evidence which would be required to understand the UK's potential for increasing its presence in overseas markets. Our review of the publicly available evidence shows the available evidence base to be particularly weak. We address this issue in the next section.

5 Recommendations for further analysis

Assessing international demand for the UK Creative Industry products is a significant task. We have been asked to construct an analytical framework for assessing international demand and to conduct an initial piece of research assessing the extent of the publicly available evidence base.

Our work in achieving these aims has been described in the previous two sections to this report. A key output of this work has been to identify where there are significant gaps in the available evidence base. These were described in the previous section as:

- global demand data for the architecture, design, software and television industries;
- UK export data for all of the key industries identified by our analytical framework; and
- firm level overseas market data.

The gaps described above can be broken into a series of categories:

- data is available, but not for the right product definition;
- data is available, but cannot be judged for robustness;
- data is available, but requires further discussion with its author to ensure is interpreted correctly and can be compared with data from other sources; and
- data is not publicly available.

A summary of the publicly available data for all key Creative Industries and countries is shown below in Figure 12.

	Country						
	US	France	Germany	China	India	Japan	ROW
Overseas market data							
Advertising	?	?	?	?	?	?	?
Architecture	x	x	x	x	x	x	x
Computer Games	?	?	?	?	?	?	?
Design	x	x	x	x	x	x	x
Film	?	?	?	?	?	?	?
Publishing	?	?	?	?	?	?	?
Software	x	x	x	x	x	x	x
Television	x	x	x	x	x	x	x
UK position							
Advertising	x	x	x	x	x	x	x
Architecture	x	x	x	x	x	x	x
Computer Games	x	x	x	x	x	x	x
Design	?	?	?	?	?	?	?
Film	?	?	?	?	?	?	?
Publishing	x	x	x	x	x	x	x
Software	x	x	x	x	x	x	x
Television	?	?	?	?	?	?	?
Firm level market data							
Advertising	x	x	x	?	x	?	x
Architecture	x	x	x	?	x	x	x
Computer Games	x	x	x	?	x	x	x
Design	x	x	?	?	x	?	x
Film	x	x	x	?	x	x	x
Publishing	x	x	x	x	x	x	x
Software	x	x	x	x	x	x	x
Television	x	x	x	?	x	x	x
Key							
✓	Robust data viewed and collected						
?	Data collected but does not correspond to precise product definition						
?	Data (or source) in public domain - requires consultation with industry						
x	No or low quality data publicly available						

Figure 12: Summary of data availability

Source: Frontier

In light of these gaps, we discuss our recommendations for improving the evidence base on international demand for UK Creative Industries below.

5.1 NEXT STEPS

Given the significant gaps in the evidence base we recommend extensive consultation with industry experts. In particular we would recommend a series of face to face discussions with each of the UK trade associations for the key Creative Industries. To facilitate the discussion we recommend using the data template for each industry. This would serve to highlight the gaps and prioritising filling these. An example for the Advertising industry is shown below in Figure 18.

Recommendations for further analysis

Advertising	Country						
	US	France	Germany	China	India	Japan	ROW
Opportunities							
Overall revenues							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
Revenues by product (television, magazine, out of home and internet advertising)							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
UK position							
Overall export revenues							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
Export revenues by product (television, magazine, out of home and internet advertising)							
<i>current</i>	x	x	x	x	x	x	x
<i>past 5 years</i>	x	x	x	x	x	x	x
<i>next 5 years</i>	x	x	x	x	x	x	x
Key							
	●	Essential data	✓	Data collected			
	●	Highly valuable data	?	Data collected but not robust or fully comparable			
	●	Useful but not essential	x	Data not collected			

Figure 13: Filled in data template for the Advertising industry

Source: Frontier

The discussions with the trade associations would potentially allow us to:

- identify data sources not revealed through desk research - for example, British Design Innovation (BDI) is compiling a set of UK export statistics for the Design industry which has not been placed in the public domain;
- verify the robustness of data we have identified – for example, Barnes Reports have published a report on worldwide architectural services, before purchasing this we would need to verify its quality with sector experts such as RIBA or other architecture organisations;
- interpret data we have identified – for example PACT (Producers Alliance for Commercial Television) television export data and data provided by All3Media through previous DCMS research.

Once relevant trade associations had been consulted with and all available data gathered, we would recommend road testing our findings with the UKTI sector teams and contacts within each of the Creative Industries – some of which have been established through earlier research into the Creative Industries.

Annexe 1: Our approach to defining the Creative Industries

The current approach to defining the Creative Industries is based on Standard Industrial Classification (SIC) code data defined at the 4-digit level⁸. This data is quite aggregated and does not permit much detailed analysis to be carried out. For example, some Creative Industries such as Design, cannot be defined at all using 4-digit SIC code data.

More dis-aggregated 5-digit data is now available which should allow a more in-depth analysis to be carried out. The Creative Industries are not currently defined at this dis-aggregated level, we must start our analysis by developing a robust definition of the Creative Industries at the 5-digit level.

It is important that this 5-digit definition is robust, representative and is consistent with the current 4-digit definition. The remainder of this annexe deals with these issues. In particular it discusses:

- the current approach to defining the Creative Industries;
- alternative approaches to defining the Creative Industries in light of improved data; and
- the implications of these alternative approaches in terms of Creative Industry performance.

THE CURRENT APPROACH TO DEFINING THE CREATIVE INDUSTRIES

The current DCMS approach to defining the Creative Industries is based on 4-digit Standard Industrial Classification (SIC) code data. To define each industry, DCMS has selected where possible, one or more 4-digit SIC codes that correspond closely to the activities of that industries. In some cases, the 4-digit code includes activities which lie outside of the Creative Industry definition. Where this is the case, only a percentage of the 4-digit code is taken as being part of that Creative Industry.

The Creative Industry SIC codes and any percentages which are applied to the codes are shown below in Table 3.

⁸ The Standard Industrial Classification system allows firms to be classified according to their principal activities so that firms can be grouped into industries. There are many levels at which this can be done. Two-digit SIC codes define industries at the broadest level. For example, SIC code 74 covers all firms which carry out 'Other Business Activities'. Three, four and five-digit SIC codes define industries in more detail. For example the 3-digit code 74.2 refers to 'Architectural and engineering activities and related technical consultancy', whereas the 5-digit code, 74.20/1 is more specific, referring only to 'Architectural activities'. In practice firms allocate themselves to a SIC code. This means that in some cases some firms may be mis-classified. This is a particular problem when the SIC code definitions change (or more are added), as firms may take time to adjust their definition.

Creative Industry	SIC code	Proportion of code included
Advertising	Advertising (74.40)	100%
Architecture	Architecture and engineering activities and related technical consultancy (74.20)	25%
Art & Antiques	Other retail sale in specialised stores (52.48); Retail sale of second-hand goods in stores (52.50)	5%
Crafts	None	None
Design	None	None
Designer fashion	Clothing manufacture (9 codes)	0.5%
Video, film and photography	Reproduction of video recording (22.32); Photographic activities (74.81); Motion picture and video production, distribution and projection (92.11 to 92.13).	25%
Music and the visual and performing arts	Publishing of sound recordings (22.14); Reproduction of sound recording (22.31); Artistic and literary creation and interpretation (92.31); Operation of arts facilities (92.32); Other entertainment (92.34).	25% - 50%
Publishing	Publishing of books, newspapers, journals & periodicals (22.12 & 22.13); other publishing (22.15); news agency activities (92.40)	0% - 50%
Software and computer games	Reproduction of computer media (22.33)	25%
Radio and TV	Radio and television activities (92.20)	100%

Table 3: The current approach to defining the Creative Industries

Source: DCMS

The current approach clearly defines some industries such as advertising and radio and television. In these cases a 4-digit code can be used to represent the Creative Industry without the need to apply a percentage to the code.

Annexe 1: Our approach to defining the Creative Industries

In contrast, some industries are much harder to define:

- for some industries a small percentage of the 4-digit SIC codes are taken to represent that part of each code which refers to the Creative Industries – e.g., for Designer Fashion 0.5% of nine clothing manufacturing codes are taken to represent the industry;
- for other industries, the current approach does not allow some industries to be defined separately – this is a particular problem for the Software and Computer Games industries who collectively account for over one-third of total Creative Industry GVA; and
- in some cases, a Creative Industry cannot be defined at all - this is the case for the Crafts and the Design industries.

These findings suggest that more detailed, 5 digit SIC code data could enable a more accurate definition of the Creative Industries to be established. Also, the current approach which applies percentages to SIC codes, means that detailed structural statistical analysis cannot be undertaken.

A FRAMEWORK FOR DEFINING THE CREATIVE INDUSTRIES

Our analysis started by considering:

- whether a greater level of detail allows some industries to be defined more accurately; and
- where to draw the line when defining each industry - for example, for the music industry, do we include only activities such as composition and live performance, or do we extend our definition to include activities such as the manufacture and sale of CDs?

To address these issues we have analysed each Creative Industry's supply chain. This sets out, for each industry, all of its activities (as defined at the 5-digit SIC code level). In addition, it classifies these activities in terms of their position within the industry supply chain.

The framework

Our framework describes each industry in terms of a series of five layers – layer one and four outer layers – layer two to layer five. Each one of these layers corresponds to a distinct stage in an industry's supply chain:

- Layer one broadly represents those activities which lie at the top of each supply chain. These include activities such as composition for the Music industry, programming for the Computer Games industry and writing for the publishing industry. Layer one arguably describes the creative element of each Creative Industry. We have therefore adopted layer one as our key definition of the Creative Industries.
- Layer two of any Creative Industry broadly represents those activities which directly support layer one activities in the supply chain. In many cases these

are the activities which translate the creative activity into a marketable product. This includes activities such as publishing for the Publishing industry, casting for the Performing Arts and computer related work for the Software and Computer Games industries.

- Layer three of a Creative Industry is one stage further removed from layer one and includes those activities which support layer one and layer Two activities described above. In many cases this includes the manufacture of the hardware which directly supports the creative process – for example, the manufacture of television cameras and other hardware directly used in creating television programmes. In addition it includes the next stage in the production process from layer two activities - for example, this would include book binding for the Publishing industry and the reproduction of software for the Software and Computer Games industry.
- Layer four of a Creative Industry represents those activities which support the layers described above. In general this includes the manufacture and wholesale of raw materials such as printing ink and pulp for the publishing industry and also the manufacture of hardware that is used in the consumption of Creative Industry products such as televisions for the television industry and arcade machines for the Computer Games industry.
- Layer five represents the least Creative activities of any Creative Industry. In many cases layer five activities include the retail to the final consumer such as the sale of DVD players for the music industry, and games consoles for the Computer Games industry.

A generic supply chain for the Creative Industries with the corresponding layer definitions is shown below in Figure 14.

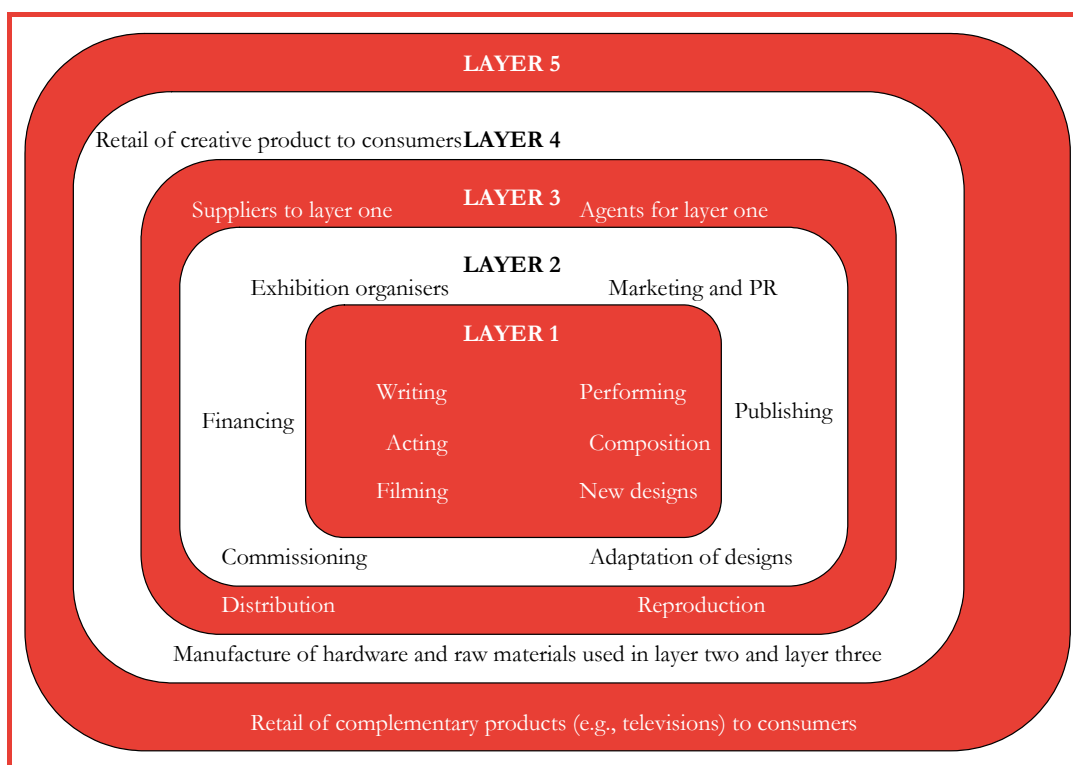


Figure 14: A generic supply chain for the Creative Industries

Source: Frontier

One of the key issues for defining the Creative Industries is where to draw the line in terms of the activities that are included in any definition. Our supply chain framework has helped us to analyse this by ordering the activities of each Creative Industry in terms of its supply chain.

This approach has revealed a distinct set of layer one activities. These appear to represent the creative processes which drive each Creative Industry. We have therefore adopted layer one as our working definition for each Creative Industry.

Annexe 2 sets out, for each Creative Industry, the activities included in each layer.

Key advantages with this approach are as follows:

- most of the Creative Industries can be defined more accurately, without the need for applying proportions to the data; and
- in some cases we have been able to define a layer one for an individual industry - this is the case for Architecture, Advertising, Design, Designer Fashion, Publishing and TV & Radio.

In other cases it has been necessary to combine layer one of two Creative Industries - this is the case for Film, Video and Photography, Music and the Performing Arts, Art, Antiques and Crafts and Software and Computer Games.

IMPLICATIONS OF DEFINING THE CREATIVE INDUSTRIES USING 5-DIGIT DATA

This section considers the implications of using the 5-digit SIC code definitions in our analysis of the Creative Industries. To do this we compare the size of the Creative Industries using the 5-digit definition with the size of the Creative Industries using the 4-digit definition currently employed by DCMS. We do this in terms of employment and turnover.

Under the new 5-digit definition we estimate that the Creative Industries employed 728,000 and had a turnover of £99bn in 2005. The estimates are lower than those under the existing definition of 982,000 employees and £129bn.

This is shown below in Figure 15 for employment.

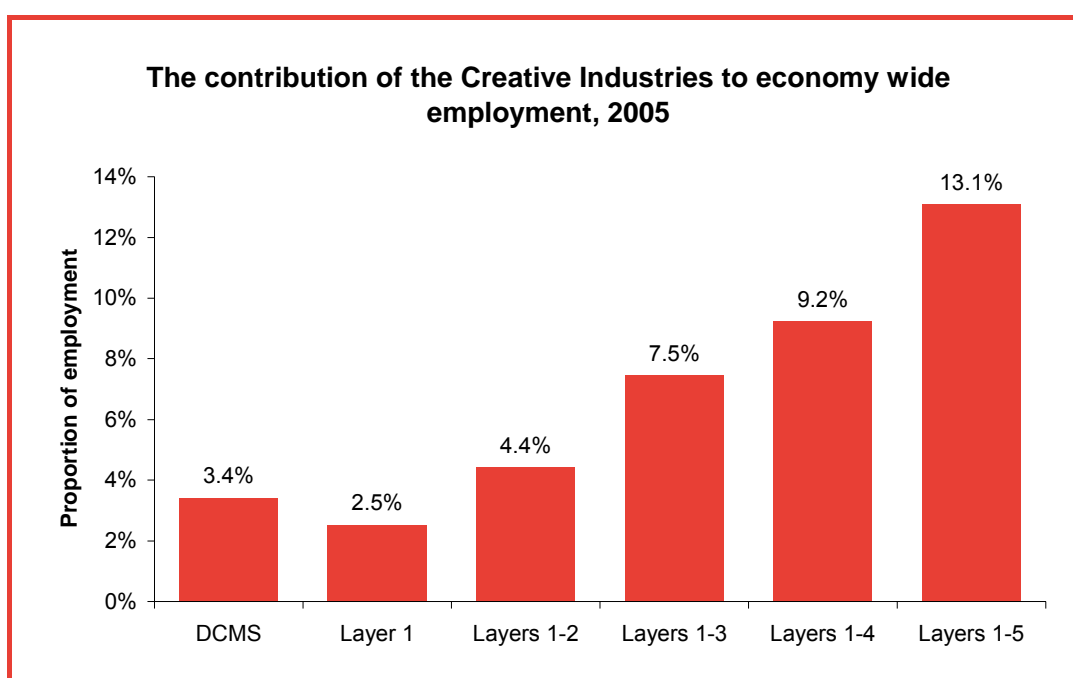


Figure 15: Comparing Creative Industry employment under the current 4-digit SIC code definition with the recent 5-digit SIC code definition

Source: DCMS, IDBR and Frontier analysis

The analysis above shows that the new definition is narrower than the existing definition in terms of employment. For example, under the existing definition the Creative Industries account for 3.4% of UK employment. Under the 5-digit definition of layer one, the contribution falls to 2.5%.

The result is similar for turnover. This is shown in Figure 16 below.

