

5) We view our results as a lower bound of the total contribution of IPR-protected assets. Patents protect a specific innovation but reveal information to others for free. The same is true for other forms of IPR-protected knowledge. Such freely available information contributes to growth via total factor productivity (TFP) - effects on total output not caused by inputs -, which we estimate contributes around 45% of labour productivity growth. Thus the true contribution of IPRs would include a share of this.

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Executive Summary

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The Role of Intellectual Property Rights in the UK Market Sector*

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July 2011

Intellectual Property Office is an operating name of the Patent Office



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2011/2

1. Purpose of the report

This report builds on previous work which estimated UK market sector investment in knowledge capital and its contribution to growth: the most recent example being the NESTA Innovation Index (Haskel et al, 2011). Knowledge capital investment adds to the stock of intellectual property (IP) in the economy. Not all that investment is protected by IP rights (IPRs) such as copyright and patents: software is protected, but business processes are not. Thus this paper attempts to answer the following questions: (a) what proportion of knowledge investment is protected by IPRs; and (b) how much economic growth is therefore accounted for by such protected investment?

To answer these questions we first introduce new measures of investment in copyright-protected 'artistic originals' – wholly new art, film, literature, TV/Radio productions or music – using new data drawn from various sources including industry estimates, collecting societies and US depreciation indices.¹

¹ For further information on the data and methods used in estimation, please consult the accompanying report: *Film, Television & Radio, Books, Music and Art: UK Investment in Artistic Originals* (Goodridge and Haskel, 2011).

Second, we apportion various knowledge investments to IPRs. Improvements to the data and methodologies used to estimate investment in artistic originals means that, when combined with official UK software investment data (Chamberlin et al, 2007), we can offer a better estimate for UK investment in copyright-protected assets. As well as other categories of knowledge assets, our dataset includes estimates of investment in research and development ('R&D'), 'Advertising' and 'Architectural and Engineering Design', upon which we base our estimates for investment in 'Patents', 'Trademarks' and 'Design Rights'. Of course, not all such investment is protected by IPRs, so we use Community Innovation Survey data to estimate the proportion that is protected. Around 30% of R&D spending is IPR-protected.

Third, with these investment data, we calculate how much knowledge capital in the UK is IPR-protected which we combine with official data from the UK National Accounts to estimate the contribution of IPR-protected capital to labour productivity growth. We also note that not all UK spending on IPR-protected goods can be capitalised as investments: not all spending is on the creation of IP assets (goods that contribute to output for more than one year)). In seeking to measure investment, we have also identified such expenditure, although our coverage of total 'IPR production' is far from complete.

The following table summarises our results for investment in assets protected by IPRs.

Summary Table: Investment in IPRs, by type (£bn, current prices)

Year	1990	1995	2000	2008
<i>Investment by IPR</i>				
Copyright	8	13	20	26
Patents	2	2	3	4
Trademarks	5	6	10	12
Design Rights (Registered & Unregistered)	13	13	15	23
Total: All IPRs	28	35	48	65

Our main findings are as follows:

1) On average, between 2000 and 2008, approximately 48% of UK market sector investment in knowledge was protected by IPRs

2) Approximately 75% of IPR investment is in assets protected by copyright and unregistered design rights.

3) In 2008, approximately 62% of the stock of knowledge assets in the UK market sector were protected by IPRs

4) On average, between 1990 and 2008, 10.6% of growth in labour productivity was due to growth in the use of IPR-protected assets, similar to the 11.1% contribution of ICT equipment. The contribution of knowledge capital not protected by IPRs is around 10.3%, slightly less than that of protected IPRs.