

Agenda

Advancing economics in business

Lost property: the European patent system and why it doesn't work

After more than 40 years of failed attempts to create a European Community patent (COMPAT), success now could be a timely symbol of a European will to resolve the economic crisis and effectively become an innovation-driven economic area. Bruno van Pottelsberghe, Senior Fellow at Bruegel and Professor at the Université Libre de Bruxelles, explains how the creation of the COMPAT could address two weaknesses: a lack of effectiveness due to fragmentation in Europe, and a lack of political power in global convergence talks

A fragmented market for technology

The European patent system has thus far been a tale of failed public cooperation: it is fragmented, which diminishes the potentially stimulating effect of the high-quality examination services performed by the European Patent Office (EPO). The current process of obtaining patents can only be described as cumbersome:

- once granted by the EPO, a patent must be validated and renewed in each of the 35 signatory countries of the European Patent Convention;
- national patent offices and national courts have the final say in upholding or invalidating patents, regardless of the verdict of the EPO;
- parallel national routes to patent allow applicants to get around the EPO and hence implicitly reduce quality in the whole system (applicants effectively 'hedge' against a negative decision by the EPO by 'going national').

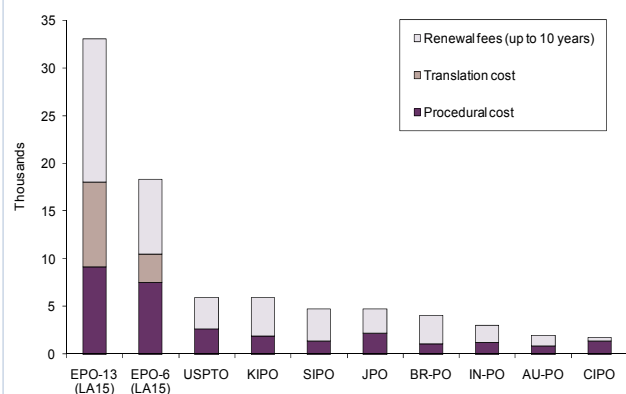
Apart from producing a high level of uncertainty, this fragmented system in terms of patent coverage (applicants cannot afford renewal fees in the 35 signatory countries—on average, they select five or six countries for protection) is prohibitively expensive and very complex to manage.

The prohibitive cost is illustrated in Figure 1. The cost of a European patent depends on the number of countries chosen for protection. If 'only' 13 countries

are chosen, ten years of protection cost more than US\$30,000 (in Purchasing Power Parity, PPP, terms). With six countries, the cumulative cost is nearly \$20,000—still more than four times higher than anywhere else in the world.

The second 'incongruity' associated with the fragmentation is that different outcomes may occur in the event of parallel litigation. The European patent system is therefore composed of countries with patent

Figure 1 International comparison of cumulated patent costs, 2008 (\$, in PPP terms)



Note: EPO-13 is a patent validated in 13 countries, while EPO-6 is a patent validated in six countries; USPTO, United States Patent and Trademark Office; KIPO is the national patent office of South Korea; SIPO: China; JPO: Japan; BR-PO: Brazil; IN-PO: India; AU-PO: Australia; and CIPO: Canada.

Source: van Pottelsberghe, B. (2009), 'Lost Property: The European Patent System and Why it Doesn't Work', Bruegel Blueprint 9, June, adapted from van Pottelsberghe de la Potterie, B. and Mejer, M. (2008), 'The London Agreement and the Cost of Patenting in Europe', ECARES Working Paper 2008_032.

This article is based on Professor van Pottelsberghe's publication, 'Lost Property: The European Patent System and Why it Doesn't Work', Bruegel Blueprint 9, June 2009 (referred to in this article as the Bruegel Blueprint). Available at <http://www.bruegel.org/nc/publications/show/publication/lost-property-the-european-patent-system-and-why-it-doesnt-work.html>.

protection for a given product and countries without. This makes parallel importing easier to undertake (and more difficult to identify).

Finally, it is possible to bypass the EPO through parallel applications at national patent offices. The cumulative number of patents granted by national patent offices is close to the number of patents granted by the EPO. Of the patents granted by national patent offices, 25% (or 15,000) were granted to foreign applicants. This share varies substantially but is significant in most countries. In Germany the ratio of foreign applications is 27%, with around 20% each for France and the UK. These figures suggest that the parallel, non-EPO route is frequently used, especially in the case of large national patent offices. The granting process orchestrated by the EPO can therefore be 'bypassed' if one or more applications are made directly to national patent offices. This practice may have a number of explanations—some entirely justified (only interested in one or two markets), some less so (a perception that certain national offices are a 'soft touch' for applications compared with the EPO). In any case, it is clear that the existence of twin routes to the granting of a patent in Europe is not conducive to fostering Europe-wide consistency of patent quality.

In other words, the current system discourages small firms with its complexity and uncertainty, and is a tax on innovation due to prohibitive cumulative translation costs and national fees.