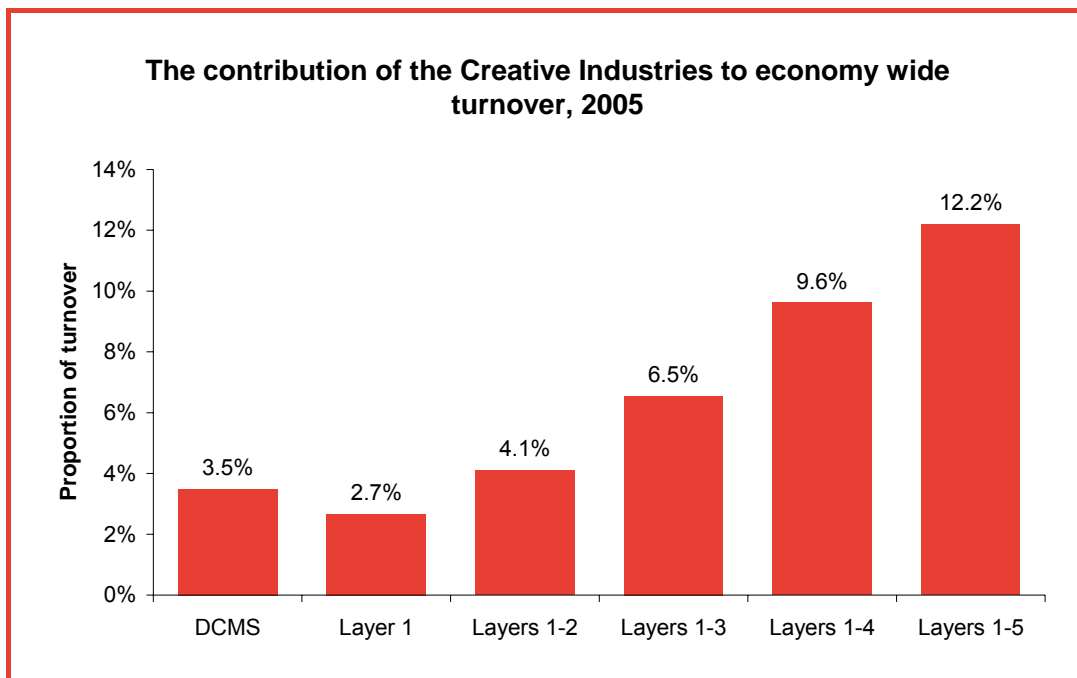


Figure 16: Comparing Creative Industry employment under the current 4-digit SIC code definition with the recent 5-digit SIC code definition

Source: DCMS, IDBR and Frontier analysis

The analysis above shows that the new definition is narrower than the existing definition in terms of turnover. For example, under the existing 4-digit definition, the Creative Industries account for 3.5% of UK turnover. Under the 5-digit definition of layer one, the contribution falls to 2.7%.

For more detail on the activities which define each Creative Industry see Annex 2.

Annexe 2: Creative Industry definitions

This annexe sets out the definition of each Creative Industry in terms of its key activities and the corresponding 5-digit SIC codes.

ADVERTISING

Layer	SIC Code	Description
Layer one	74.40/2	Planning, creating and putting in place advertising campaigns
Layer Five	74.40/9	A "catch all" code for advertising, including handing out free samples and aerial advertising
	74.40/1	Selling or leasing advertising space or time

Table 4: 5-digit SIC code definition of the Advertising industry

Source: National Statistics and Frontier

ARCHITECTURE

Layer	SIC Code	Description
Layer one	74.20/1	Architectural design and construction supervision
	74.20/2	Urban planning and landscape architecture
Layer Two	74.20/4	Engineering advice and design for construction projects
Layer Three	74.20/6	Scientific consultancy like weather and geological surveying
	74.15/3	Construction holding companies and head offices
	70.11	Real estate developers
	45.21/1, 45.21/2, 45.21/3, 45.22, 45.23, 45.24, 45.25	All types of construction work, like residential buildings, bridges, roads, sports facilities, dams and related work like laying foundations and putting up scaffolding.
Layer Four	74.20/3	Quantity surveying
	51.54	Wholesale of hardware, plumbing and heating equipment and supplies
	51.53	Wholesale of construction materials and sanitary equipment (e.g. toilets and sinks)
	51.13	Agents who sell timber and building materials
	45.41, 45.42, 45.43, 45.44, 45.45	All types of building completion like plastering, painting and glazing, Floor and wall covering and installing swimming pools
	45.31, 45.32, 45.33, 45.34	All types of building installation like electrical work, insulation work and plumbing

Table 5: 5-digit SIC code definition of the Architecture industry

Source: National Statistics and Frontier

ARTS, ANTIQUES AND CRAFTS

Layer	SIC code	Description
Layer Two	74.87/3	Exhibition and fair organisation
	52.50/1, 52.48/6	Retail sale of antiques and retail sale in commercial art galleries
Layer Three	36.63/9	Catch all SIC code for "other manufacturing" (potentially some craft firms, if they are large enough to be covered by the IDBR)
	36.22, 36.61	Manufacture of jewellery and dinnerware made of precious metals and imitation jewellery
	36.30, 33.50	Making musical instruments and watch & clock making
	28.75, 28.61	Making various metal products like swords but also ship propellers etc. and making cutlery
	27.54, 27.41, 26.82/9	Casting and production of heavy and precious metals and manufacture of mineral products
	26.30, 26.25, 26.21, 26.70	Making ceramic tiles, pots, jars, tableware, statuettes etc. and cutting stone for building and ornamental use
	17.51/9, 17.51/2, 17.51/1	Carpet and rug making
Layer Four	51.47/9	A catch all SIC code that includes the wholesale of floor coverings but also stationary and sportswear etc.
	51.44, 51.47/8	Wholesale of china and of travel and fancy goods
	51.47/3, 51.47/4	Wholesale of jewellery and imitation jewellery

Table 6: 5-digit SIC code definition of the Art, Antiques and Crafts industry

Source: National Statistics and Frontier

DESIGN

Layer	SIC code	Description
Layer one	74.20/5	Engineering design for industry

Table 7: 5-digit SIC code definition of the Design industry

Source: National Statistics and Frontier

DESIGNER FASHION

Layer	SIC Code	Description
Layer One	74.87/2	Fashion design but also interior design and graphic design
Layer Two	17.53, 17.71, 17.72, 18.10, 18.22/1, 18.22/2, 18.23/1, 18.23/2, 18.24/1, 18.24/3, 18.24/9, 18.30, 19.20, 19.30	Manufacture of clothing items like hats, shoes, outerwear and underwear or accessories like bags and luggage.
Layer Three	17.11, 17.12, 17.13, 17.14, 17.15, 17.16, 17.17, 17.21, 17.22, 17.23, 17.24, 17.25, 17.30, 17.54/1, 17.54/2, 17.54/9, 17.60, 19.10	Manufacture of fibres, textiles, prepared fur and prepared leather
	51.16, 51.24/1, 51.24/9, 51.41, 51.42/1, 51.42/2, 51.42/3, 51.42/9	Wholesale of, and activates of agents involved in the sale of, fabrics, fur and clothing,
Layer Four	52.42/1, 52.42/2, 52.42/3, 52.42/4, 52.43/1	Retail sale of cloths, accessories and footwear

Table 8: 5-digit SIC code definition of the Creative Industries

Source: National Statistics and Frontier

FILM, VIDEO AND PHOTOGRAPHY

Layer	SIC code	Description
Layer One	74.81/3	Specialist photography (e.g. underwater)
	74.81/9	Photos for commercials, fashion, tourism etc.
	92.11/1	Producing films, cartoons and documentaries
	92.11/9	Dubbing, editing, post production etc.
Layer Two	74.81/2	Portrait photos (mainly passport photo companies, although doesn't include photo machines)
Layer Three	92.12	Motion picture distribution
	74.81/4	Film processing
	52.48/2	Retail sale of cameras but also office equipment
	51.47/6	Wholesale of photographic goods
	33.40/3	Manufacture of cameras, projectors etc.
	24.65	Manufacture of unrecorded media (also includes unrecorded media for computers)
	24.64	Manufacture of photographic chemicals
	22.32	Reproduction of DVD's and tapes
Layer Five	92.13	Cinemas

Table 9: 5-digit SIC code definition of the Film, Video and Photography industry

Source: National Statistics and Frontier

MUSIC AND THE PERFORMING ARTS

Layer	SIC code	Description
Layer one	92.31/1	Live theatrical presentation
	92.31/9	Artistic and literary creation and interpretation
Layer Two	92.72/1	Casting for theatres, motion pictures or television
	92.32	Theatres, concert halls, arts facilities and ticket agencies
	22.14	Music publishing
Layer Three	92.34/9	"Other entertainment activities" code that includes VUE and Tussauds
	51.47/5	Wholesale of musical instruments
	22.31	Reproduction of sound recording
Layer Four	51.43/1	Wholesale of records, CD's etc. and players
Layer Five	92.72/9	"Other recreational activities" code

Table 10: 5-digit SIC code definition of the Music and Performing Arts industry

Source: National Statistics and Frontier

PUBLISHING

Layer	SIC Code	Description
Layer one	92.40	Journalists, press photographers and news syndicates
Layer Two	22.13	Publishing journals
	22.12	Publishing newspapers
	22.11	Publishing books
Layer Three	74.87/9	Business activities not covered by other SIC codes, including author's agents but also consultants etc.
	22.25	Activities like embossing and laminating
	22.24	Pre-press work, like composition and typesetting
	22.23	Bookbinding
	22.22	Printing maps, magazines, music manuscripts, diaries and similar items
	22.21	Printing newspapers
	22.15	Publishing photos, posters, timetables etc.
Layer Four	24.30/2	Manufacture of printing ink
	21.12	Manufacture of paper and paperboard
	21.11	Manufacture of pulp
Layer Five	52.47	Retail sale of books, newspapers and stationery
	52.11/1	Retail sale by newsagents, confectioners etc.

Table 11: 5-digit SIC code definition of the Publishing industry

Source: National Statistics and Frontier

SOFTWARE AND COMPUTER GAMES

Layer	SIC code	Description
Layer one	36.50/9	Manufacture of video game machines but also chess sets, dolls, playing cards etc.
	72.21	Development and supply of ready made software "off the shelf"
	72.22	Development of made to order software, software consultancy and web page design
Layer Two	72.60	Computer related work not covered under other SIC codes
Layer Three	72.10	Hardware consultancy
	22.33	Reproduction of software
Layer Four	51.84	Wholesale of computers, peripherals and software
	51.47/7	Wholesale of toys, including video games
	36.50/1	Manufacture of arcade games, including billiards etc.
Layer Five	52.48/5	Retail sale of toys (including video games), spots goods, stamps and coins

Table 12: 5-digit SIC code definition of the Software and Computer Games industry

Source: National statistics and Frontier

TELEVISION AND RADIO

Layer	SIC code	Description
Layer one	92.20/1	Radio production and broadcast
	92.20/2	Television production and broadcast
Layer Three	32.20/2	Transmitters and television cameras
Layer Four	51.43/9	Wholesale of radios, TV's, lighting equipment and some other appliances
	32.30	Manufacture of TV's, video recorders, camcorders, record decks, microphones and similar goods
Layer Five	52.45	Retail sale of radios, TV's, DVD's, musical instruments and musical scores

Table 13: 5-digit SIC code definition of the Television and Radio industry

Source: National Statistics and Frontier

Annexe 3: Product tradability analysis

Creative Industry	Product/service	Transport costs	Language barriers	Cultural barriers
Advertising				
	Design of advertising campaigns - poster/print	L	M	M
	Design of advertising campaigns - tv & cinema	L	M	M
	Design of advertising campaigns - radio	L	H	H
	Design of advertising campaigns - open air	L	M	H
Architecture				
	Building design (Architecture)	L	M	L
	Construction supervision	M	H	L
	Architectural urban planning	L	M	M
	Architectural landscape design	L	M	M
	Civil engineering advice	L	M	L
	Civil engineering design	L	M	L
Art, antiques and crafts				
	Art, antiques and crafts sales from commercial galleries	H	M	L
	Antique sales from other retailers	H	M	L
Design				
	Industrial process and product design services	L	L	L
	interior decoration design services	L	M	M
	graphic design services	L	M	M
	Designer furniture	H	L	M
	Other designer hardware	H	L	M
Designer fashion				
	fashion design services	L	M	H
	designer fashion products	H	L	M

Creative Industry	Product/service	Transport costs	Language barriers	Cultural barriers
Film Video and Photography				
	aerial photography	M	M	L
	underwater photography	M	M	L
	microfilming	M	M	L
	Commerical photography	M	M	L
	Fashion photography	M	M	L
	Tourism photography	M	M	L
	Live video services	M	M	L
	Film production	M	M	M
	Cartoon production	M	M	H
	Documentary production	M	M	H
	Audio visual dubbing services	L	H	L
	Audio visual editing services	M	H	L
	Audio visual post production services	L	M	L
	Portrait photography	M	M	L
	Off the shelf photographs (for above classifications)	M	L	L
	Off the shelf videos and DVDs (for above classifications)	M	L	M
	Feature films	L	L	M
Music and the performing arts				
	Live theatre performance	H	H	H
	Live opera performance	H	L	L
	Live band performance	H	L	L
	Printed music publishing	M	L	L
	Publishing pre-recorded sound recordings	L	L	L
	Theatre and concert hall operations	H	L	L
	Casting for film, tv and theatre	H	H	H
	Printed music	M	L	L
	Pre-recorded music (digital, CD, vinyl etc.)	L	L	L

Creative Industry	Product/service	Transport costs	Language barriers	Cultural barriers
Publishing				
	Journalism services	L	M	M
	News syndicate services	L	M	M
	Press photography services	L	L	L
	Book publishing services	L	M	M
	Brochure publishing services	L	M	H
	Leaflet publishing services	L	H	H
	Map and chart publishing services	L	L	L
	Newspaper publishing services	M	M	H
	Publishing of journals and periodicals	L	M	M
	Books	M	M	H
	Maps and charts	H	L	L
	Newspapers	H	H	H
	Journals and periodicals	M	M	M
	Magazines	H	M	H
Software and computer games				
	Computer games software	L	L	L
	Computer games production services	L	M	M
	Other software (non-bespoke)	L	L	L
	Other software (bespoke)	L	M	M
Television and radio				
	TV broadcasting services	M	M	L
	TV production services	M	H	H
	TV programmes	L	M	H
	Radio broadcasting services	M	H	L
	Radio production services	M	H	H
	Radio programmes	L	H	H

Annexe 4: Largest 50 countries by GDP

1	United States	26	Denmark
2	Japan	27	South Africa
3	Germany	28	Greece
4	People's Republic of China	29	Ireland
5	United Kingdom	30	Iran
6	France	31	Finland
7	Italy	32	Argentina
8	Spain	33	Hong Kong, SAR of China
9	Canada	34	Thailand
10	India	35	Portugal
11	Brazil	36	Venezuela
12	South Korea	37	Malaysia
13	Mexico	38	Israel
14	Russia	39	Czech Republic
15	Australia	40	Colombia
16	Netherlands	41	Singapore
17	Switzerland	42	Chile
18	Belgium	43	Pakistan
19	Turkey	44	Hungary
20	Sweden	45	New Zealand
21	Saudi Arabia	46	United Arab Emirates
22	Austria	47	Algeria
23	Poland	48	Nigeria
24	Indonesia	49	Romania
25	Norway	50	Philippines

Table 14: Largest 50 world countries by GDP, 2005

Source: World Bank

Annexe 5: SIC code definitions of the Creative Industries

SIC code	SIC code title	Layer	Products/ Services
Advertising			
74.40/2	Planning, creation and placement of advertising activities	c	Design of advertising campaigns (poster/print/radio&tv/cinema/openair) Poster hanging
Architecture			
74.20/1	Architectural activities	c	Building design (Architecture)
74.20/2	Urban planning and landscape architectural activities	c	Architectural urban planning
74.20/4	Engineering consultative and design activities	1	Civil engineering advice
Art, antiques and crafts			
52.48/6	Retail sale in commercial art galleries	1	Art, antiques and crafts sales from commercial galleries
52.50/1	Retail sale of antiques, including antique books in stores	1	Antique sales from other retailers
74.87/3	Activities of exhibition and fair organisers	1	Art, antique and craft exhibition organisers
Design			
74.20/5	Engineering design activities for industrial process and production	c	Industrial process and product design services
Designer fashion			
74.87/2	Speciality design activities	c	fashion design services designer fashion products
Film Video and Photography			
74.81/3	Other specialist photography	c	aerial photography underwater photography microfilming
74.81/9	Photographic activities not elsewhere classified	c	Commerical photography Fashion photography Tourism photography Live video services
92.11/1	Motion picture production on film or video	c	Film production Cartoon production Documentary production
92.11/9	Other motion picture and video production activities	c	Audio visual dubbing services Audio visual editing services Audio visual post production services
74.81/2	Portrait photographic activities	1	Portrait photography

Note: Layer descriptions refer to whether the activity is defined as being in the layer one or in layer two of the industry

Source: National Statistics for SIC code and SIC code title. Frontier analysis for layer and products/ services analysis.

SIC code	SIC code title	Layer	Products/ Services
Music and the performing arts			
92.31/1	Live theatrical presentation	c	Live theatre performance Live opera performance Live band performance
22.14	Publishing of sound recordings	1	Printed music publishing Publishing pre-recorded sound recordings
92.32	Operation of arts facilities	1	Theatre and concert hall operations
92.72/1	Motion picture, television and other theatrical casting	1	Casting for film, tv and theatre
Publishing			
92.40	News agency activities	c	Journalism services News syndicate services Press photography services
22.11	Publishing of books	1	Books Book publishing services Brochure publishing services Leaflet publishing services Maps and charts Map and chart publishing services
22.12	Publishing of newspapers	1	Newspapers Newspaper publishing services
22.13	Publishing of journals and periodicals	1	Journals and periodicals Publishing of journals and periodicals
Software and computer games			
36.50/9	Manufacture of other games and toys not elsewhere classified	c	Computer games software
72.2	Software consultancy and supply	c	Computer games production services
72.21	Publishing of software	c	Other software (non-bespoke)
72.22	Other software consultancy and supply	c	Other software (bespoke)
72.60	Other computer related activities	1	Arcade games machines
Television and radio			
92.20/1	Radio activities	c	TV broadcasting services
92.20/2	Television activities	c	TV production services

Note: Layer descriptions refer to whether the activity is defined as being in layer one or in layer two of the industry

Source: National Statistics for SIC code and SIC code title. Frontier analysis for layer and products/services analysis.

