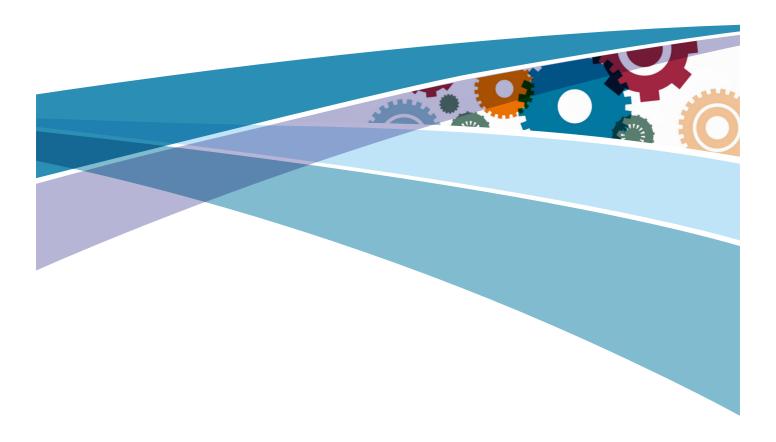


# **Estimating UK investment in intangible assets and Intellectual Property Rights**

# **Executive Summary**



Research commissioned by the Intellectual Property Office, and carried out by:

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This is an independent report commissioned by the Intellectual Property Office (IPO). Findings and opinions are those of the researchers, not necessarily the views of the IPO or the Government.

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Contacts: Jonathan Haskel and Peter Goodridge, Imperial College Business School, Imperial College, London. SW7 2AZ. j.haskel@ic.ac.uk, p.goodridge10@ ic.ac.uk. We are very grateful for financial support for this research from NESTA and the UK Intellectual Property Office. This work was based on data from the Annual Survey of Hours and Earnings (ASHE), National Employers Skills Survey (NESS) and UK Innovation Survey (UKIS), produced by the Office for National Statistics and supplied by the Secure Data Service at the UK Data Archive. The data are Crown Copyright and reproduced with the permission of the controller of HMSO and Queen's Printer for Scotland. The use of the data in this work does not imply the endorsement of the ONS or Secure Data Service at the UK Data Archive in relation to the interpretation or analysis of the data. This work uses research datasets which may not exactly reproduce National Statistics aggregates. We thank Tony Clayton of the IPO for very helpful suggestions. Views expressed in this paper represent those of the authors and do not necessarily reflect those of affiliated institutions. All errors are of course our own.

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This report seeks to answer the following questions;

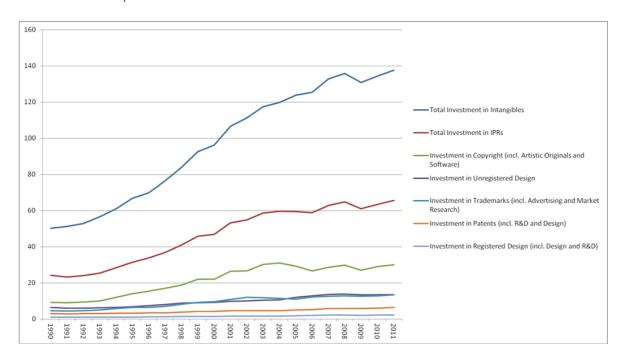
- a. How much does the UK invest in knowledge assets?
- b. What proportion of UK knowledge investment is protected by formal IPRs?

New estimates of UK business intangible investment protected by intellectual property rights (IPRs), show continuing growth, and recovery in business IP investment to the point where, by 2011, it was already above its pre-recession peak. The historical growth pattern looks to have been re-established

In 1990 investment in Intellectual Property (IP) assets totalled £24.3bln, out of a total of £50.2bln for total intangible assets (the wider definition including investment in Non-scientific R&D, Mineral exploration, Training and Organisational Investment). The IP figure grew to £65.7bln by 2011, compared to a figure of £137.5 for total Intangible investment. The comparable figure for tangible investment (mainly buildings, plant, machinery and vehicles) in 2011 was £89.8bln.

UK business investment in Intangible Assets and IPRs

## £billion at current prices



Growth in IP Rights and intangible investment has only turned negative on two occasions between 1991 and 2001, once during the recession of 1991 and again in 2009. The value of all UK business investment in intangible assets overtook investment in tangible assets between 1995 and 2000. Now in 2011 the value of IP protectable intangible investment alone is over 75% of the value of tangible investment.

These estimates are by Jonathan Haskel and Peter Goodridge of Imperial College, London. They build on work commissioned by NESTA to estimate intangible investment by UK business as part of the 'Innovation Index', and identify the IP protected component.

For 2011, it is estimated that approximately 48% of UK market sector intangible investment in knowledge was protected by formal IPRs. Of investment in IPRs in 2011, it is estimated that 10% was in assets protected by patents; 46% in assets by copyright; 3% in assets protected by design registration; 21% in assets protected by unregistered design rights; and 21% in assets protected by trademarks.

The work builds on previous estimates of UK market sector investment in knowledge capital (Goodridge, Haskel and Wallis 2012<sup>1</sup>) and the proportions of those investments protected by formal intellectual property rights (IPRs) (Farooqui, Goodridge and Haskel 2011<sup>2</sup>)

Using the (Corrado, Hulten and Sichel<sup>3</sup>) framework, covering the production of, investment in and consumption of intangibles, and combining new national accounts estimates for artistic originals, new estimates for artistic originals are based on Imperical work funded by the IPO with official estimates of software investment data an improved estimate for UK investment in copyright-protected assets is produced. As well as other categories of knowledge assets, the new dataset includes estimates of investment in research and development ("R&D"), "branding" (made of "advertising" and "market research") and "architectural and engineering design" (AED), upon which the estimates for investment in "patents", "trademarks" and "design rights" (both registered and unregistered) are produced.

The Community Innovation Survey (CIS) has been used to estimate the proportion of intangible assets protected by IPRs. It is estimated that: 38% of R&D is protected by patents and 3% by design registration; and 11% of AED is protected by design registration and 2% by patents.

The report's main findings are:

- 1. In 2011, the UK invested £137.5bn in intangible assets compared to £89.8bn in tangible assets;
- 2. Since the recession of 2008-9, intangible investment has recovered and grew in 2010-11. In contrast investment in tangible assets up to 2011 was flat;
- 3. In 2011, it was estimated that approximately 48% of UK market sector investment in knowledge was protected by formal IPRs;
- 4. Of investment in IPRs in 2011, it was estimated that 10% was in assets protected by patents; 46% in assets by copyright; 3% in assets protected by design registration; 21% in assets protected by unregistered design rights; and 21% in assets protected by trademark.

<sup>1</sup> Spillovers from R&D and other intangible investment: evidence from UK industries

<sup>2</sup> The Role of Intellectual Property Rights in the UK Market Sector

<sup>3</sup> Intangible Capital and Economic Growth; Carol Corrado, Charles Hulten, and Daniel Sichel April 2006 US Federal Reserve

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