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Supporting Investment in Knowledge Capital, Growth and Innovation

Summary in English

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Innovation is a key to business success, but where innovation comes from is changing. Today's firms are looking beyond research and development (R&D) to drive innovation. They invest in a wider range of intangible assets, such as data, software, patents, designs, new organisational processes and firm-specific skills. Together these non-physical assets make up knowledge-based capital (KBC).

Business investment in KBC has been increasing faster than investment in physical capital such as machinery and buildings for a number of years in many OECD countries. Indeed, in some countries business investment in KBC now significantly exceeds investment in physical capital and overall investment in KBC has been relatively resilient during the global crisis.

But how much do KBCs contribute to growth, and could it do even more? This report aims to provide evidence of the economic value of knowledge-based capital, and to help meet the policy challenges it raises in the areas of innovation, taxation, entrepreneurship, competition, corporate reporting and intellectual property.

Key findings

- Business investment in KBC helps boost growth and productivity. Studies for the European Union and the United States show business investment in KBC contributing 20% to 34% of average labour productivity growth.
- KBC is transforming what makes firms competitive. For instance, in the automotive sector, software is increasingly prominent in the cost of developing new vehicles, with high-end vehicles relying on millions of lines of computer code.
- Countries that invest more in KBC are also more effective in reallocating resources to innovative firms. As a share of gross domestic product (GDP), the United States and Sweden invest about twice as much in KBC as Italy and Spain, and patenting firms in the United States and Sweden attract four times as much capital as similar firms in Italy and Spain.
- Overall tax relief for R&D, when factoring in cross-border tax planning by Multinational Enterprises (MNEs), could well be greater than governments foresaw when their R&D tax incentives were designed. Countries may be losing tax revenue on the output from subsidised R&D and also losing out on domestic knowledge spillovers associated with production. We also need to recognise the risk that increasing countries' reliance on tax incentives to boost R&D could increase the amount of foregone tax without a commensurate rise in innovation.
- Furthermore, firms that are not part of a multinational group of companies – often small and young firms – may be placed at a competitive disadvantage, relative to MNEs, in undertaking and exploiting R&D. In addition, more data are needed to estimate the amounts of income being shifted to low and no-tax countries through MNE tax planning involving KBC.
- Industries founded on KBC raise new issues for competition policy, particularly in the digital economy, where competition differs in some respects from other sectors.
- Intellectual property rights (IPR) are an increasingly important framework condition for investing in KBC. But IPR rules have not always kept pace with technological change – many copyright systems, for instance, were designed for a world of paper and print and may inhibit new digital services.

- Across countries, there is a positive correlation between the market value of firms and investment in KBC. But corporate financial reports provide limited information on companies' investments in KBC. This may hinder corporate finance and impair corporate governance.
- A fuller understanding of innovation and growth, and better policy, require better measurement of KBC and common measurement guidelines.
- Growing business investment in KBC amplifies the importance of getting human capital policies right. Human capital is the foundation of KBC: software, for example, is essentially an expression of human expertise translated into code.
- The rise of KBC also has profound implications for employment and earnings inequality. A KBC-based economy rewards skills and those who perform non-routine manual and cognitive tasks, but may also reward investors (who ultimately own much of the KBC) over workers.

Key policy recommendations

- Getting the key framework conditions right for investment in KBC is essential and can be a low-cost step for policy makers in fiscal terms. Appropriately crafted framework conditions are important for the creation and retention of high-value jobs in global value chains (GVCs).
- Well-functioning product and labour markets, and systems of debt and early-stage equity finance, are essential to encourage KBC investment. Bankruptcy laws that do not overly penalise failure are also important. Reducing the stringency of bankruptcy legislation from the highest to the average level in the OECD could raise capital flows to patenting firms by around 35%.
- Policy makers should adopt an enlarged concept of innovation, beyond the conventional view in which R&D is pre-eminent. Other forms of KBC, such as design, data and organisational capital, should also be policy targets.
- Policy should make it easier for firms to develop and commercialise new ideas by lowering the costs of failure and encouraging firms to experiment with potential growth opportunities.
- Improved design of R&D tax credits, such as greater targeting to stand-alone firms without the cross-border tax planning opportunities available to MNEs should be implemented, alongside reducing the unintended tax relief for MNEs on KBC use.
- Governments can take steps to facilitate companies' reporting of investments in KBC. In the near-term, countries are encouraged to develop additional measures via satellite accounts so as to maintain the international comparability of GDP.
- Competition policy should: properly account for competition among platform providers; eliminate unnecessarily anti-competitive product market regulation; and effectively enforce competition law, which will protect and encourage innovation.
- Creating economic value from large data sets is at the leading edge of business innovation. OECD governments must do more to implement coherent policies in the fields of privacy protection, open data access, information and communications technology (ICT) infrastructure and ICT skills.
- In economies increasingly based on knowledge assets, IPR systems must be coupled with pro-competition policies and efficient judicial systems. Steps should also be taken to address the erosion of patent quality (whether patents reflect genuinely novel innovations, for example). There is a need for greater mutual recognition and comparability across IPR systems internationally

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