Annexe 6: ONS data request for UK trade data

General description of data	UK firm exports at the 5-digit SIC code, for specific countries and years		
Years	2001 2003 2005		
Countries	France Germany United States Japan China India		
SIC codes (if necessary, SIC codes which are listed in the same cell could be rolled)	74.40/2	92.11/1 92.11/9	92.12
N.B. we require all SIC codes for all 6 countries listed above	92.31/1 92.31/9	74.20/1 74.20/2	92.31/1 92.31/9
	74.20/1 74.20/2	22.14	51.43/1
	52.45	36.50/9 72.21 72.22	92.40
	92.20/1 92.20/2	74.84/2	22.11 22.12 22.13
	74.20/5	74.87/2	92.72/1

Table 15: Frontier request for export statistics (minimum request)

Annexe 7: International demand for Advertising

The key objective of this study has been to establish an analytical framework for understanding international demand for Creative Industry products. In deriving our analytical framework, we have identified the following report by PWC - Global Entertainment and Media Outlook, 2006-2010 – as the most comprehensive information source on this topic.

We have conducted an in-depth review of this report and further analysis of the data it contains. This annexe summarises our analysis for the advertising industry. This serves a number of purposes:

- to illustrate how our analytical framework and data template can be applied; and
- to provide an example of how the data that is obtained can be analysed to understand more about international demand for the Creative Industries.

Figure 27 below sets out a data template for the advertising industry (see Section 4 for further information on creating the template). This illustrates:

- the key country markets we are focusing on;
- key data required to analyse international demand; and
- the extent to which the PWC report discussed above meets these requirements for data.

Advertising	Country						
	US	France	Germany	China	India	Japan	ROW
Opportunities							
Overall revenues							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
Revenues by product (television, magazine, out of home and internet advertising)							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
UK position							
Overall export revenues							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
Export revenues by product (television, magazine, out of home and internet advertising)							
<i>current</i>	x	x	x	x	x	x	x
<i>past 5 years</i>	x	x	x	x	x	x	x
<i>next 5 years</i>	x	x	x	x	x	x	x
Key							
	●	Essential data	✓	Data collected			
	●	Highly valuable data	?	Data collected but not robust or fully comparable			
	●	Useful but not essential	x	Data not collected			

Figure 17: Data template for the Advertising industry

Source: Frontier

The remainder of this Annex uses the data from the PWC report to answer the following questions:

- What is the overall size of the global advertising market?
- Is this market in growth or in decline?
- Which countries are consuming most advertising products?
- Are the same countries expected to remain key consumers in the future?
- Which types of advertising media are generating most demand?
- Are these media likely to remain the most popular?
- Does demand for the different media look the same for all countries?

Our analysis and response to these questions are provided below.

THE OVERALL SIZE OF THE GLOBAL ADVERTISING MARKET

Our key analysis of the global advertising market focuses on total expenditure on advertising. We do this because this is by far the most comprehensive and reliable data that is available for the global advertising market. This data provides us with the total revenues earned by for example publishers and television

Annexe 7: International demand for Advertising

broadcasters rather than the revenues of the firms creating the adverts. Although imperfect, it provides an indication as to the magnitude of potential revenues to be earned from producing adverts as well as the relative size of the markets between the different types of media where advertisements are placed and the countries where these revenues are earned.

Total global advertising expenditure in 2005 was £212bn. This is forecast to grow to £287bn by 2010. This figure includes expenditure on television, internet, magazine, newspaper and out-of-home⁹ advertising. The purpose of this study is to provide an overview of the global advertising market in the context of UK exports. We have therefore excluded radio and advertising from our analysis. Neither of these mediums appears to be particularly exportable – radio advertising may present high language and cultural barriers to UK firms looking to export. Similarly, newspaper advertising may also present high language and cultural barriers and may also be low value added, resulting in an unsustainably low return on investment.

When radio and newspaper advertising revenues are excluded, total global advertising expenditure falls to £132bn in 2005, rising to £190bn in 2010. These results are shown below in Figure 18.

⁹ For example, billboard advertising.

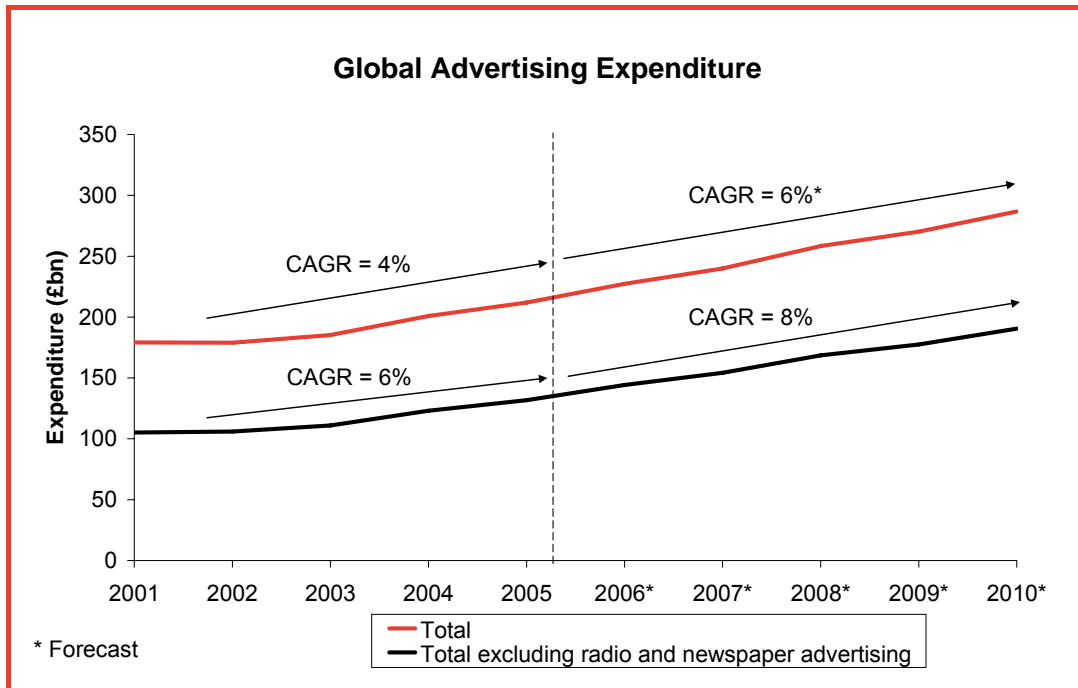


Figure 18: Global Advertising Expenditure, 2001-2010*

Source: PWC, Global Entertainment and Media Outlook and Frontier analysis

Figure 18 above shows that global advertising revenues are increasing (in nominal terms) and are forecast to grow faster over the next five years than in the previous four years. The revenues of our 'exportable' advertising mediums (i.e., excluding radio and newspaper) have grown by 6% per annum between 2001 and 2005 and are forecast to grow by an average of 8% per annum between 2005 and 2011.

To understand more about potential overseas investment opportunities for UK firms we need to examine the characteristics of the different advertising mediums and markets. We do this below.

DECOMPOSING ADVERTISING REVENUES BY SECTOR

As described above, advertising revenues can be sub-divided according to the nature of the final media in which the advert is presented. For smaller firms this distinction may be important if they do not have scope to produce adverts for all media types.

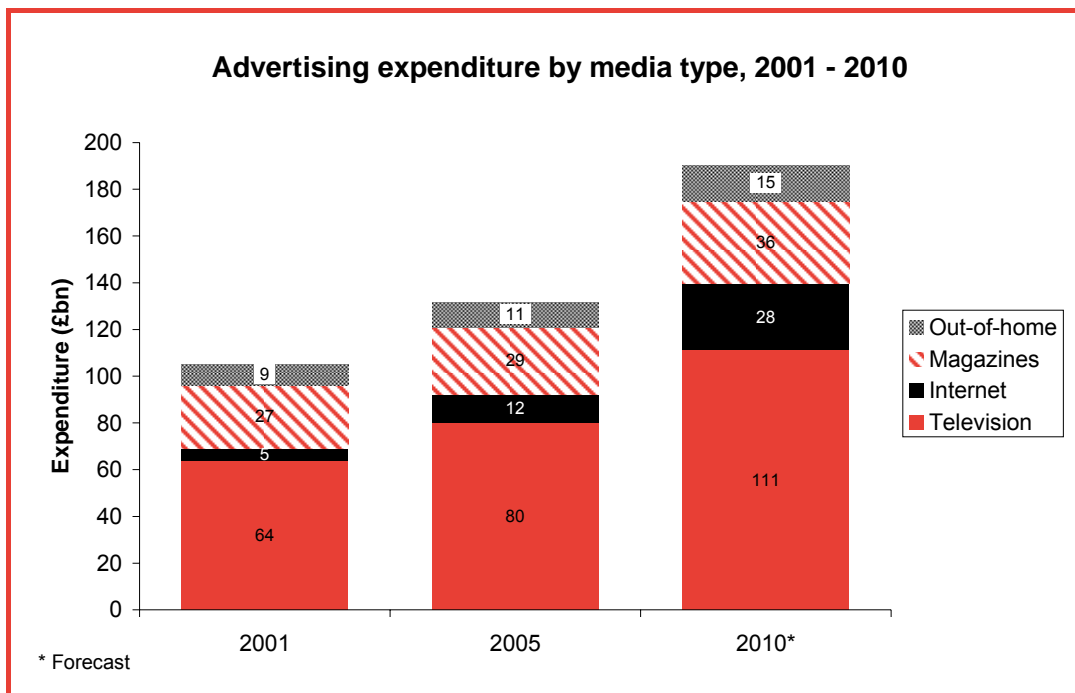


Figure 19: Global advertising expenditure by media type, 2001 - 2010

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

The analysis shown above in Figure 19 illustrates that the majority of advertising expenditures are on television advertising.

- **Television advertising expenditure** accounted for 61% of total advertising expenditure in 2005. Expenditure is forecast to increase by 7% per annum, from £80bn to £111bn between 2005 and 2010.
- **Internet advertising expenditure** is forecast to become increasingly important in terms of overall expenditure. Expenditure has increased from £5bn in 2001 to £12bn in 2005. This figure is forecast to increase to £28bn by 2010 (an annual growth rate of 18% per annum).
- **Magazine advertising expenditure** is currently a significant part of total advertising expenditure, but its overall importance appears to be becoming less significant in favour of internet advertising. Global expenditure in 2005 was £29bn. This is forecast to increase to £36bn by 2010 (an annual growth rate of 4%).
- **Out of home advertising expenditure** is the least significant of the four advertising media we are focusing on. In 2005 total advertising expenditures were £11bn. This is forecast to increase to £15bn by 2010 (an annual growth rate of 4%). In share of total advertising expenditure is forecast to remain constant at 8% of total expenditure across the four media types.

DECOMPOSING ADVERTISING REVENUES BY COUNTRY

Advertising revenues can also be decomposed by region and by country. For the purposes of our study, we need to be more specific than the region level. Most firms will not be able to immediately invest across a whole region as this investment requires at least a minimal physical presence. Furthermore, advertising products may need to be tailored on a country by country basis to take into account cultural and language differences.

We therefore present an analysis of overall advertising expenditures (aggregated across the four media types discussed above) for the largest country markets. We have been asked to focus on a few particular markets - France, Germany, India, China, U.S. Where these are not the largest markets these are included and a note made to this effect.

Figure 20 below breaks down the £212bn global advertising market by country for 2005.

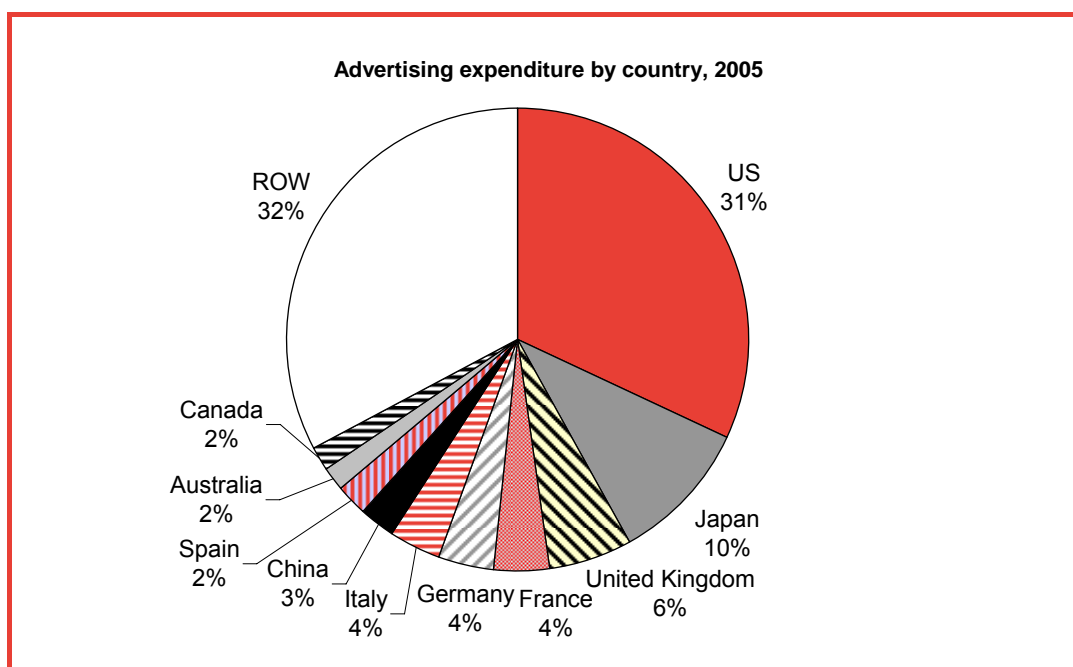


Figure 20: Global advertising expenditure* by country, 2005

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

* Note: Data refers to tv, internet, magazine and out of home advertising

Figure 20 shows the US advertising market to be significantly larger than all other world markets with a 31% share of total global expenditure. The second largest market is Japan with a 10% share of the global market. France, Germany and Italy represent the next largest potential export markets for UK firms, each representing a 4% of the global market.

The two Asian countries we have been asked to consider – China and India currently have a relatively small share of the global market. In 2005, China's

global share was 3% and India's was 0.7% (included in the Rest of World (ROW) category in the above).

We now examine how these shares are forecast to change over time. To do this we illustrate forecast country shares for the £287bn 2010 global advertising market in Figure 21 below.

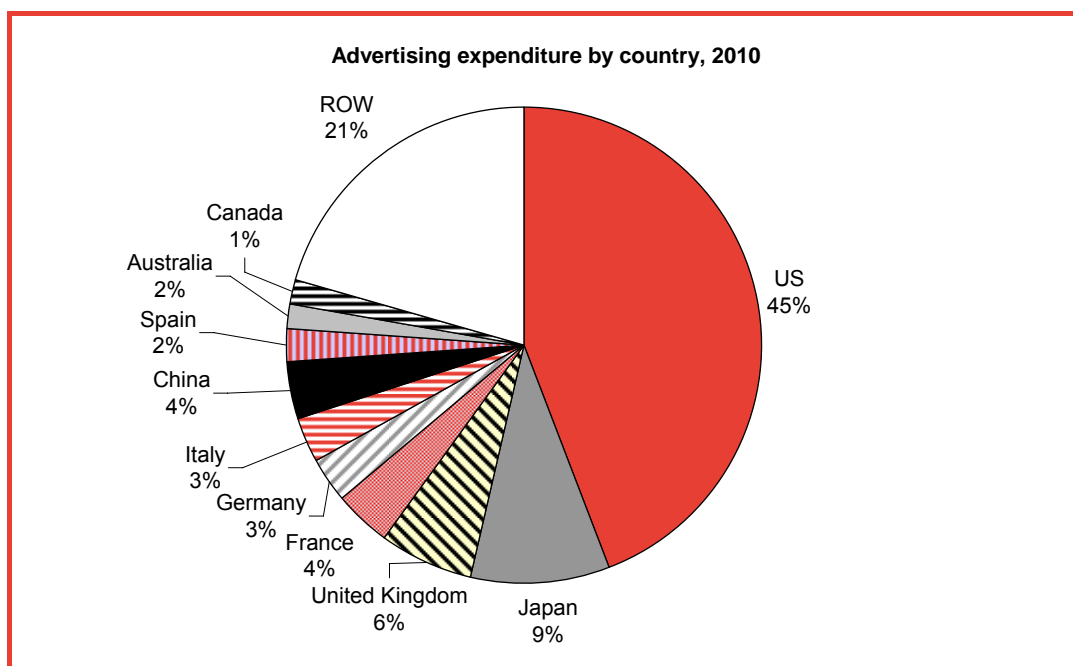


Figure 21: Forecast global advertising expenditure* by country, 2010

Source: PWC, *Global Entertainment and Media Outlook* and Frontier analysis

* Note: Data refers to tv, internet, magazine and out of home advertising

Figure 21 below shows that the US's share of the global advertising market is predicted to increase to 45% by 2010 (from 31% in 2005). Other countries' shares are predicted to remain relatively stable over time. The only significant other change is China's move up the country ranking from 7th largest advertising country to the 5th largest advertising country.

It is important to recognise that the stable country shares represent growth rather than stagnation for these countries. For example, the forecast average annual average growth rate for Japan is 6% for the years 2006-2010. A summary of these forecast growth rates for the largest ten countries is shown below in Table 16 below.

