Patents, trade marks and startup finance

Funding and exit performance of European startups

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Executive summary

The spectacular growth of the European startup ecosystem in recent years has been a major boost for the European economy. Startups are increasingly seen as engines of economic growth, with strong potential to address the key European challenges of digitalisation, sustainability and industry competitiveness through innovation. Nevertheless, Europe still faces significant challenges in bridging its funding gap with respect to the US.

This study examines the role of intellectual property (IP) rights – specifically patents and trade marks – in facilitating access to finance for European startups. To this end, it assesses the links between the filing of IPRs by startup firms and their success in raising venture capital (VC), as well as the signalling power of patents and trade marks as predictors of successful exit strategies for investors.

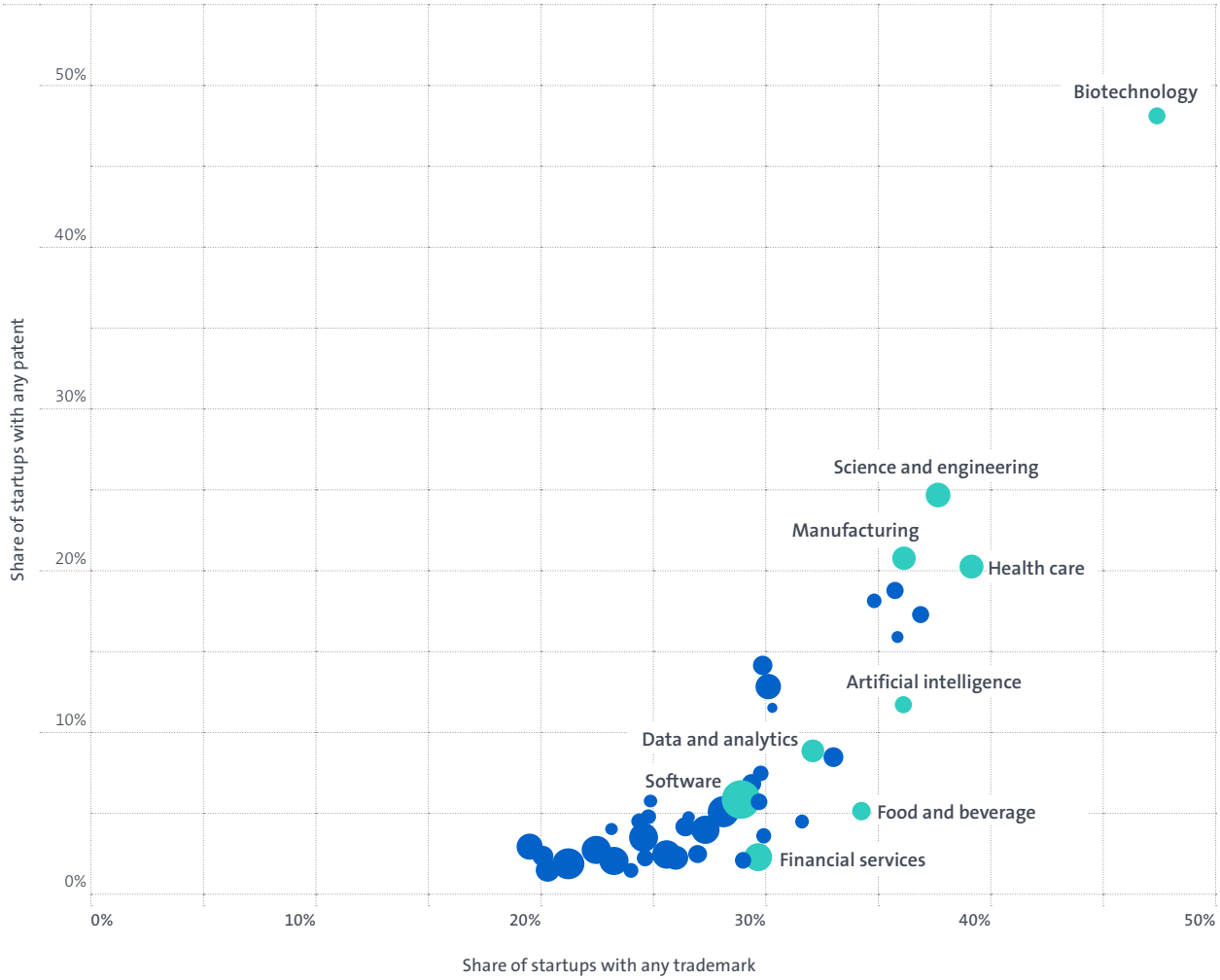
These questions are especially relevant today, after the shock of COVID-19 and the recent monetary policy tightening led to a decline in investment in European startups in 2022. As reduced VC spending and weaker growth forecasts are putting an end to an era of easy access to venture capital, IP rights deserve strong attention as a means not only of capturing the value potential of their intellectual assets but also of signalling this value to investors.

