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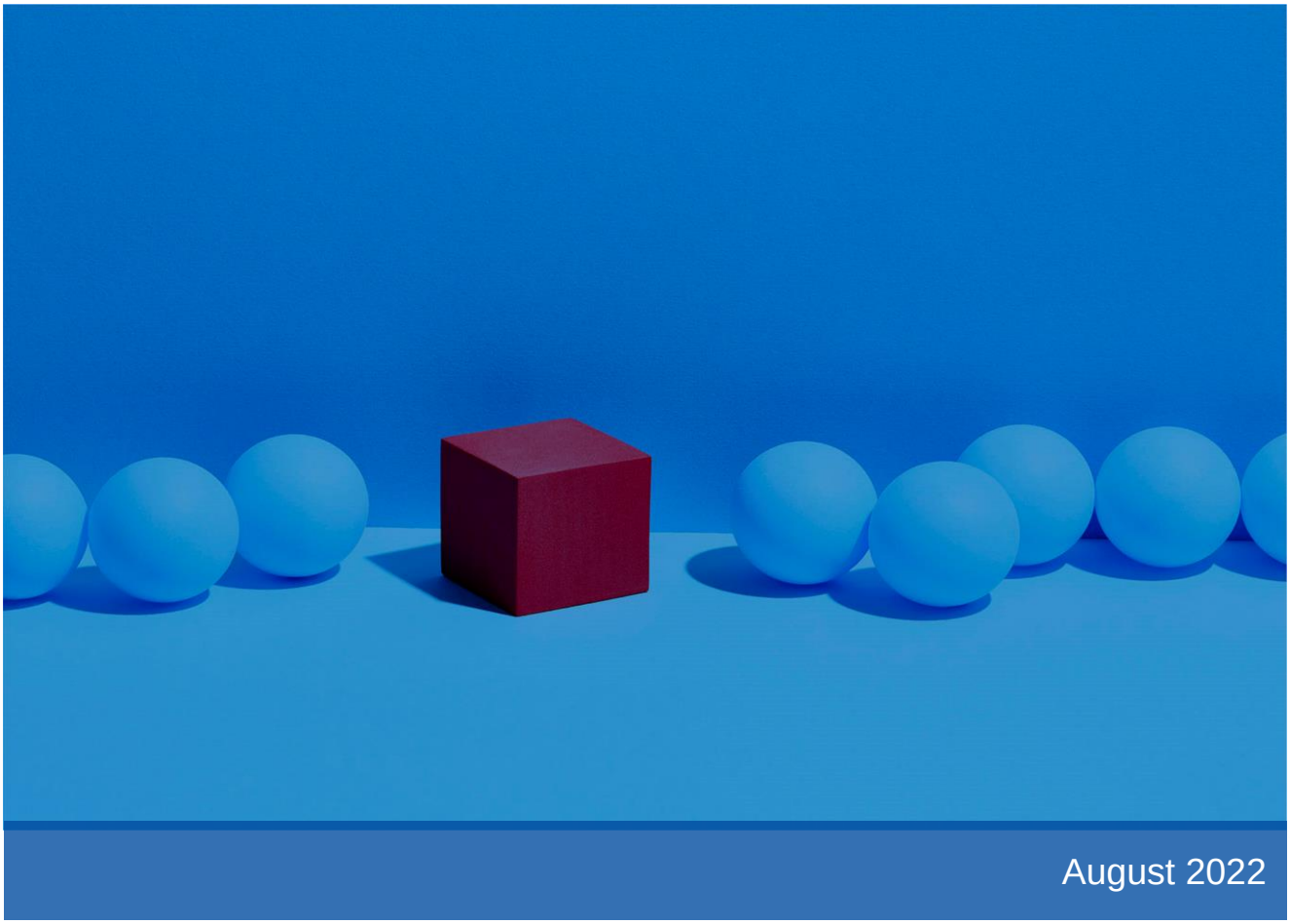
IPR INTENSITY AND INDUSTRIAL DYNAMICS

EXECUTIVE SUMMARY



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Executive Summary

Since 2013 the EUIPO, through the European Observatory on Infringements of Intellectual Property Rights, and the European Patent Office (EPO) have been conducting regular assessments of the intellectual property rights (IPR) intensity of EU industries. Those studies have quantified the contribution of IPR intensive industries in the EU economy in terms of employment, share of GDP and the EU external trade. The rich datasets produced for those studies are used in the present report to gain deeper insights into the dynamic evolution of EU industries in recent years, focusing on the possible associations between those dynamic changes and IPR intensity.