	Country	Forecast annual growth rate (2006-2010)		Country	Forecast annual growth rate (2006-2010)
1	US	15%	6	Italy	6%
2	Japan	6%	7	China	16%
3	UK	9%	8	Spain	7%
4	France	7%	9	Australia	9%
5	Germany	3%	10	Canada	6%

Table 16: Forecast compound annual growth rates for the largest 10 countries, 2006-2010

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

* Note: Data refers to tv, internet, magazine and out of home advertising

DETAILED ANALYSIS OF KEY SECTORS AND COUNTRIES

In some cases it is important to know where the largest markets are for the different types of advertising (e.g., the same firm may not be able to contest a market for tv advertising and internet advertising). This section highlights, for each of our four media types, where the largest and fastest growing markets are around the world.

Television advertising

The global television advertising market was valued at £62bn in 2005. Figure 22 below shows global expenditures for the largest 10 markets.

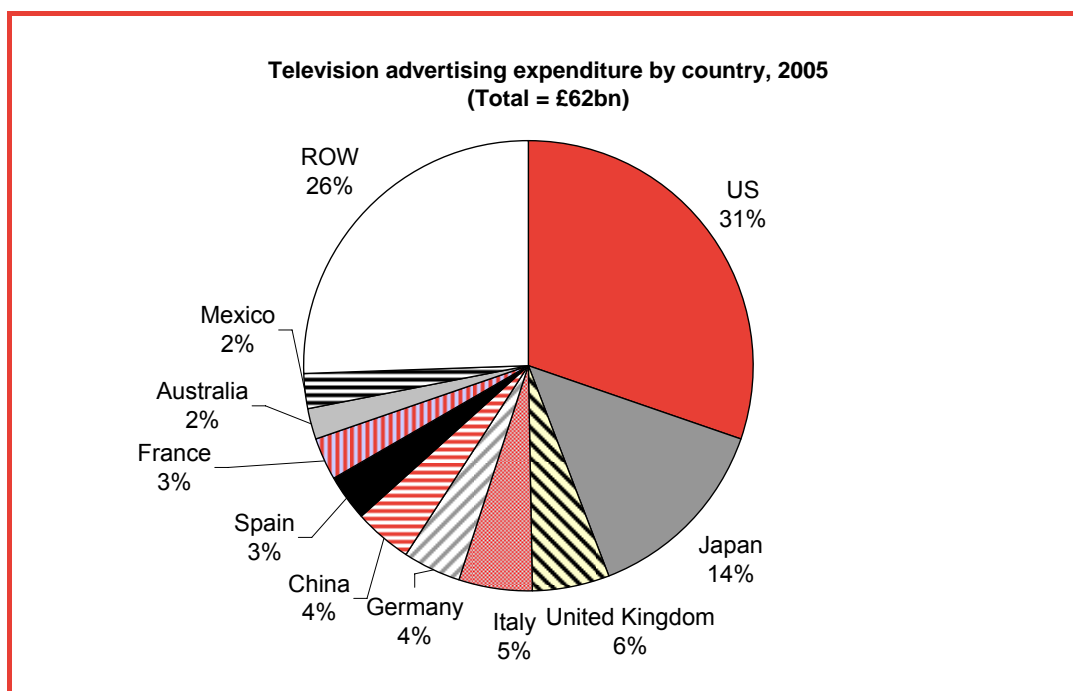


Figure 22: Expenditure on television advertising by country, 2005

Source: *Global Entertainment and Media Outlook and Frontier analysis*

Figure 22 shows that US expenditure (£19bn) accounts for the largest portion of total expenditure. Japan (£8.5bn), the UK (£3.6bn), Italy (£3.3bn), Germany (£2.6bn) and China (£2.5bn) also have relatively large advertising markets. The Indian advertising market (not shown in the above) is relatively small with advertising revenues of £586m in 2005.

In terms of growth, many countries are forecast to experience double digit growth for the period 2006-2010. Many of these are countries are however starting from such as small base their forecast revenues for 2010 remain relatively low. Countries which already have a sizable television advertising market and that are forecast to have grow significantly include:

- US – 21% per annum;
- Russia – 20% per annum;
- China – 17% per annum;
- Brazil -13% per annum; and
- Mexico – 10% per annum.

This growth is likely to have an impact on the overall country shares by 2010 (see Figure 23 below).

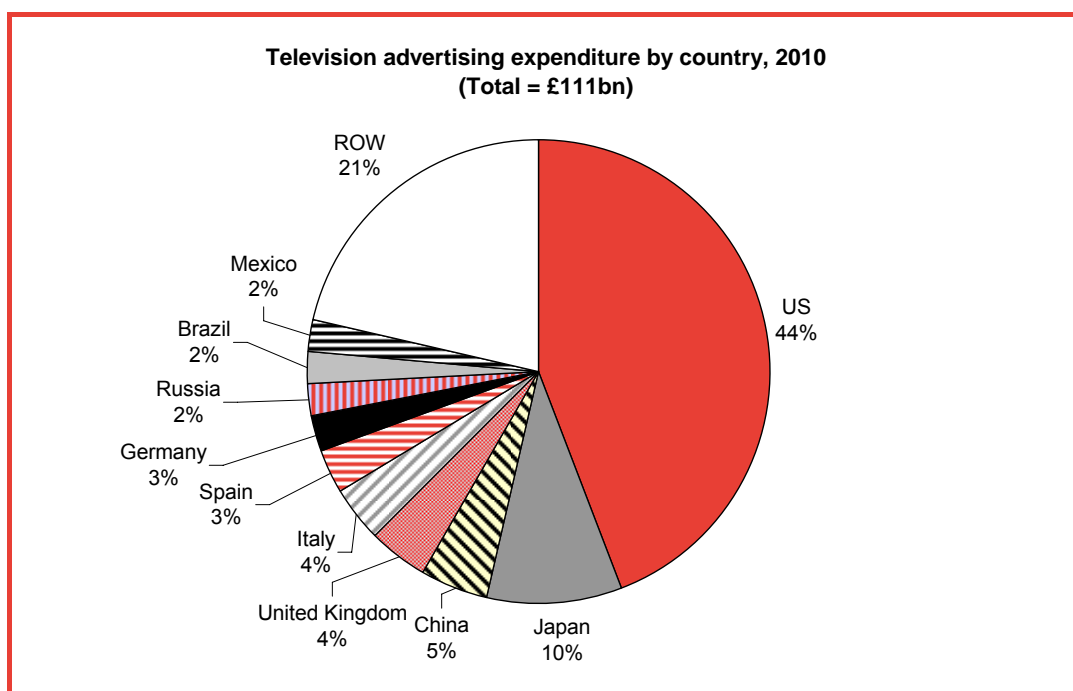


Figure 23: Expenditure on television advertising by country, 2010

Source: *Global Entertainment and Media Outlook and Frontier analysis*

Figure 23 shows that the US and Japan will remain the largest television advertising markets. Key changes in terms of the relative sizes of these markets include China's forecast market growth from £2.5bn to £5.4bn, making it the third largest television advertising market. Similarly, the Russian and Brazilian television advertising markets are also forecast to grow significantly, pushing them into the top ten in terms of world advertising market size. Russia's market is forecast to grow from £1.1bn to £2.6bn and Mexico's from £1.4bn to £2.4bn.

Internet advertising

The global internet advertising market was valued at £12bn 2005. Figure 24 below shows global expenditures for the largest 10 markets.

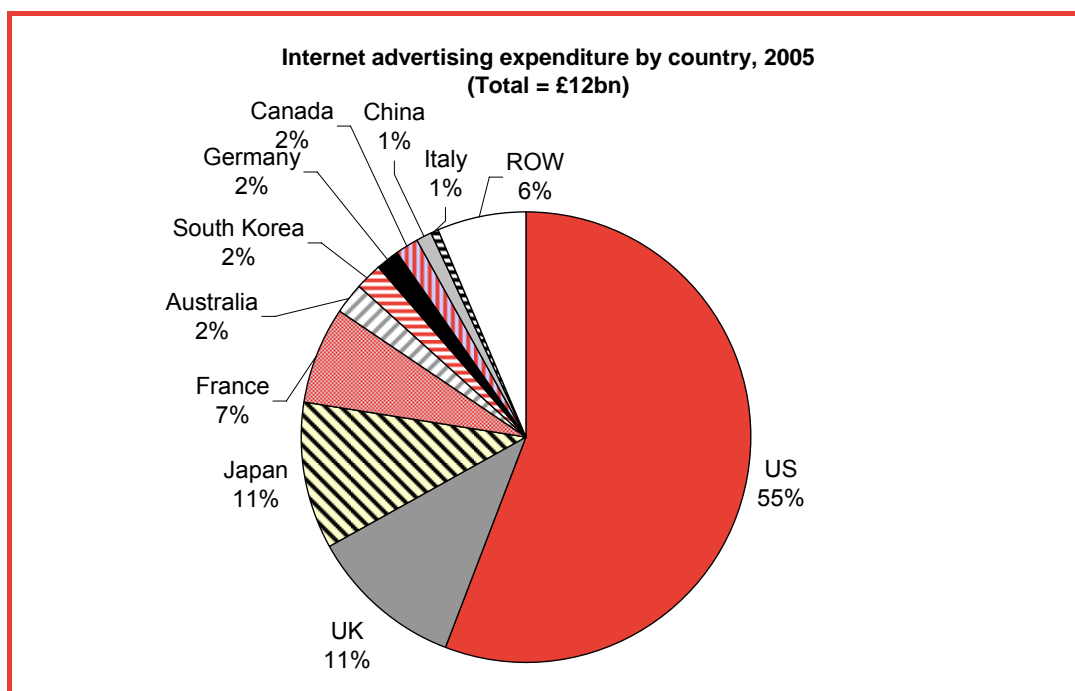


Figure 24: Expenditure on television advertising by country, 2005

Source: *Global Entertainment and Media Outlook and Frontier analysis*

Figure 24 shows that the top 10 internet advertising markets account for 94% of total internet advertising revenues. The largest markets are the same as those we have seen for the other advertising media types. The US has the largest global share, with total revenues of £6.9bn. The UK (£1.4bn), Japan (£1.3bn) and France (£0.9bn) also have relatively large shares of the global market.

South Korea and China also feature in this set of top ten internet advertising markets. South Korea is the sixth largest market with revenues of £241m and China is the ninth largest with revenues of £134m. Note that although these countries are in the top 10, their markets are small relative to the size of other markets we have explored above such as television and magazine advertising.

In terms of growth, as perhaps would be expected, most countries' markets are expected to grow significantly over the next few years. All of the top 10 countries shown in Figure 24 above are forecast to exhibit double digit growth during the period 2006-2010. Hence the picture for 2010 is largely unchanged, except for the total size of the internet advertising market which is forecast to more than double in size by 2010 to £28bn.

Significant growth is expected for some of the smaller markets. In particular:

- the Indian internet advertising market is forecast to grow by an average of 49% per annum between 2005 and 2010. However the overall size of the market will remain small (£94m); and

- the Mexican internet advertising market is forecast to grow by an average of 43% per annum between 2005 and 2010. As above, the overall size of this market will remain small (£91m).

A summary of forecast growth for internet advertising by country is shown below in Figure 25.

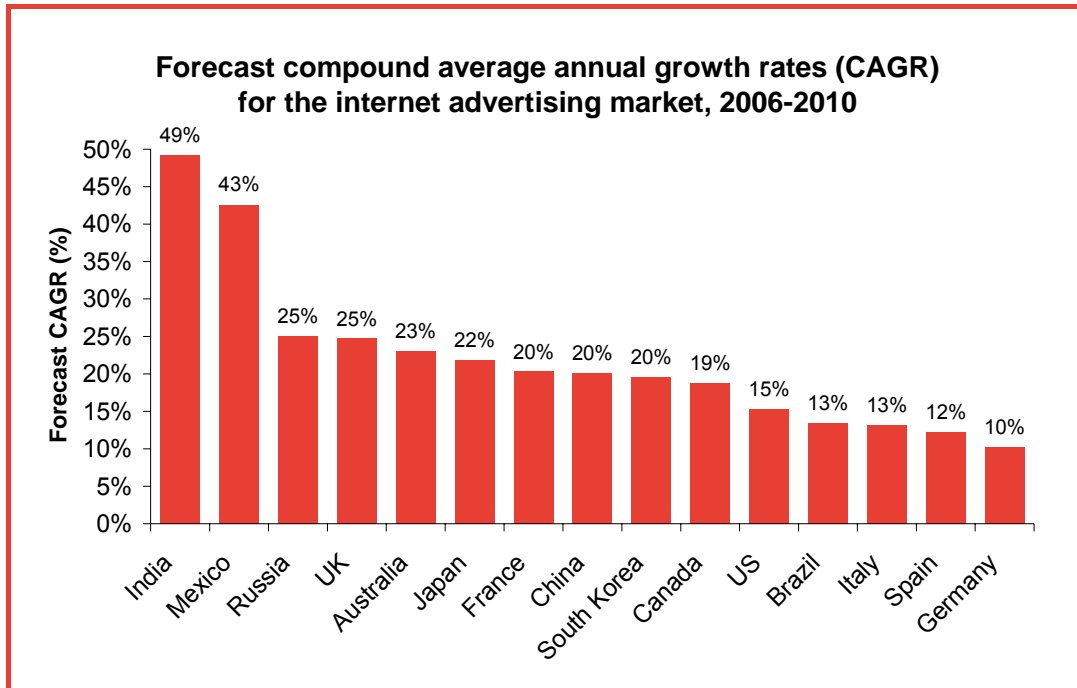


Figure 25: Forecast annual average growth rates for key internet advertising markets, 2006 - 2010

Source: *Global Entertainment and Media Outlook and Frontier analysis*

Out of home advertising

Out of home advertising covers any type of advertising that would be seen by individuals outside of their home. Major sources of revenue in this category include billboards and bus and train shelter adverts. The out of home global advertising market was valued at £11bn in 2005. Figure 26 below shows global expenditures for the largest 10 markets.

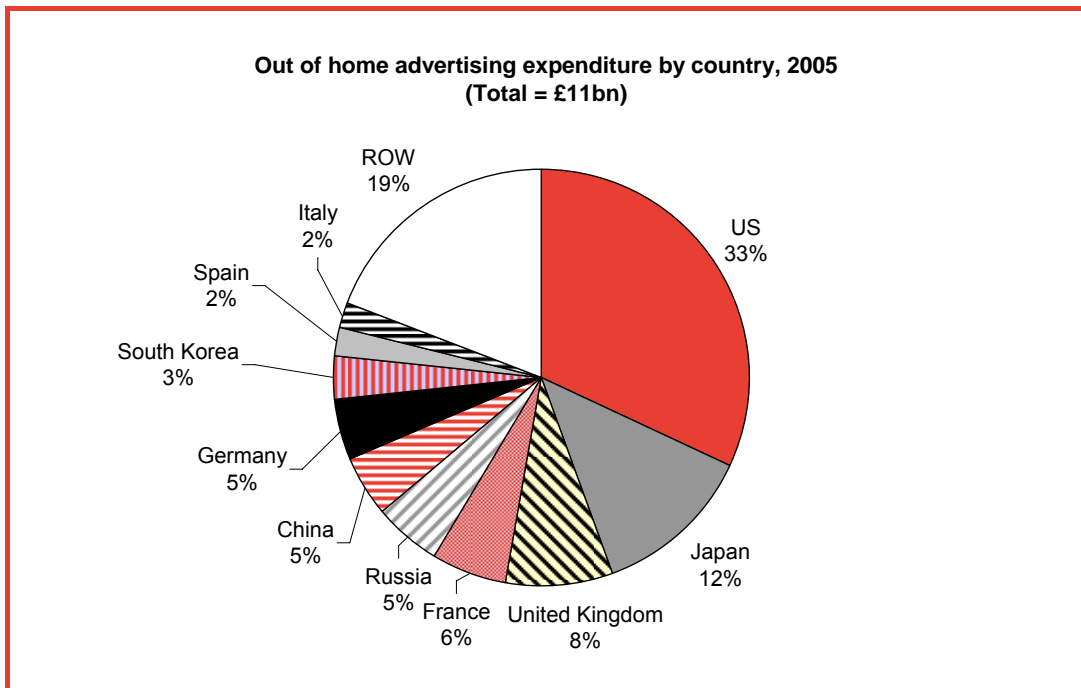


Figure 26: Expenditure on television advertising by country, 2005

Source: *Global Entertainment and Media Outlook and Frontier analysis*

Figure 26 shows that US expenditure (£3.5bn) accounts for the largest portion of total expenditure on television advertising. Japan (£1.3bn), the UK (£0.9bn) also have relatively large out of home advertising markets. The Chinese advertising market is the sixth largest in the world, accounting for £0.5bn of revenue. The Indian advertising market (not shown in the above) is relatively small with advertising revenues of £0.2bn of revenue).

The out of home advertising market is forecast to grow by 7% per annum during the period 2006-2010. A few countries are forecast to grow relatively quickly over this period. In particular, Russia is forecast to growth by 21% per annum between 2005 and 2010 and China is forecast to grow by 12% per annum over the same period. As a result these countries are forecast to become the third and fifth largest out of home advertising markets.

Annexe 8: International demand for Film

The key objective of this study has been to establish an analytical framework for understanding international demand for Creative Industry products. In deriving our analytical framework, we have identified the following report by PWC - Global Entertainment and Media Outlook, 2006-2010 – as the most comprehensive information source on this topic.

We have conducted an in-depth review of this report and further analysis of the data it contains. This annexe summarises our analysis for the film industry. This serves a number of purposes:

- to illustrate how our analytical framework and data template can be applied; and
- to provide an example of how the data that is obtained can be analysed to understand more about international demand for the Creative Industries.

Figure 27 below sets out a data template for the film industry (see Section 4 for further information on creating the template). This illustrates:

- the key country markets we are focusing on;
- key data required to analyse international demand; and
- the extent to which the PWC report discussed above meets these requirements for data.