Main findings

On average, 29% of European startups have filed for registered IP rights, though there are significant differences between industry sectors. Biotechnology is by far the most IP intensive sector, with nearly half of startups using patents or registered trade marks. Other IP-intensive sectors include science and engineering (with patent users at 25% and trade mark users at 38%), healthcare (patent users at 20% and trade mark users at 40%) and manufacturing (patent users at 20% and trade mark users at 36%). Startups with registered IP rights exist in all sectors, with a stronger reliance on trade marks in sectors that are not IP-intensive, whereas startups that use patents tend to be more concentrated in a smaller number of technology-related sectors.

Figure E1

Share of startups with patents or trade mark applications by sector



Note: The Figure compares shares of patent and trade mark applicants by sector in the initial sample. The size of the circles represents the number of firms from the sector in the initial sample.

Startups increasingly make use of IP rights as they grow, with a strong focus on European IP rights at all growth stages. While 10% of startups that were invested in by VCs in seed stage rounds have filed a patent application, this proportion rises to 28% in the early growth stage and 44% in the late stage rounds (Series C and beyond). The share of trade mark users similarly increases from 28% in the seed stage rounds to 53% in the early stage rounds and 72% in the late stage rounds. More than 80% of startups with a patent in the seed stage financial rounds have filed a European patent application. The share of startups with a trade mark that have filed for an EU trade mark increases from 47% in the seed stage rounds to 81% in the late stage rounds.

Figure E2

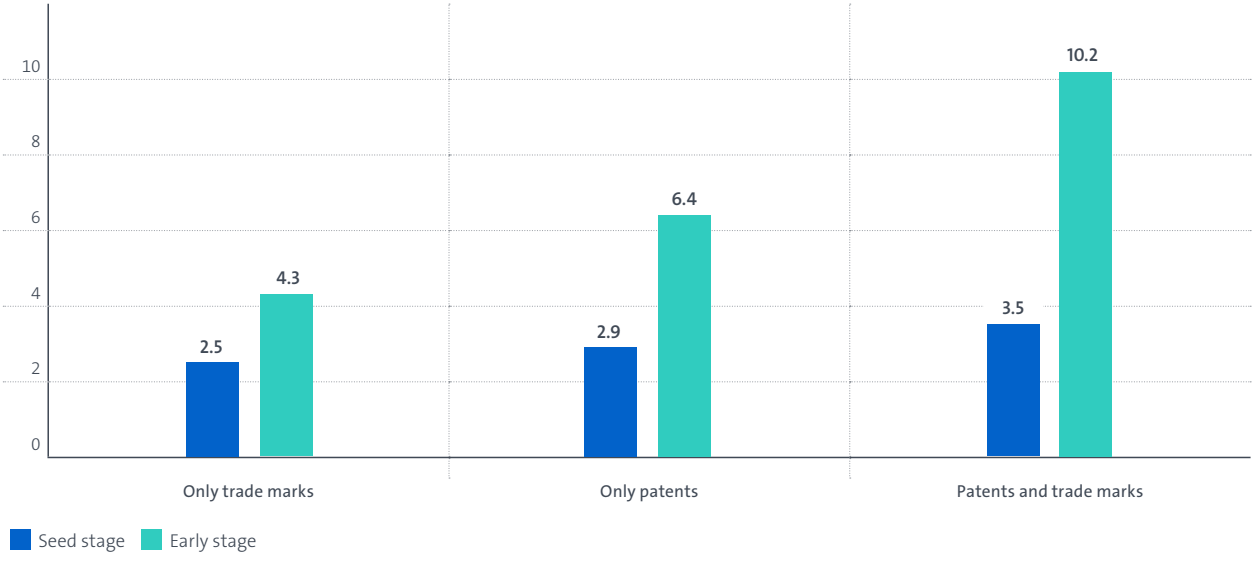
Share of startups with IPR at different stages of financing

Note: The first panel presents the number of events in each stage of financial round. The second panel shows the share of startups having applied for various combinations of IPRs prior to the date of the financial round. The third panel presents the share of startups within each category that applied for protection in the form of an EUTM, a European patent or both prior to the date of the financial round.

The filing of patent and trade mark applications in the seed or early growth stage is associated with a higher likelihood of subsequent VC funding. This effect is particularly important in the early stage, with a 4.3 times higher likelihood of funding for startups that filed for trade marks, and a 6.4 times higher likelihood of funding for startups that filed for patents. Startups that filed for both trade marks and patents show the highest likelihood of funding in both the seed and the early stage.