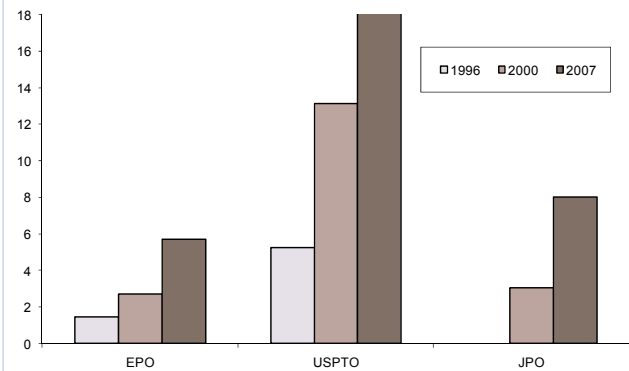
The package of suggested measures to combat the current fragmentation includes a significant revision of the governance of the European patent system (for further details see the Bruegel Blueprint):

- creating the COMPAT and a centralised European litigation system;
- the creation of a 'small and medium-sized enterprise' status with lower fees;
- a new governance structure for the EPO;
- national patent offices to cease granting patents.

The global challenge

The global challenge is related to the explosion in patent applications worldwide, which is causing backlogs at patent offices. While patent applications have been rapidly growing in number at most patent offices, the backlog issue is first and foremost an American problem (see Figure 2), with a much greater backlog than in Europe. The EPO backlog is currently similar to the USPTO backlog in 1996, which was not particularly alarming at that time. The major consequences of these backlogs are more uncertainty in the market due to several hundred thousand patents pending for longer, and a reduction in quality in both patent applications and patents granted.

Figure 2 Number of claims in pendency (millions)



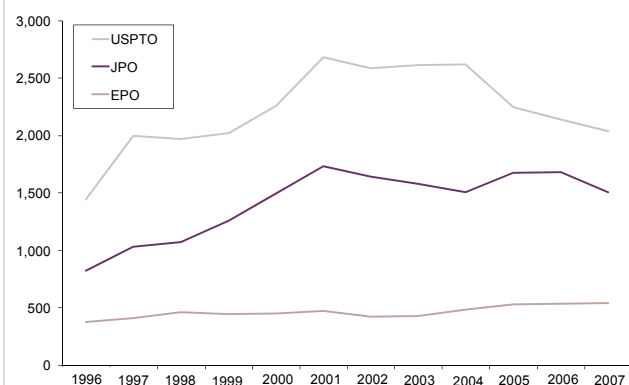
Source: van Pottelsberghe (2009), op. cit.

The Bruegel Blueprint provides evidence to suggest that the ultimate cause of the explosion in the number of patents is related to the design of the patent systems by policy-makers. In the USA, a relatively low-quality examination process is evidenced by (in comparison with Europe):

- a high patent grant rate;
- high turnover of employees (due in part to lower incentives);
- lack of transparency and the lack of an opposition process by third parties;
- a heavy workload per examiner (see Figure 3).

This lack of rigour, coupled with relatively low fees and few restrictions on patentable subject matter, has led to a high and ever-growing propensity to patent, which does not correlate with any indicator of economic performance.

Figure 3 Trend in annual number of claims under examination per examiner, 1996–2006 ('000s)



Source: van Pottelsberghe (2009), op. cit. Own computation from USPTO, EPO, and JPO information on patent filings and average number of claims; and European Patent Office, Japan Patent Office and United States Patent and Trademark Office (2008), 'Trilateral Statistical Report: 2007 Edition', Munich.

Major patent offices have recently started negotiating, or have entered into work-sharing agreements and/or mutual recognition projects, because a proportion of patents are filed simultaneously in several patent offices. The solution put forward by the USA and Japan (they were the first to enter into such bilateral agreements) in order to speed up the examination and reduce backlogs takes the form of 'patent prosecution highways' (PPHs): if a search or examination report has been carried out by office A, office B must use it and deal with the patent using an accelerated procedure. However, it follows from the analysis of the Bruegel Blueprint that PPHs might be detrimental because a 'speed' condition is attached to the treatment of a foreign report, whereas no patent quality conditions have been agreed by the main patent offices.

Regarding global cooperation and work-sharing processes, the Bruegel Blueprint argues that a convergence in global patent standards must occur before mutual recognition practices are put into place. The convergence should occur in the three key dimensions of a patent system:

- access to information;
- structural changes in the process;

- the human factor (eg, total resources, incentives, key performance indicators).

What is actually missing to implement the COMPAT is political leadership! This is especially the case now because the current president is stepping down. Candidates for the presidency of the EPO are emerging, with undisclosed strategic agendas. Whatever the strengths and weaknesses of the candidates, they could be well advised to announce publicly their programme on at least three key strategic issues:

- the COMPAT and rationalisation of the European system;
- the rigour of the examination process;
- international policy regarding mutual recognition processes.

After all, the EPO, with more than 6,300 employees, is at the very root of an ailing Lisbon agenda. The paradox is that institutions naturally resistant to the COMPAT—national patent offices—are the sole electors of the president. Policy-makers, and European innovators deserve (or should request) more dynamic and transparent governance. A drastic change of the current governance of the EPO is proposed in the Bruegel Blueprint.

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If you have any questions regarding the issues raised in this article, please contact the editor, Derek Holt: tel +44 (0) 1865 253 000 or email d_holt@oxera.com

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