Film	Country						
	US	France	Germany	China	India	Japan	ROW
Opportunities							
Overall revenues							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
Revenues by product (television, magazine, out of home and internet advertising)							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
UK position							
Overall export revenues							
<i>current</i>	x	x	x	x	x	x	x
<i>past 5 years</i>	x	x	x	x	x	x	x
<i>next 5 years</i>	x	x	x	x	x	x	x
Export revenues by product (television, magazine, out of home and internet advertising)							
<i>current</i>	x	x	x	x	x	x	x
<i>past 5 years</i>	x	x	x	x	x	x	x
<i>next 5 years</i>	x	x	x	x	x	x	x
Key							
	●	Essential data	✓	Data collected			
	●	Highly valuable data	?	Data collected but not robust or fully comparable			
	●	Useful but not essential	x	Data not collected			

Figure 27: Data template for the Film industry

Source: Frontier

The remainder of this Annexe uses the data from the PWC report to answer the following questions:

- What is the overall size of the global film market?
- Is this market in growth or in decline?
- Which countries are consuming most film products?
- Are the same countries expected to remain key consumers in the future?
- Which types of film media are generating most demand?
- Are these media likely to remain the most popular?
- Does demand for the different media look the same for all countries?

Our analysis and response to these questions are provided below.

THE OVERALL SIZE OF THE GLOBAL FILM MARKET

Our analysis of the global film market focuses on total consumer expenditure on film products – for example cinema box office and DVD sales and rental revenues. This data represents the costs and profits associated with producing, distributing and marketing films. It is therefore useful as a guide to the relativities that exist between markets rather than the potential size of film makers' revenues were they to capture a sizeable portion of the market.

Annexe 8: International demand for Film

Total global film revenues in 2005 were £44bn. Revenues are forecast to grow to £57bn by 2010. This figure includes cinema box office revenues, video and DVD sales and rentals and online film distribution. These results are shown below in Figure 28.

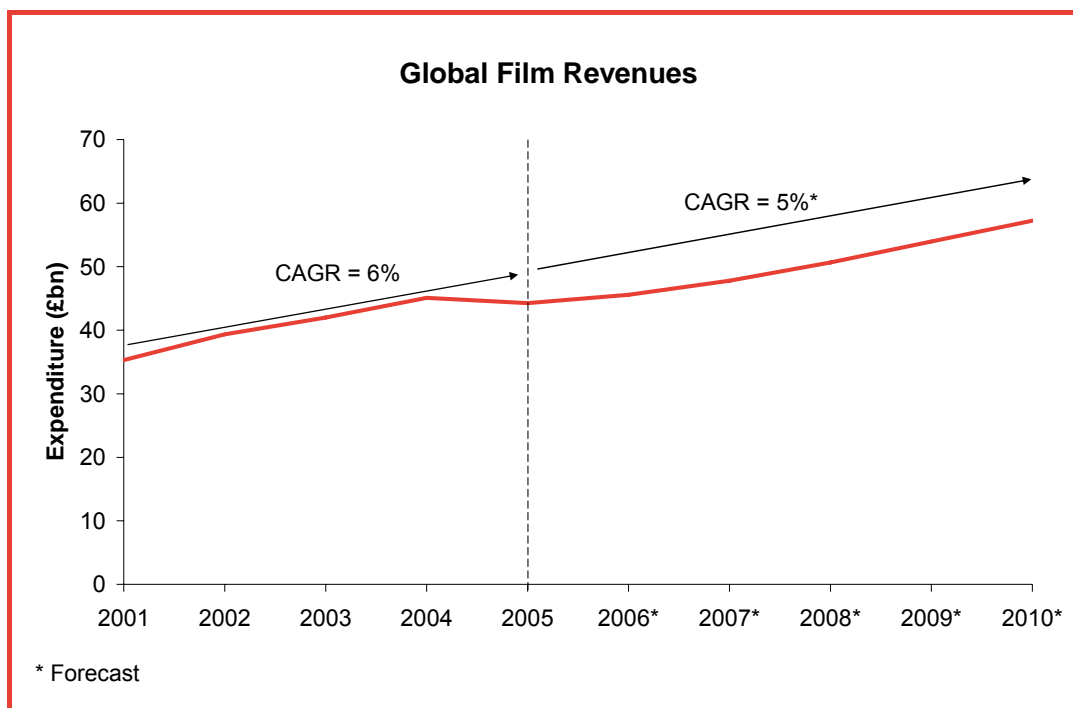


Figure 28: Global film revenues, 2001-2010*

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

Figure 28 above shows that global film revenues are increasing (in nominal terms), but are forecast to slow over the next five years. Revenues have grown by 6% per annum between 2001 and 2005 and are forecast to grow by an average of 5% per annum between 2005 and 2011.

To understand more about potential overseas investment opportunities for UK firms we need to examine the characteristics of the different advertising mediums and markets. We do this below.

DECOMPOSING FILM REVENUES BY SECTOR

Film production and distribution activities can generate revenues through the following mediums:

- cinema box office revenues;
- DVD sales and rental; and
- online film sales and rental.

For some film producers this distinction may be important as they may not have the scale or experience to rely on generating large box office revenues and may

target for example the online sales market. On the other hand, other film producers may have the reputation and experience which enables them to produce for cinema audiences. We present a breakdown of film sales revenues for the three key media types below in Figure 29.

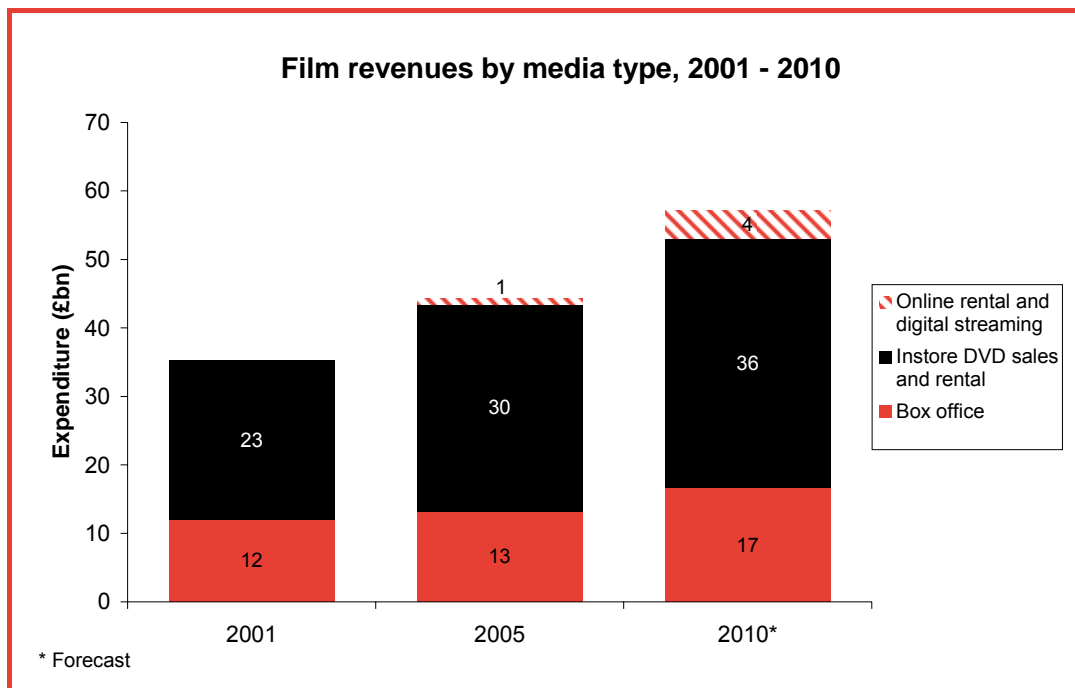


Figure 29: Global film revenues by media type, 2001 – 2010

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

The analysis shown above in Figure 29 illustrates that the majority of film revenues are from instore DVD sales and rental.

- **Box office revenues** accounted for 30% of total film revenues in 2005. Expenditure is forecast to increase by 5% per annum, from £13bn to £17bn between 2005 and 2010.
- **Instore DVD sales and rentals** accounted for 68% of film sales revenues in 2005. Growth is expected to stay steady with revenues increasing from £30bn in 2005 to £36bn in 2010. This represents an annual average growth rate of 4% per annum.
- **Online rental and digital streaming revenues** are forecast to become increasingly important. Revenues have increased from £0bn in 2001 to £800m in 2005. This figure is forecast to increase to £4bn by 2010 (an annual growth rate of 41% per annum for 2006-10).

DECOMPOSING FILM REVENUES BY COUNTRY

In this section we present a decomposition of overall film revenues (aggregated across the three media types discussed above) for the largest country markets. Figure 30 below breaks down the £44bn global film market by country for 2005.

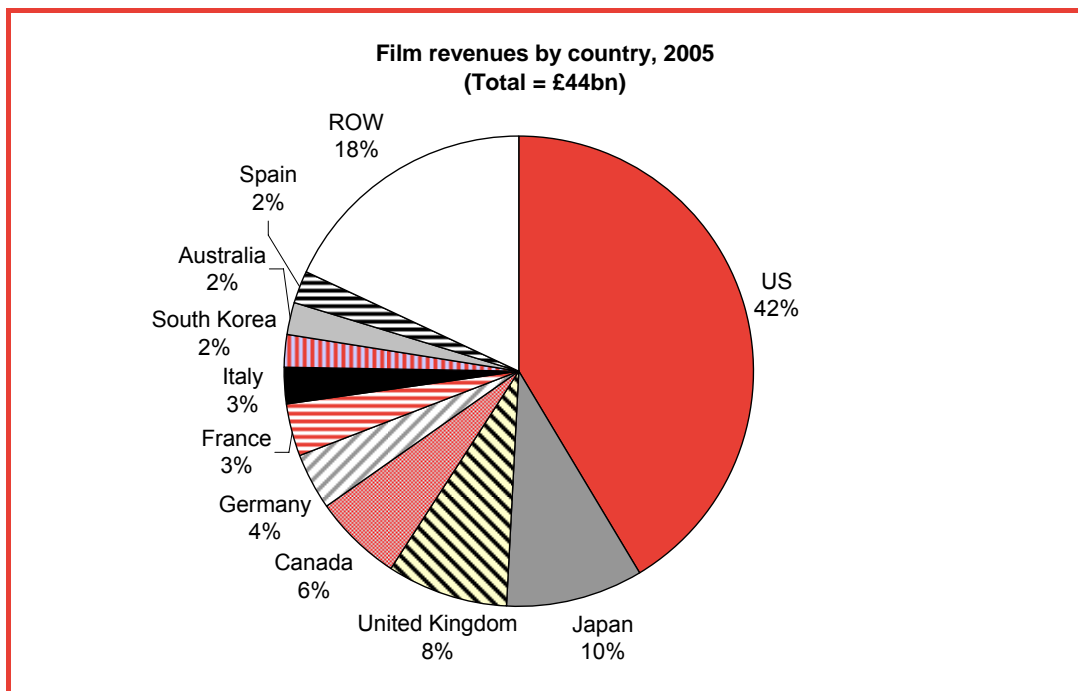


Figure 30: Global film revenues by country, 2005

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

Figure 30 shows the US film market to be significantly larger than all other world markets with a 42% share of total global expenditure. The second largest market is Japan with a 10% share of the global market. The UK (8%), Canada (6%) and Germany (4%) also have significant film markets. China and India's film markets are relatively small and are included in the ROW category in Figure 20. In 2005, China's global share was 1.7% and India's was 1.6%.

The major markets that are described above are forecast to grow more slowly (between 1% and 4% per annum). As a result the country shares of the global film market are expected to remain relatively stable between now and 2010. The exception to this is India which is forecast to be the eighth largest market in 2010 with a share of 2%. India's film market is forecast to grow faster than any other world market over the next five years (12% per annum). These results are illustrated below in Figure 31.

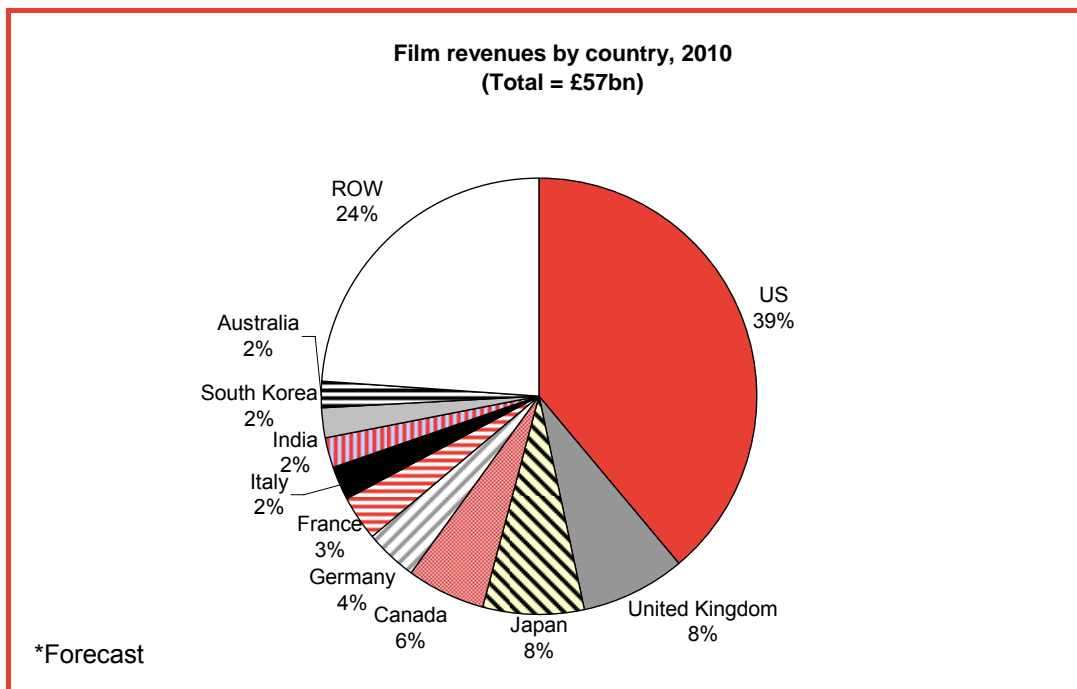


Figure 31: Forecast global film revenues by country, 2010

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

DETAILED ANALYSIS OF KEY SECTORS AND COUNTRIES

In some cases it is important to know where the largest markets are for the different types of film media. We describe where the largest and fastest growing markets are for the following media below:

- box office revenues; and
- instore DVD sales and rental;

Online film sales and rental data is not available at a country level.

Box office revenues

Global box office revenues were £13bn in 2005. Figure 22 below shows global expenditures for the 10 largest markets.

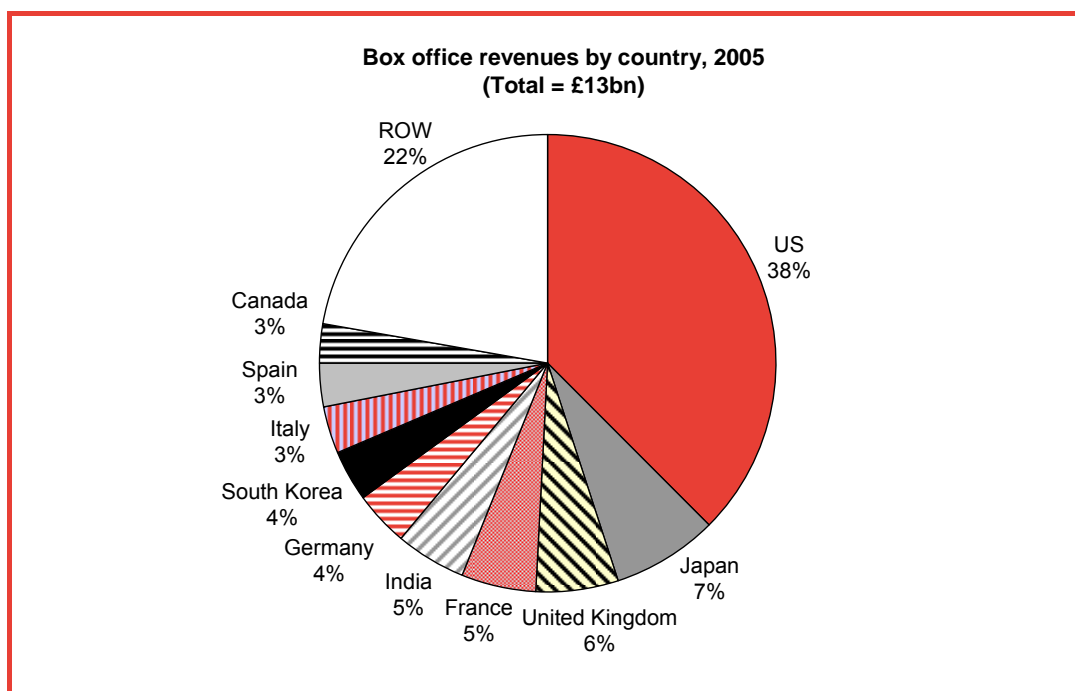


Figure 32: Cinema box office revenues by country, 2005

Source: *Global Entertainment and Media Outlook and Frontier analysis*

Figure 32 shows that US expenditure (38% or £5bn) accounts for the largest portion of total expenditure. Other countries with significant box office markets are:

- Japan (7%, £1bn);
- the UK (£6%, £0.8bn);
- France (5%, £0.7bn); and
- India (5%, £0.7bn).

China's box revenues are relatively small (£134m in 2005). These revenues are included in the rest of World (ROW) category in Figure 32.

In terms of growth, almost all countries are forecast to experience single digit growth for the period 2006-2010. The key markets which were described above are forecast to grow steadily, as shown in Table 17 below. As a result, the picture for 2010 remains largely unchanged from that shown in Figure 32 above.

	Country	Forecast annual growth rate (2006-2010)		Country	Forecast annual growth rate (2006-2010)
1	US	4%	6	Germany	4%
2	Japan	1%	7	South Korea	4%
3	United Kingdom	4%	8	Italy	3%
4	France	4%	9	Spain	3%
5	India	7%	10	Canada	3%

Table 17: Forecast compound annual growth rates for the largest 10 countries, 2006-2010

Source: PWC, Global Entertainment and Media Outlook and Frontier analysis

Instore DVD sales and rental

The global DVD sales and rental market was valued at £30bn 2005. Figure 33 below shows global expenditures for the largest 10 markets.