Figure E3

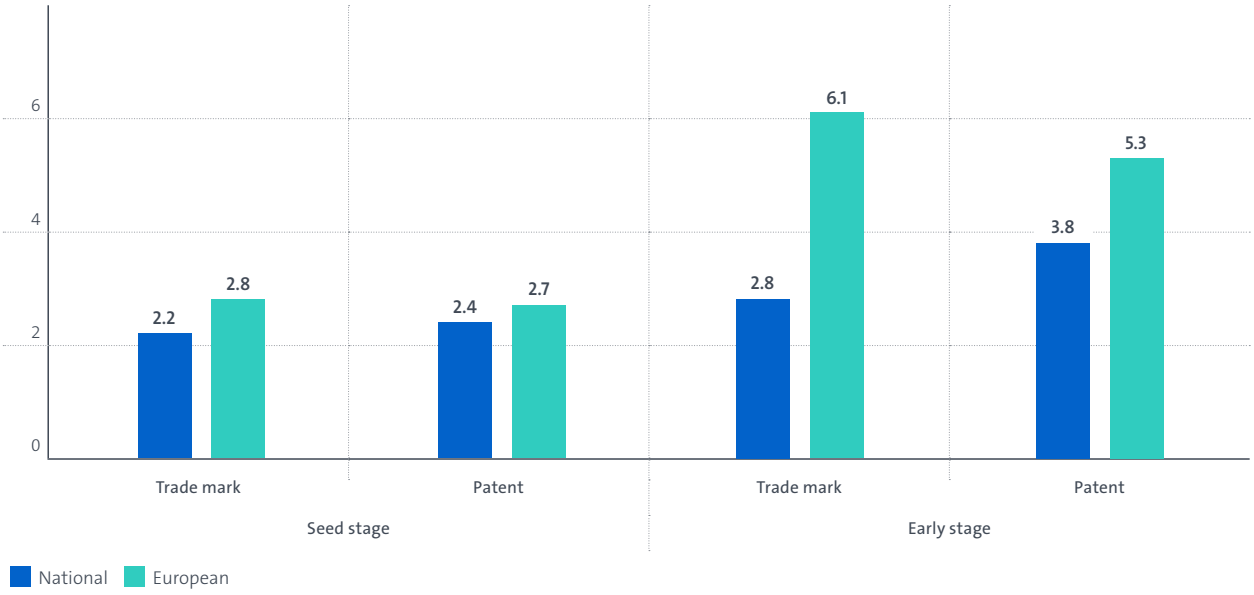
Increase in odds of funding for startups with prior patent or trade mark applications



The filing of European patent and trade mark applications is associated with an even higher likelihood of subsequent VC funding for startups. Although this result can already be observed in the seed stage, it is especially strong in the early growth stage. Startups with an EU trade mark application have a 6.1 times higher likelihood of obtaining early-stage funding, compared to 2.8 times for those that only filed for a national trade mark. European patents are associated with a 5.3 times higher likelihood of early-stage funding, compared with 3.8 times for the relatively smaller number of startups that have only national patents.

Figure E4

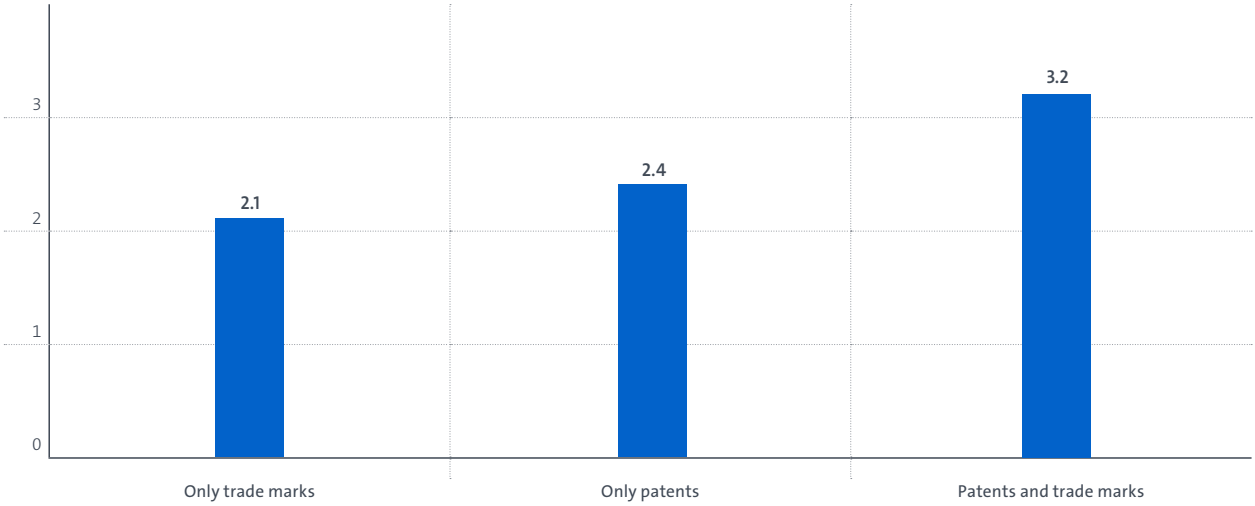
Increase in odds of funding for startups with European versus national patent or trade mark applications



The filing of patent and/or trade mark applications is associated with a more than twice as high likelihood of successful exit for investors. The highest likelihood of initial public offering (IPO) or acquisition is observed for startups that filed for both patents and trade marks. A higher likelihood is also observed for startups that filed for European IP rights than for those that make use of national-level rights only.

Figure E5

Increase in odds of exit for startups with prior patent or trade mark applications



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