These analyses show that the use of IPR is becoming more widespread across the EU economy. The ownership of IPR is still highly concentrated within IPR intensive industries, especially in the case of patents and designs. However, the share of IPR attributable to non-IPR intensive industries has grown between 2004 and 2014. Many industries have grown in IPR intensity, but the intensity in non IPR-intensive industries has grown faster than that in in IPR-intensive ones.

IPR ownership has been traditionally thought to be concentrated in the manufacturing industries. Manufacturing is still responsible for a majority of patents and designs filings. However, the share of manufacturing in IPR filings has declined in recent years. Although manufacturing is still the biggest trade mark filing sector, its share represents only a third of 2010-2014 filings. Trade marks are by far the most versatile IPR, widely used across the whole EU economy.

In general, IPR-intensive industries are more productive than non-IPR-intensive ones. The productivity differences between those two groups of industries are higher in the case of services and trade sectors than in manufacturing. Moreover, with one exception of design-intensive manufacturing industries, the correlation between IPR intensity and productivity is positive. The negative relationship between intensity of design use and productivity in manufacturing could be an indication that design rights may be an especially important form of IP protection in more traditional and less productive industries. On the other hand, design-intensive manufacturing industries were characterised by the highest productivity growth among all IPR-intensive groupings in manufacturing between 2011 and 2017.

The analysis of the productivity dynamics indicates that IPR-intensive industries increase their productivity more rapidly than non-IPR intensive industries. The difference in productivity growth rates between IPR non-intensive and IPR-intensive industries is however smaller than in the productivity levels. In some industry groupings, such as the manufacturing and trade sectors, the productivity increase reflects an increase of value added coupled with a reduction in the number of employees.

Analysis of the business demography data indicates that the firm birth rates are in general lower in IPR-intensive industries than in non-IPR intensive ones in the manufacturing sector. On the other hand, IPR-intensive service industries are characterised by a higher firm birth rate than non-IPR intensive service industries. Moreover, whereas the correlation rate between firm birth rates and IPR intensity is in general weakly positive in service industries, it is negative in the case of manufacturing. This could indicate that there are relatively high barriers to entry in IPR-intensive manufacturing sectors.

These trends are also evidenced by the generally positive net business population growth in the service sector, which is higher in the case of IPR-intensive industries than in the non-IPR intensive ones. In manufacturing, IPR-intensive industries are characterised by negative net business population growth between 2013 and 2018—that is, the number of firms is declining. It contrasts, non-IPR intensive manufacturing industries have seen slightly positive rates of net business population growth. Survival rates do not seem to be affected by the IPR-intensity of industries to any significant degree.

Finally, the analysis of the rate of emergence of high-growth firms (HGF) leads to the conclusion that, between 2014 and 2018, HGF tended to appear more frequently among various groups of IPR-intensive industries than among non-IPR intensive ones. The rate of HGF emergence was highest among the patent-intensive industries in the manufacturing and services sectors.

The results confirm previous findings from academic research. Firms' innovation activity has been found to be important factor contributing to the increase of productivity. A higher innovation rate also increases the chance for exceptional performance. Since higher innovation is associated with higher IPR intensity, IPR intensive industries are in general more productive and are characterised by a higher share of high-growth firms.

Recent academic literature also investigates the relationship between intangible assets, including IPR, and market concentration. The results reported in the present study indicate that IPR intensity may lead to different industry dynamics in manufacturing and services. Higher IPR intensity may be associated with lower industry dynamism (i.e., fewer new firms) in the manufacturing sector but may signal higher industrial vitality and new market opportunities leading to higher entry rates in the service sector. Due to data and methodological limitations, those conjectures should be treated as preliminary, but they provide interesting perspectives for future research.

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