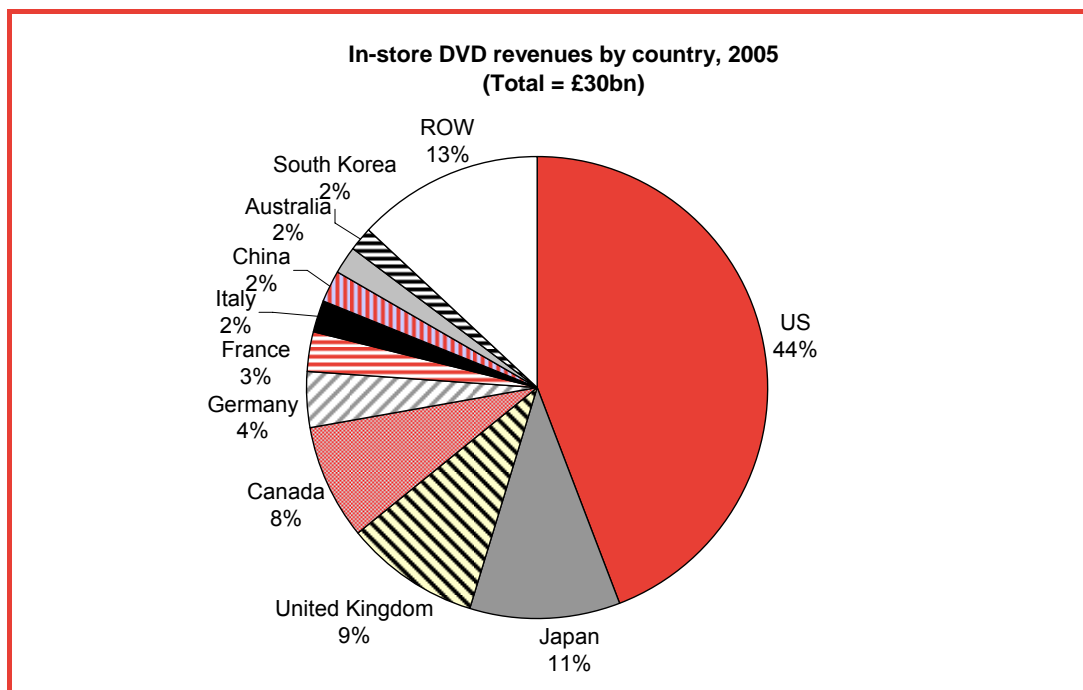


Figure 33: Expenditure on in-store DVD sales and rental by country, 2005

Source: Global Entertainment and Media Outlook and Frontier analysis

Figure 33 shows that the top 10 in-store DVD markets account for 87% of total internet advertising revenues. The largest markets are:

- the US with a share of 44% of global revenues (£13bn);
- Japan with a share of 11% (£3.2bn)
- the UK with a share of 9% of global revenues (£2.9bn); and
- Canada with a share of 8% of global revenues (£2.4bn).

China's market accounts for 2% of global revenues (£0.6bn) and India's market accounts for 0.2% of world revenues. As Figure 34 below shows, both these markets are forecast to grow faster than most other large instore DVD markets.

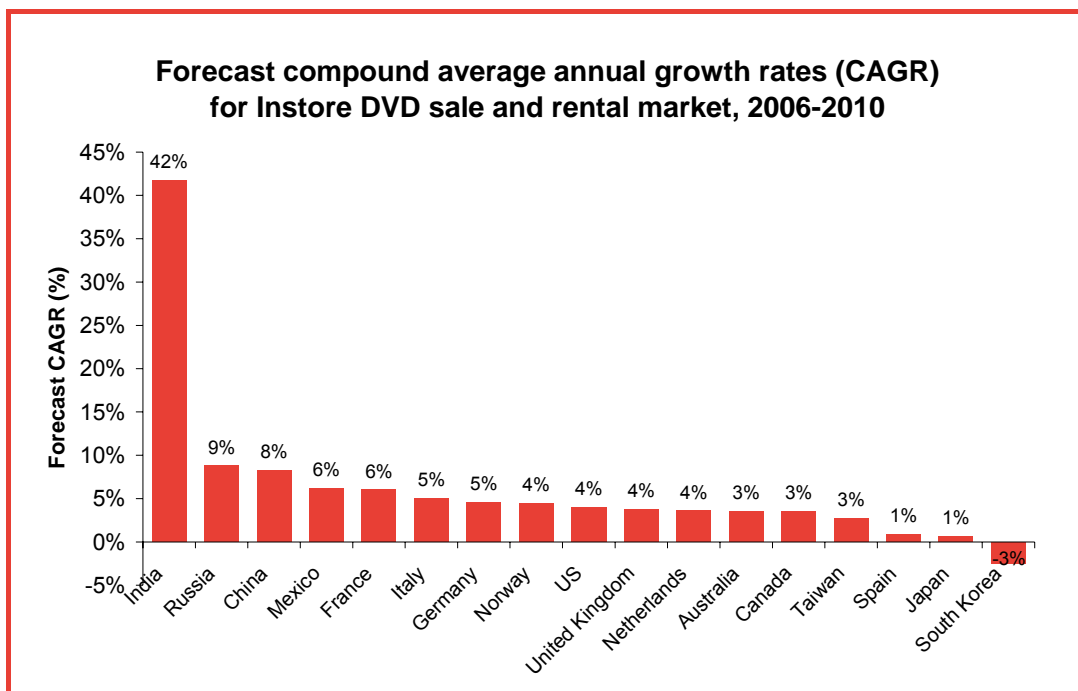


Figure 34: Forecast annual average growth rates for key in-store DVD sale and rental markets, 2006 - 2010

Source: *Global Entertainment and Media Outlook and Frontier analysis*

Despite India's significant growth, the picture for 2010 in terms of revenue shares is largely unchanged from that shown in Figure 34 above.

Annexe 9: International demand for Publishing

The key objective of this study has been to establish an analytical framework for understanding international demand for Creative Industry products. In deriving our analytical framework, we have identified the following report by PWC - Global Entertainment and Media Outlook, 2006-2010 – as the most comprehensive information source on this topic.

We have conducted an in-depth review of this report and further analysis of the data it contains. This annexe summarises our analysis for the Publishing industry. This serves a number of purposes:

- to illustrate how our analytical framework and data template can be applied; and
- to provide an example of how the data that is obtained can be analysed to understand more about international demand for the Creative Industries.

Figure 27 below sets out a data template for the Publishing industry (see Section 4 for further information on creating the template). This illustrates:

- the key country markets we are focusing on;
- key data required to analyse international demand; and
- the extent to which the PWC report discussed above meets these requirements for data.

Publishing	Country						
	US	France	Germany	China	India	Japan	ROW
Opportunities							
Overall revenues							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
Revenues by product (television, magazine, out of home and internet advertising)							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
UK position							
Overall export revenues							
<i>current</i>	x	x	x	x	x	x	x
<i>past 5 years</i>	x	x	x	x	x	x	x
<i>next 5 years</i>	x	x	x	x	x	x	x
Export revenues by product (television, magazine, out of home and internet advertising)							
<i>current</i>	x	x	x	x	x	x	x
<i>past 5 years</i>	x	x	x	x	x	x	x
<i>next 5 years</i>	x	x	x	x	x	x	x
Key							
	●	Essential data	✓	Data collected			
	●	Highly valuable data	?	Data collected but not robust or fully comparable			
	●	Useful but not essential	x	Data not collected			

Figure 35: Data template for the Publishing industry

Source: Frontier

The remainder of this Annexe uses the data from the PWC report to answer the following questions:

- What is the overall size of the global publishing market?
- Is this market in growth or in decline?
- Which countries are consuming most publishing products?
- Are the same countries expected to remain key consumers in the future?
- Which types of publishing media are generating most demand?
- Are these media likely to remain the most popular?
- Does demand for the different media look the same for all countries?

Our analysis and response to these questions are provided below.

THE OVERALL SIZE OF THE GLOBAL PUBLISHING MARKET

Our analysis of the global publishing market focuses on total consumer expenditure on those publishing products which we graded as exportable in Section 3 in the main section of this report. This includes:

- book publishing; and

Annexe 9: International demand for Publishing

- magazine publishing.

Total global publishing revenues in 2005 for both these media revenues were £116bn. Revenues are forecast to grow to £136bn by 2010. These results are shown below in Figure 18.

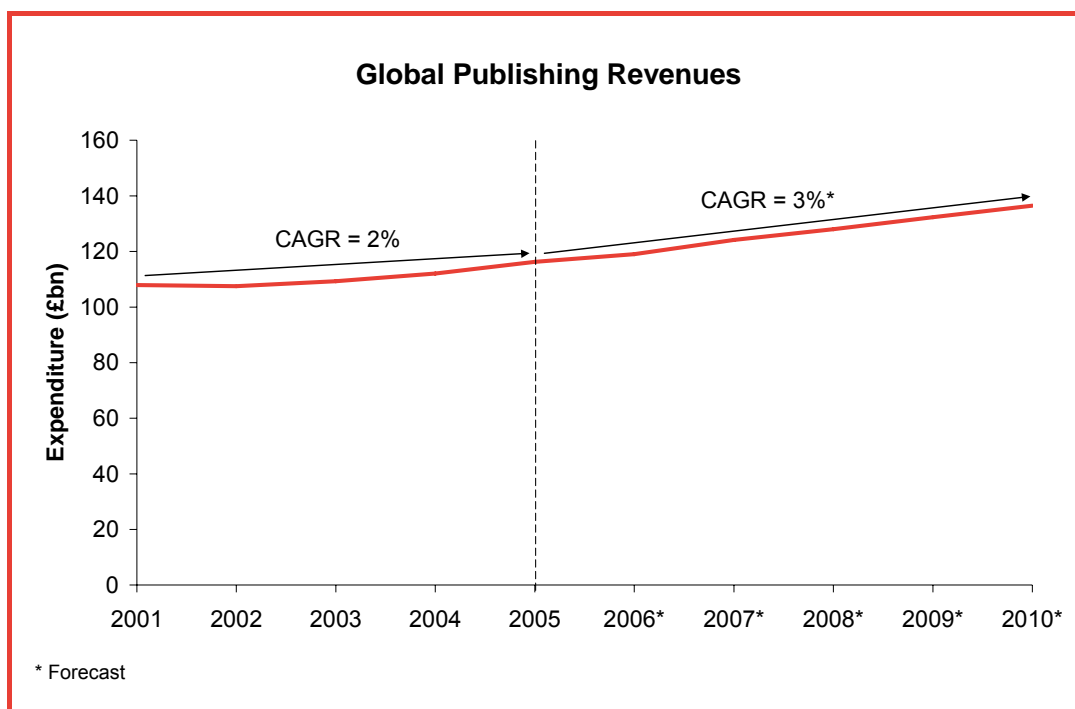


Figure 36: Global publishing revenues, 2001-2010*

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

Figure 36 above shows that global publishing revenues are increasing (in nominal terms) and are forecast to keep growing. Revenues have grown by 2% per annum between 2001 and 2005 and are forecast to grow by an average of 3% per annum between 2005 and 2011.

To understand more about potential overseas investment opportunities for UK firms we need to examine the characteristics of the different advertising mediums and markets. We do this below.

DECOMPOSING PUBLISHING REVENUES BY SECTOR

Publishing activities can generate revenues through the following media:

- magazine publishing;
- consumer book publishing;
- education book publishing;
- professional books publishing; and

- electronic book publishing

Publishers may focus on one or a few of these areas for generating revenues. It is therefore useful to understand this breakdown. This is shown below in Figure 37.

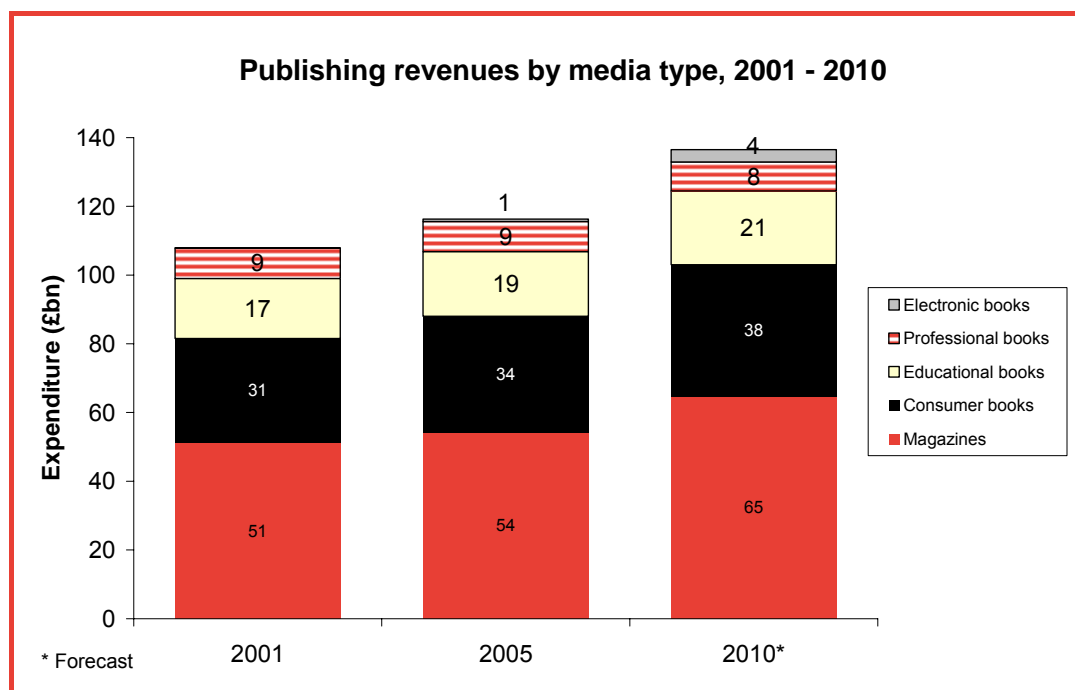


Figure 37: Global publishing revenues by media type, 2001 – 2010

Source: PWC, Global Entertainment and Media Outlook and Frontier analysis

The analysis shown above in Figure 37 illustrates that the majority of publishing revenues are from magazine and consumer book revenues.

- **Magazine** revenues accounted for 50% of total publishing revenues in 2005. Expenditure is forecast to increase by 4% per annum, from £54bn to £65bn between 2005 and 2010.
- **Consumer book** revenues accounted for 31% of publishing revenues in 2005. Revenues are expected to increase at 3% per annum, from £34bn to £38bn between 2005 and 2010.
- **Education book** revenues accounted for 17% of publishing revenues in 2005. Revenues are expected to increase at 3% per annum, from £19bn to £21bn between 2005 and 2010.
- **Professional book** revenues accounted for 8% of publishing revenues in 2005. Revenues are expected to fall by 1% per annum, from £8.8bn to £8.4bn between 2005 and 2010.
- **Electronic book** revenues account for a small proportion of overall revenues. In 2005, revenues accounted for 1% of total publishing revenues. These are forecast to remain small, growing from £1bn to £4bn between 2005 and 2010. This represents an annual growth rate of 39%.

DECOMPOSING PUBLISHING REVENUES BY COUNTRY

In this section we present a decomposition of overall publishing revenues (aggregated across the five media types discussed above) for the largest country markets. Figure 38 below breaks down the £44bn global advertising market by country for 2005.

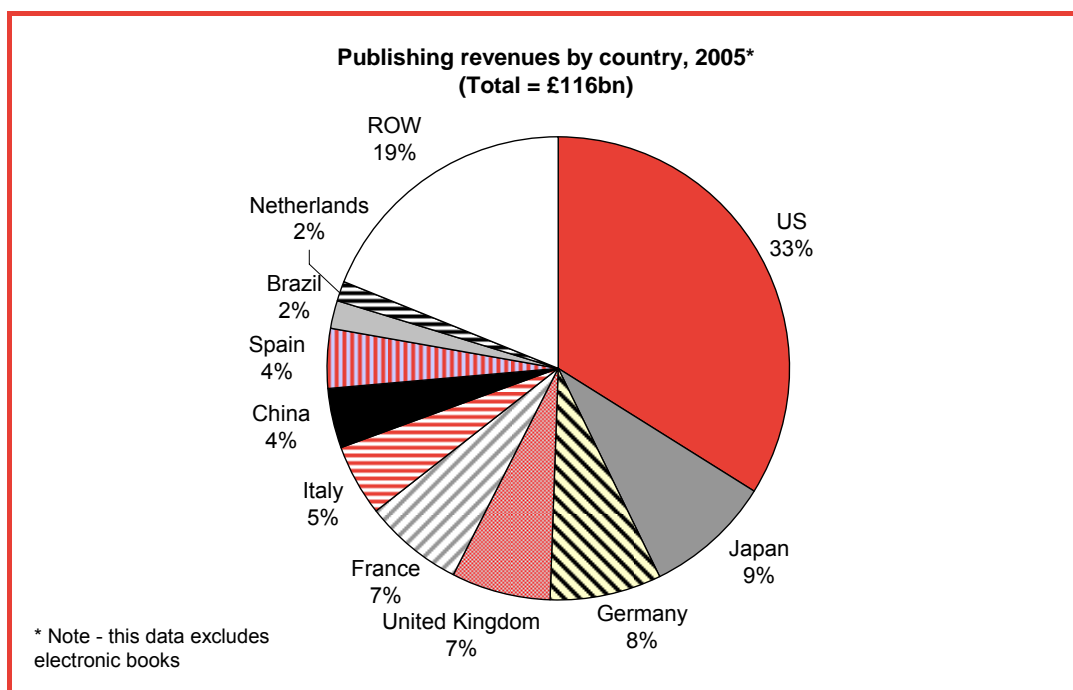


Figure 38: Global publishing revenues by country, 2005

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

Figure 38 shows that the top ten markets (in terms of revenue) account for 79% of total publishing revenues. The US publishing market is the largest with a 33% share of total global revenues (£39bn). Other large markets include:

- Japan with a 9% share of the global market (£10bn);
- Germany with an 8% share of the global market (£9bn); and
- the UK and France each with a 7% share of the global market (£8bn).

