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research on  
intellectual property

## Research paper summary and key messages

**Report title:** The economic impacts of computer-implemented inventions at the European Patent Office

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### Overview

This paper examines the economic impact of Computer-Implemented Inventions (CII) in Europe. The opponents of patents argue that the creation of temporary monopolies by patents slows down innovation, preventing competition for the best technological solutions and enabling only large corporations to make a profit. Critics believe that CII should be only granted copyright protection, instead of patent protection, since a computer program is not an invention in the strict sense but a creative work

Through an analysis of a quantitative database research [EPO Worldwide Patent Statistical Database, PATSTAT – Bureau van Dijk's, ORBIS] as well as an empirical survey [Fraunhofer ISI, 2010], the authors illustrate that, since patent filings on CII are not limited to the software industry and are mostly beneficial to small-medium enterprises, they play a positive role for businesses, also in enhancing international competition.

### Key messages

#### Message

CII are in widespread use and have achieved great importance in a variety of sectors. These inventions are by no means limited to large enterprises; on the contrary they are acquiring a constantly larger importance for small and medium-sized companies (SMEs).

#### Proof points

- With well over 50,000 patent applications at the EPO per year, CII reach a share of about 35% of total EPO patent filings.
- About 75% of CII, similar to filings in other technological fields, originate in the manufacturing sector, while technical services and information and communication services contribute significantly less than 10%.
- In Germany alone, nearly 1 million jobs were directly or indirectly dependent on CII in 2010. In relation to all industries, there were even some 1.4 million jobs affected by CII.

## **Message**

A departure from patentability of CII would result in weakened protection and reduce the incentive to invest in R&D in this area.

## **Proof points**

- The most important motive for filing a CII patent, according to the Fraunhofer ISI survey, is to create room to manoeuvre, followed by market motives whereas exchange motives are less important. Even if for large enterprises, all three motives (freedom to operate, exchange, and market) to file CII patents are more important than for SMEs, the impact on employment and market shares is rated higher by the latter.
- Companies are favourable to preserve the current *status quo* with regard to patenting CII, and a large proportion of them rated an abolition of the patentability of CII as inappropriate.
- A minority of survey respondents even believe that an extension of patent rights for CII, such as business methods or software "as such", would be appropriate.

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