



Procedural Patent Fees as a Policy Tool

Introduction

This note provides a brief overview of patent fees, their typologies, and the economic functions that they can serve.

Different fees with different goals

Broadly speaking patent fees can be divided in two separate groups.

- *Patent renewal fees* — these fees need to be paid (typically on an annual basis) in order to renew patents that have already been granted.
- *Procedural fees* — these consists of fees charged by patent offices to applicants prior to granting decisions. Depending on the specific aspects of the application process, they encompasses a variety of separate fees (e.g. filing fees, search fees, examination fees, etc.).

The study of the role that renewal fees play within the patent system has received significant attention by economists. Renewal fees can be thought of as a being a ‘sorting device’ which ensures that only the most valuable patents are kept alive, whilst patents of less economic value are filtered out. There is consensus amongst economists that, in order for renewal fees to be an effective sorting device, they need to increase over time (e.g. the amount that needs to be paid to renew a patent after its first year should be less than the amount that to be paid to renew it after two years; the amount to renew the patent after two years should be less the amount to renew it after three years, and so on). One of the reasons for having a renewal fee structure that increases over time is due to the fact patent owners have better information on the value of their patents than patenting authorities. A patent owner will renew a patent for an additional year only if the expected benefit of doing so outweigh the renewal cost. Therefore, progressively increasing renewal fees act also as a

revelation mechanism: by deciding to maintain a patent alive for an additional year, a patent owner signals private information on the value of the patent to the public. The idea that the optimal structure for renewal fees is to increase over time — whilst having its origin in the economic literature — has found a widespread application also in practice. In fact, most patent offices apply renewal schedule with progressively increasing fees, and some apply a zero-charge for the earliest renewal years (where even patent owners may not yet be in the position to assess the economic value of their inventions).

Whilst the role and optimal design of renewal fees has been extensively analysed by economists, the study of procedural fees has received much less attention. This is partially due to the fact that wide accessibility to the patent system has always been an innovation policy prerogative. Consequently, the traditional patent fee policy has been characterised by low procedural fees to encourage patent filings, and higher renewal fees to induce patent holders to give up monopoly rights while subsidising examination activities on unsuccessful patent applications. However, recent developments in the patenting landscape (e.g. the substantial increase in patent filings) suggests that a re-evaluation of the role that procedural fees may play within the system could be appropriate.

The potential role of procedural fees

The first step towards a better understanding of the potential role procedural could play, is to understand whether procedural fees do have the potential of shaping patenting behaviour in the first place. Economists¹ who have investigated this question have come to the conclusion that the price elasticity of patent demand is negative, i.e. on average, higher procedural fees lead to a lower number of patents being filed. In a recent study² the European Patent Office (EPO)

¹ See e.g. de Rassenfossé G., and B. van Pottelsberghe de la Potterie, (2008) “On the price elasticity of demand for patents” ECARES working paper 2008_031.

² “Study on the economic dimensions of the fee structure in the European Patent system” (2010), <http://documents.epo.org/projects/babylon/eponot.nsf/0/>

examined empirically the impact of different procedural fees on applicants' decisions to proceed to the next phase of the application process and found that all fees examined have statistically significant and negative impact on applicants' decisions to proceed to the next stage (even though the magnitude of the impact varies greatly across fees).

These findings suggest that procedural fees have indeed the potential to shape applicants behaviour. The next question is: why and how should procedural fees be used as a policy tool? We offer below a number of rationales that could justify using procedural fees as a policy tool.

- *Excessive number of patent applications* — over the last decades we have witnessed a surge in the number of patent filings at major patent offices. There are a number of contribution factors to this trend (e.g. globalisation, the development of new technologies, the emergence of new dynamic economies, etc.). As a result, it can be argued that the scarce resource is not innovation activity but patent offices' capacity to process an increasing number of applications.
- *Risk of low quality patents and increased legal uncertainty* — there are only two ways in which a resource-constrained patent office can react to the challenge imposed by an increasing number of applications. To either devote less time and attention to the examination of each application — with the risk of inflating the system with low quality and potentially invalid patents —, or to accept and tolerate backlogs and the that increased legal uncertainty associated with them.
- *Strategic abuse of the application system* — there is a concern that applicants in some technological fields may strategically exploit by the patent pending status. For example some applicants may seek to extend the length of the application phase — thus extending the length of temporary protection granted by the patent pending status — until they secure regulatory approval for the marketing of a new product.

The challenges highlighted above suggest that there are a number economic rationales that call for re-visiting the role that procedural fees play, examples are:

- *Cost recovery* — procedural fees could be set at a level that reflects the cost of the service provided (e.g. search of prior art, examination, etc.) to users of the patent system.
- *Pricing negative externalities* — patent backlogs impose a negative externality to the patent system and this should be priced.
- *Paying for private benefits* — if applicants benefit from the patent pending status they should be charged for this.

Conclusions

Similarly to how central banks set interest rate to stimulate economic activity or target inflation, patent offices could set procedural fees at a level which is appropriate given the specific patenting environment. For example, procedural fees could be raised in periods characterised by a sudden surge in patenting activity (e.g. when new technologies emerge) and decreased in times of subdued innovation activity (e.g. during recessions). If there was compelling evidence that applicants behaviour differs significantly across technologies, patent offices could also apply different fee levels to different technological fields.