China also has a relatively large share of the global publishing market. In 2005, its revenues accounted for 4% of global revenues (£5bn). India's publishing market on the other hand is small. In 2005, India's publishing revenues accounted for 0.6% of global revenues (£712m).

Publishing growth is forecast to be steady between 2005 and 2010 with most countries' revenues growing at a rate of between 1% and 5%. China, Russia, India and Poland's revenues are forecast to grow faster, at an annual rate of 7%. As a result the country shares of the global film market are expected to remain relatively stable between now and 2010.

DETAILED ANALYSIS OF KEY SECTORS AND COUNTRIES

As we described above, publishing can be sub-divided into the following categories:

- magazine publishing;
- consumer book publishing;
- education book publishing;
- professional books publishing; and
- electronic book publishing.

We describe where the largest and fastest growing markets are for these media below.¹⁰

Magazine publishing

Magazine publishing revenues were £54bn in 2005. Figure 39 below shows global revenues for the 10 largest markets.

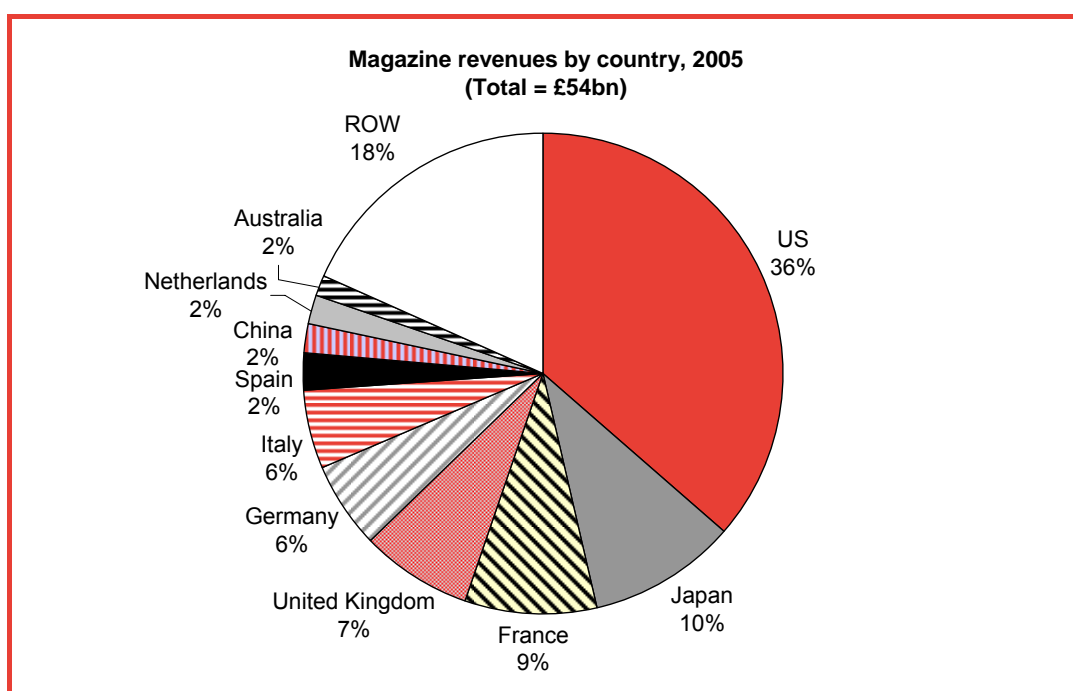


Figure 39: Magazine publishing revenues by country, 2005

Source: *Global Entertainment and Media Outlook and Frontier analysis*

¹⁰ Excluding electronic book publishing, where data is not available.

Figure 39 shows that US expenditure (36% or £20bn) accounts for the largest portion of global revenues. Other countries with significant magazine revenues are:

- Japan (10%, £5.5bn);
- France (9%, £4.7bn); and
- The UK (7%, £4.0bn).

China's revenues accounted for 2% and India's magazine revenues for 0.3% in 2005. As Table 18 below shows these are forecast to grow significantly between 2005 and 2010.

	Country	Forecast annual growth rate (2006-2010)		Country	Forecast annual growth rate (2006-2010)
1	US	4%	7	Spain	3%
2	Japan	1%	8	China	13%
3	France	2%	9	Netherlands	2%
4	United Kingdom	3%	10	Australia	4%
5	Germany	1%		India	13%
6	Italy	3%			

Table 18: Forecast compound annual growth rates for the largest 10 countries and India, 2006-2010

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

As a result, the picture for 2010 remains largely unchanged from that shown in Figure 39 above.

Consumer book publishing

The global consumer book publishing market was worth £34bn in 2005. Figure 40 below shows global expenditures for the largest 10 markets.

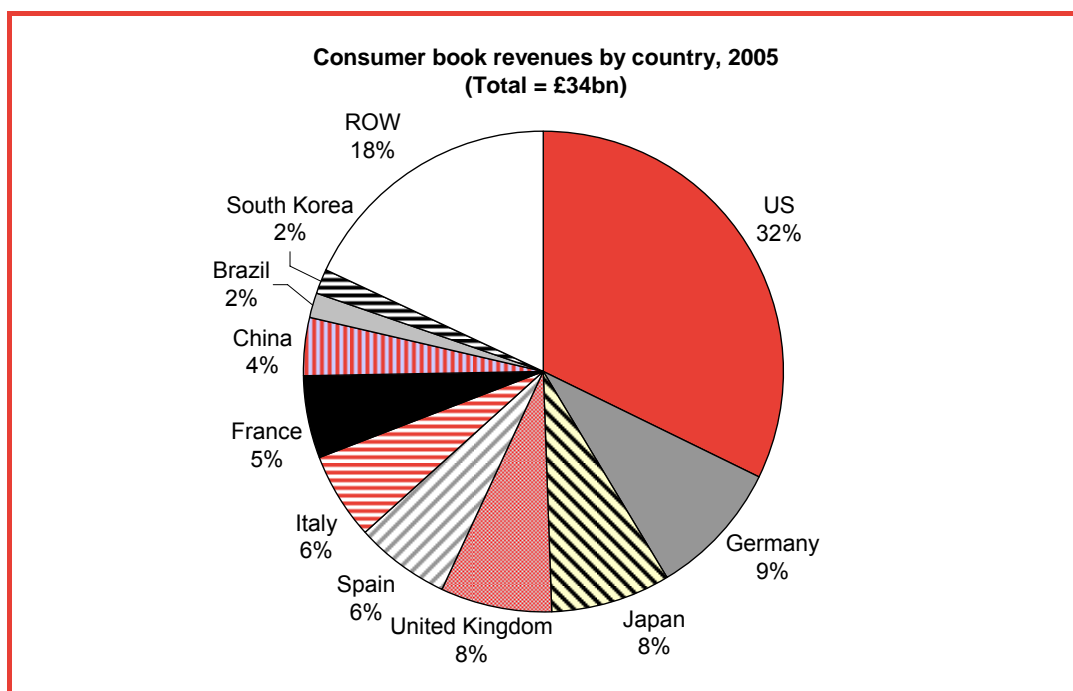


Figure 40: Consumer book revenues by country, 2005

Source: *Global Entertainment and Media Outlook and Frontier analysis*

Figure 40 shows that the top 10 consumer book markets account for 82% of total consumer book revenues. The largest markets are:

- the US with a share of 32% of global revenues (£11bn);
- Germany with a share of 9% (£3bn);
- Japan with a share of 8% (£3bn); and
- the UK with a share of 8% of global revenues (£3bn).

China's market is also relatively large. In 2005, total revenues accounted for 4% of global revenues (£1.3bn). India's consumer book market is small. In 2005 India's revenues were £384m (1% of global revenues).

In terms of growth, the market is forecast to remain steady. Growth of all of the markets mentioned above is forecast to remain in single digit figures between 2005 and 2010. The greatest forecast growth is for China, at a rate of 7% per annum. India's market is forecast to grow second fastest, at a rate of 5% per annum for the period. As a result the country revenue shares are forecast to be largely unchanged in 2010, compared with the picture shown above in Figure 40 for 2005.

Education book publishing

The education book publishing market was worth £34bn in 2005. Figure 41 below shows global expenditures for the largest 10 markets.

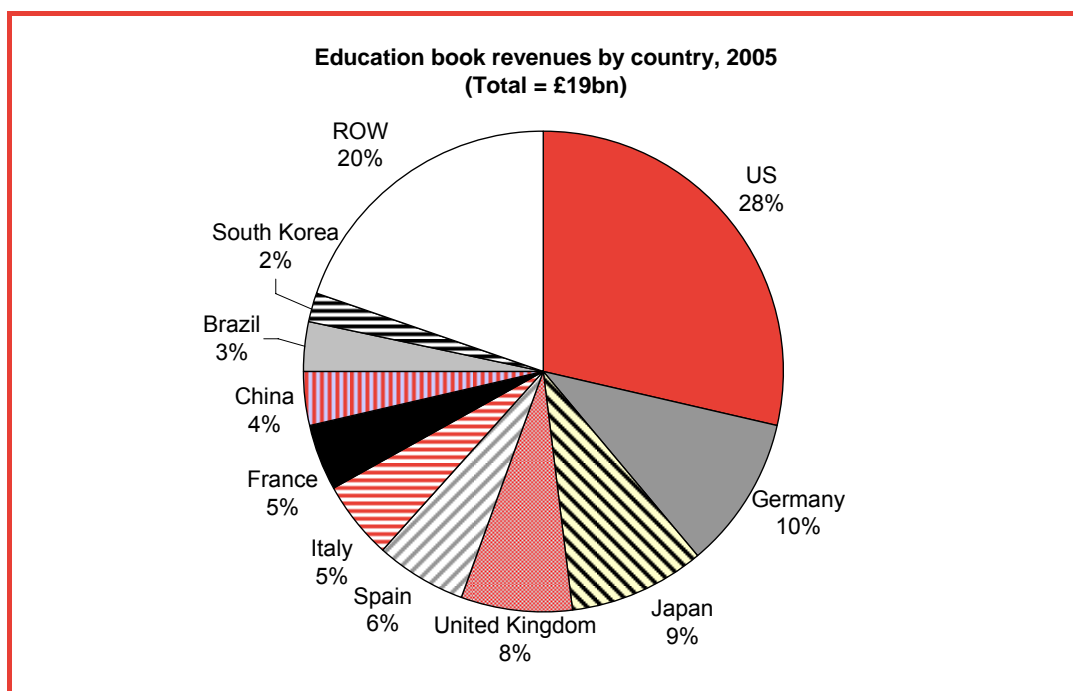


Figure 41: Expenditure on education books by country, 2005

Source: *Global Entertainment and Media Outlook and Frontier analysis*

Country shares for the education book market are similar to those shown for consumer books in Figure 40 above. Figure 41 shows that the top 10 consumer book markets account for 80% of total consumer book revenues. The largest markets are:

- the US with a share of 28% of global revenues (£5.4bn);
- Germany with a share of 10% (£1.9bn);
- Japan with a share of 9% (£1.7bn); and
- the UK with a share of 8% of global revenues (£1.4bn).

China's market is also relatively large. In 2005, total revenues accounted for 4% of global revenues (£0.7bn). India's consumer book market is small. In 2005 India's revenues were £117m (0.6% of global revenues).

In terms of growth, the market is forecast to remain steady. Growth of all of the markets mentioned above is forecast to remain in single digit figures between 2005 and 2010. The greatest forecast growth is for India, at a rate of 6% per annum. India's market is forecast to grow third fastest, at a rate of 4% per annum for the period. As a result the country revenue shares are forecast to be largely unchanged in 2010, compared with the picture shown above in Figure 41 for 2005.

Professional book publishing

The professional book publishing market was worth £9bn in 2005. Figure 42 below shows global expenditures for the largest 10 markets.

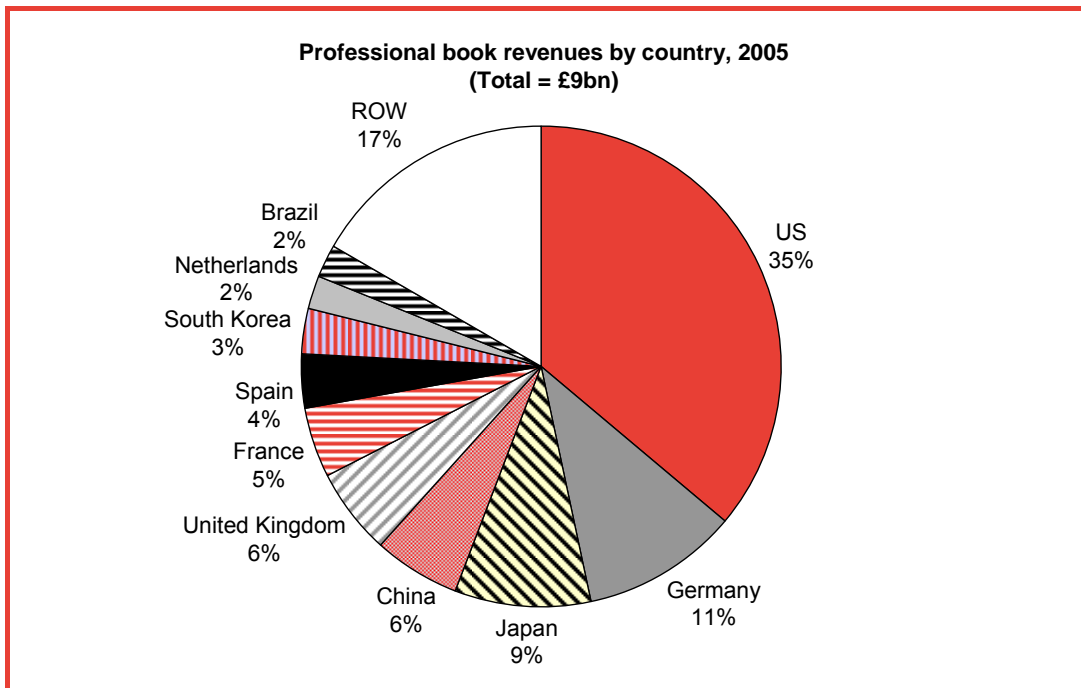


Figure 42: Expenditure on professional books by country, 2005

Source: *Global Entertainment and Media Outlook and Frontier analysis*

Country shares for the professional book publishing market are different to those shown for consumer and education books above. Figure 42 shows that the top 10 consumer book markets account for 83% of total consumer book revenues. The largest markets are:

- the US with a share of 35% of global revenues (£3.1bn);
- Germany with a share of 11% of global revenues (£0.9bn);
- Japan with a share of 9% of global revenues (£0.8bn); and
- China with a share of 6% of global revenues (£0.5bn).

India's professional book market is small. In 2005 India's revenues were £43m (0.5% of global revenues).

In terms of growth, the overall market is forecast to decline over the next five years. Although some smaller country markets are forecast grow (for example Russia, China and India), most of the other larger country markets are forecast to become smaller over the period 2005- 2010. Forecast growth for the largest markets and our key markets of interest are shown below in Figure 43.

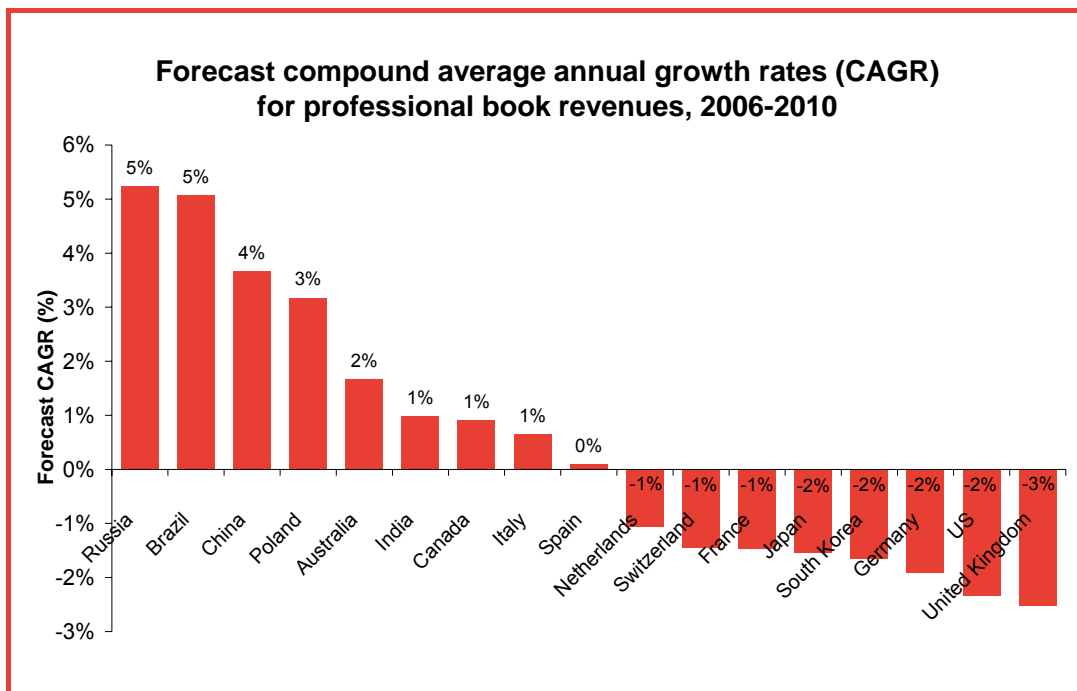


Figure 43: Forecast annual average growth rates for the professional book market, 2006 - 2010

Source: *Global Entertainment and Media Outlook and Frontier analysis*

These growth forecasts do not result in a significantly different picture of country revenue shares in 2010 from that shown above in Figure 42 for the professional book market in 2005.

Annexe 10: Computer Games

The key objective of this study has been to establish an analytical framework for understanding international demand for Creative Industry products. In deriving our analytical framework, we have identified the following report by PWC - Global Entertainment and Media Outlook, 2006-2010 – as the most comprehensive information source on this topic.

We have conducted an in-depth review of this report and further analysis of the data it contains. This annexe summarises our analysis for the Computer Games industry. This serves a number of purposes:

- to illustrate how our analytical framework and data template can be applied; and
- to provide an example of how the data that is obtained can be analysed to understand more about international demand for the Creative Industries.

Figure 27 below sets out a data template for the Computer Games industry (see Section 4 for further information on creating the template). This illustrates:

- the key country markets we are focusing on;
- key data required to analyse international demand; and
- the extent to which the PWC report discussed above meets these requirements for data.

Computer Games	Country						
	US	France	Germany	China	India	Japan	ROW
Opportunities							
Overall revenues							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
Revenues by product (television, magazine, out of home and internet advertising)							
<i>current</i>	?	?	?	?	?	?	?
<i>past 5 years</i>	?	?	?	?	?	?	?
<i>next 5 years</i>	?	?	?	?	?	?	?
UK position							
Overall export revenues							
<i>current</i>	x	x	x	x	x	x	x
<i>past 5 years</i>	x	x	x	x	x	x	x
<i>next 5 years</i>	x	x	x	x	x	x	x
Export revenues by product (television, magazine, out of home and internet advertising)							
<i>current</i>	x	x	x	x	x	x	x
<i>past 5 years</i>	x	x	x	x	x	x	x
<i>next 5 years</i>	x	x	x	x	x	x	x
Key							
	●	Essential data	✓	Data collected			
	●	Highly valuable data	?	Data collected but not robust or fully comparable			
	●	Useful but not essential	x	Data not collected			

Figure 44: Data template for the Computer Games industry

Source: Frontier

The remainder of this Annexe uses the data from the PWC report to answer the following questions:

- What is the overall size of the global computer games market?
- Is this market in growth or in decline?
- Which countries are consuming most computer game products?
- Are the same countries expected to remain key consumers in the future?
- Which types of computer games media are generating most demand?
- Are these media likely to remain the most popular?
- Does demand for the different media look the same for all countries?

Our analysis and response to these questions are provided below.

THE OVERALL SIZE OF THE GLOBAL COMPUTER GAMES MARKET

Total global computer games revenues in 2005 were £14.8bn. Revenues are forecast to grow to £25.6bn by 2010. These results are shown below in Figure 45.

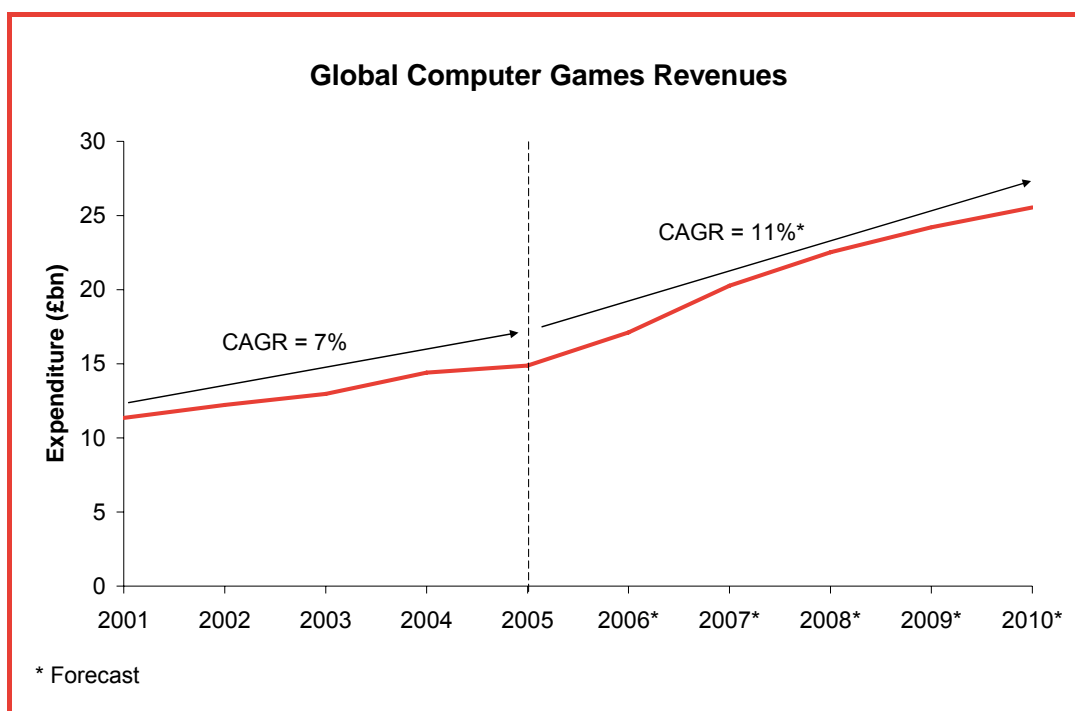


Figure 45: Global computer games revenues, 2001-2010*

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

Figure 45 above shows that global computer games revenues have increased significantly over the period 2001 to 2005 and are forecast to grow faster over the next five year period, 2005 to 2010. Revenues grew by 7% per annum between 2001 and 2005 and are forecast to grow by an average of 11% per annum between 2005 and 2011.

To understand more about potential overseas investment opportunities for UK firms we need to examine the characteristics of the different advertising mediums and markets. We do this below.

DECOMPOSING COMPUTER GAMES REVENUES BY MEDIA

Computer Games development and publishing can generate revenues through the following mediums:

- console or handheld games;
- PC games;
- online games; and
- wireless games.

A breakdown of global revenues over time for these different media is shown below in Figure 46.

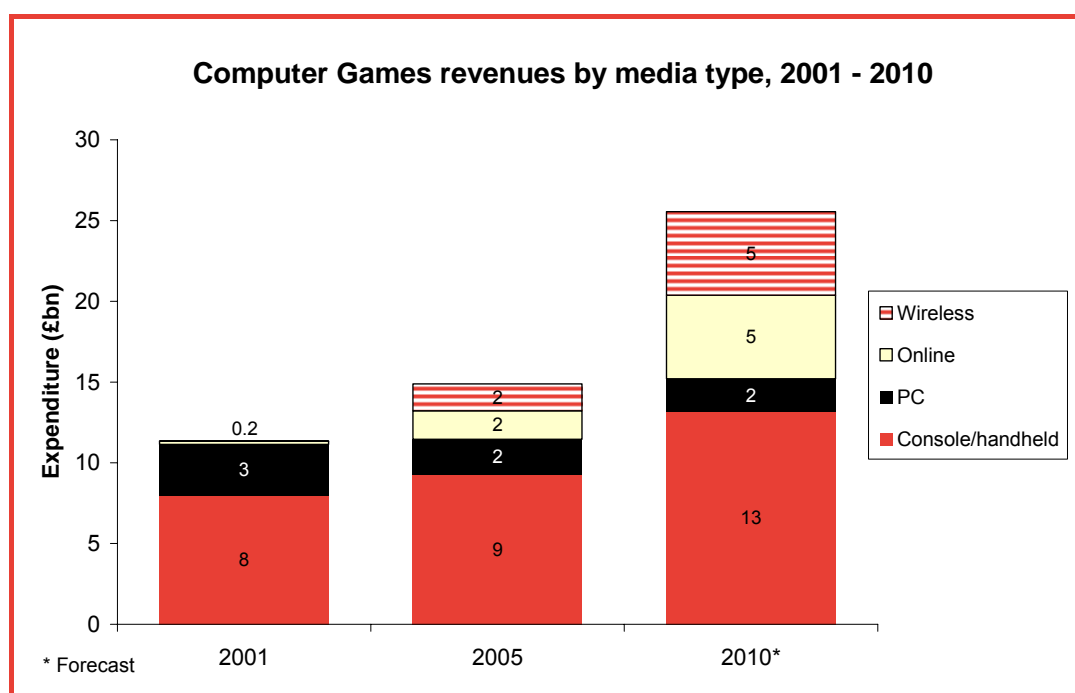


Figure 46: Global computer games revenues by media type, 2001 – 2010

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

The analysis shown above in Figure 46 illustrates that the majority of computer games revenues are currently derived from console or handheld games sales. Figure 46 also shows that revenues from online and wireless games are forecast to become increasingly important in terms of revenue.

- **Console/handheld games** revenues accounted for 62% of total computer games revenues in 2005. Revenues are forecast to increase by 7% per annum, from £9bn to £13bn between 2005 and 2010.
- **PC games** revenues accounted for 15% of total computer games revenues in 2005. Revenues are expected to fall at a rate of 1% per annum, from £2.2bn to £2.1bn between 2005 and 2010.
- **Online games** revenues accounted for 12% of publishing revenues in 2005. Revenues are expected to increase by 24% per annum, from £2bn to £5bn between 2005 and 2010.
- **Wireless games** revenues accounted for 11% of computer games revenues in 2005. Revenues are expected to increase by 26% per annum, from £2bn to £5bn between 2005 and 2010.

DECOMPOSING COMPUTER GAMES REVENUES BY COUNTRY

In this section we present a decomposition of overall computer games revenues (aggregated across the four media types discussed above) for the largest country

markets.¹¹ Figure 47 below breaks down the £15bn global computer games market by country for 2005.

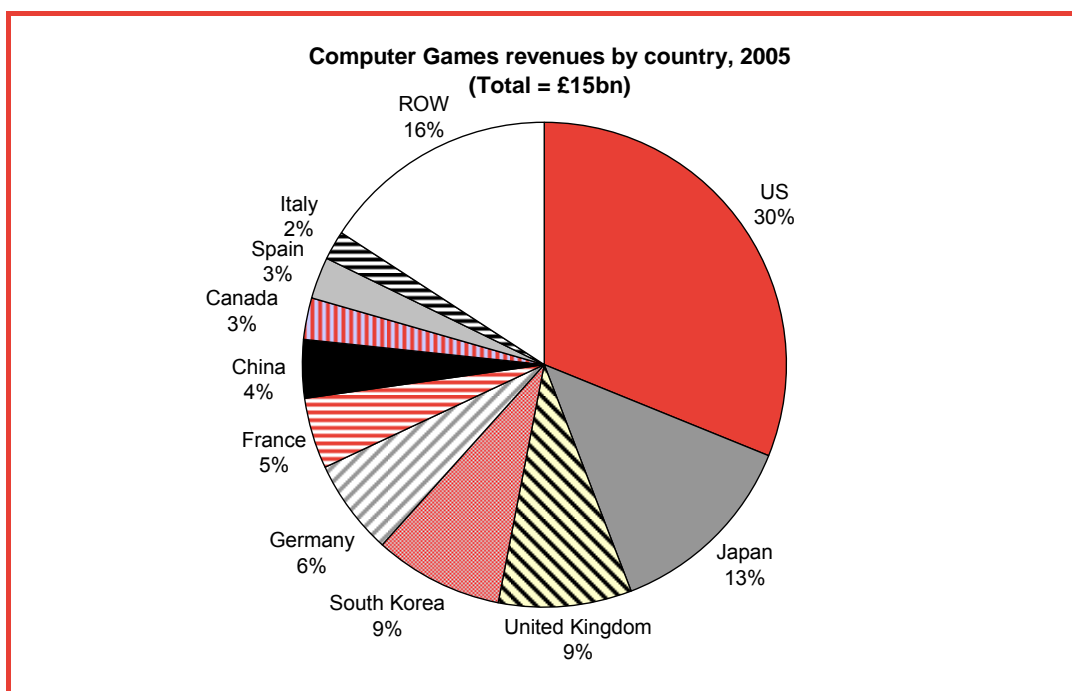


Figure 47: Global computer games revenues by country, 2005

Source: PWC, *Global Entertainment and Media Outlook and Frontier analysis*

Figure 47 shows that the top ten markets (in terms of revenue) account for 84% of total computer games revenues. The US computer games market is the largest with a 30% share of total global revenues (£5bn). Other large markets include:

- Japan with a 13% share of the global market (£2bn);
- the UK with a 9% share of the global market (£1bn); and
- South Korea also with a 9% share of the global market (£1bn).

China also has a relatively large share of the computer games market. In 2005, its revenues accounted for 4% of global revenues (£0.6bn). Data on India's computer game market is not available.

Computer Games growth is forecast to be significant between 2005 and 2010 with double digit growth rates forecast for most countries. These are illustrated below in Figure 48.

¹¹ Further breakdowns are not available on a country level for the individual media types.

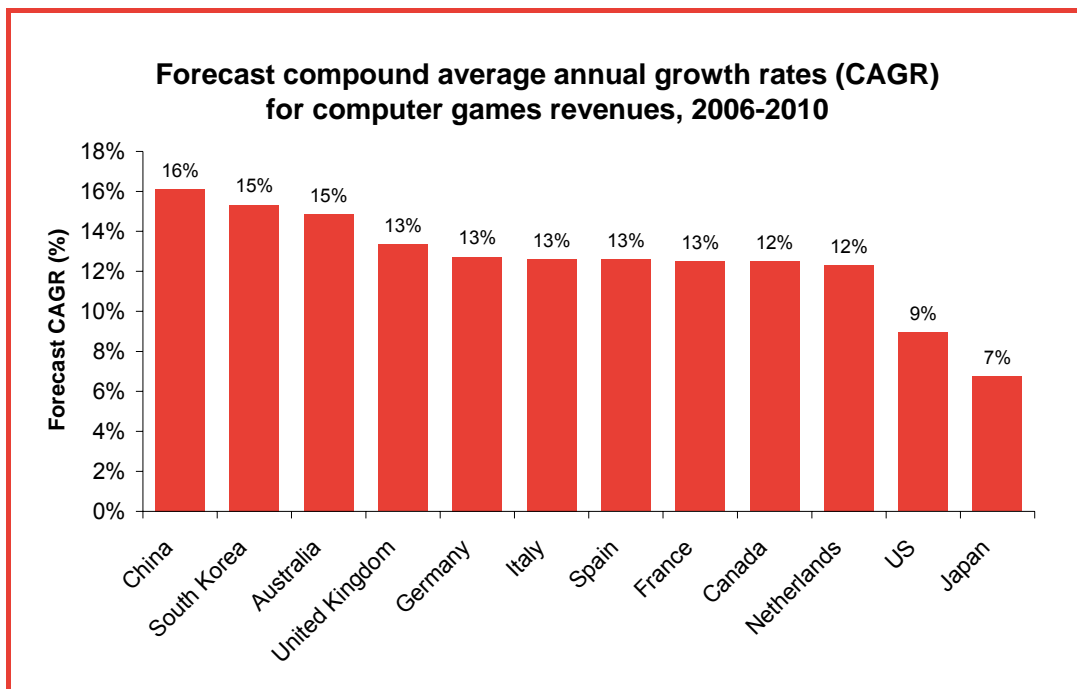


Figure 48: Forecast annual average growth rates for the computer games market, 2006 - 2010

Source: *Global Entertainment and Media Outlook and Frontier analysis*

As a result of this growth the overall computer games market is forecast to increase by a total of 71% over the period 2006 – 2010, but the country share picture for 2010 is forecast to remain similar to that for 2005. Forecast 2010 country shares are shown below in Figure 49.

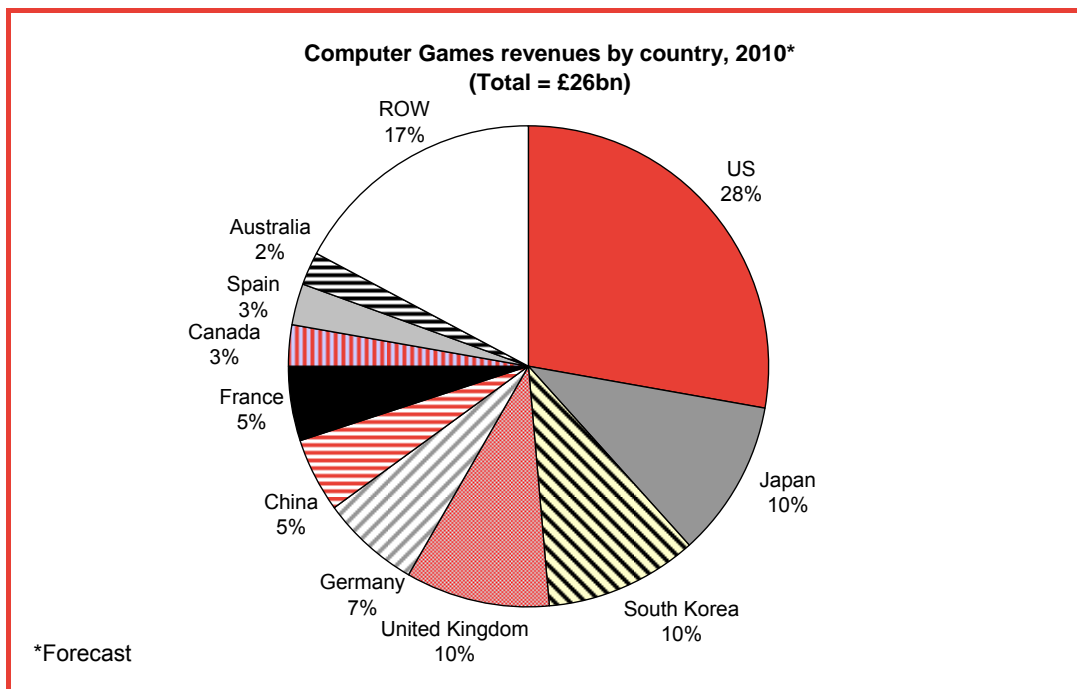


Figure 49: Global computer games revenues by country, 2010

Source: PWC, *Global Entertainment and Media Outlook* and Frontier analysis

Comparing the forecast country shares for 2010 (Figure 49 above) with those for 2005 (Figure 47 above) shows that South Korea is forecast to become the third largest computer games market (currently fourth behind the UK). Similarly China is forecast to become the sixth largest computer games market (currently seventh behind France). The remainder of the key markets are forecast to remain in the same relative order over the period.

DETAILED ANALYSIS OF KEY SECTORS AND COUNTRIES

No further decomposition is available for the Computer Games industry.

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