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# How SMEs exploit their intellectual property assets:

Evidence from survey data



**Authors:** De RASSENFOSSE, Gaitan

**Author of the summary:** Haris Tsilikas, PhD Candidate and Junior  
Research Associate, Max Planck Institute for Innovation and Competition

<b>SUMMARY</b>			
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<b>Author</b>	Haris Tsilikas, LL.M	<b>Date</b>	22.03.2019

## Abstract

In the present article, the author conducts an analysis of empirical data found in a 2006 survey by the European Patent Office (EPO) in order to better understand the motives for SMEs to patent their innovations. The author draws three conclusions: (a) SMEs rely more strongly than larger firms on patents for monetary and financing purposes; (b) SMEs generally use their patents more actively than larger firms; and (c) SMEs license out a larger portion of their patent portfolio compared to larger firms, whereas US SMEs are much more active in this regard compared to their European counterparts.

## Summary

In the present paper<sup>1</sup>, the author conducts an analysis of empirical data found in a 2006 survey by the European Patent Office (EPO). The EPO gathered a substantial amount of data based on responses by patent applicants. The aim of the survey was to elucidate the reasons why applicants decide to apply for patent protection for their inventions. From this sample, the author singled out SME-respondents with a view to draw conclusions on SME motivation for opting for patent protection.

The author begins with an extensive literature review on motives for patenting. The conclusions of major empirical surveys point out as possible motives for firms to patent the following:

- prevent imitation by competitors,
- block competitors,
- generate licensing revenue and monetisation,

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<sup>1</sup> Gaetan de Rassenfosse, 'How SMEs exploit their intellectual property assets: evidence from survey data' (2012) 39 Small Bus. Econ. 437.

- gain access to the capital market.<sup>2</sup>

Moreover, empirical data shows that SMEs are more active than larger businesses in exploiting their patent holdings.

In respect of the relationship between patents and the financing of innovation, the author reviews theoretical contributions which reveal two major problems in the commercialisation of innovation: information asymmetries and agency costs.

Information asymmetries refer to superior information possessed by an inventor on the value of its invention as opposed to potential investors. Because of insufficient information on which inventions are actually valuable and which not, investors tend to place a high risk premium in financing innovative projects.

Agency costs, on the other side, arise when managers are more risk-averse compared to investors: to the extent managers are more unwilling to take up risky innovative projects, investment in innovation tends to be suboptimal. Information asymmetry and agency costs increase the cost of financing of innovation for SMEs.

In this regard, patents play a decisive role in enabling inventors to access capital markets on better terms. Patents send a credible signal of a company's innovation capabilities to potential investor. The signalling effect of patents enables investors to better differentiate between worthy and unworthy projects, reducing the financing cost for the former. Adding to that, patents make inventions tradable and allow inventors to earn revenue, either by licensing or monetisation of their patents.

The author reviews next the literature on the relationship between patenting, licensing, and the capital market, according to which the following motives for firms to license out their patents exist:

- 'patent-oriented' motives, relating to entering into foreign markets, or setting standards,
- 'technology-oriented' motives, mainly referring to freedom to operate,
- 'mixed motives,' such as enhancing reputation and building international networks.

Moreover, the literature on licensing reveals that SMEs are more likely to license out their patents compared to larger companies.<sup>3</sup> One plausible explanation for more active licensing on the part of SMEs includes their need to secure access to complementary assets owned by third parties.

With regard to the relation between patents and access to the capital market, the author briefly outlines the findings of a substantial empirical literature, which establishes a close link between patenting by start-ups and attracting venture capital.

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<sup>2</sup> Wesley Cohen, Richard Nelson, and John Walsh, 'Protecting their intellectual assets: Appropriability conditions and why US manufacturing firms patent (or not)' (2000) NBER Working Paper No. w7552; Knut Blind et al, 'Motives to patent: Empirical evidence from Germany' (2006) 35(5) *Research Policy* 655.

<sup>3</sup> Paola Guiri et al, 'Inventors and invention processes in Europe: Results from the PatVal-EU survey' (2007) 36(8) *Research Policy* 1107.

Following the literature review, the author discusses the findings of the EPO survey.<sup>4</sup> The EPO survey identified five possible motives for patenting: (a) 'Imitation,' (b) 'Secrecy,' (c) 'Freedom,' (d) 'Investors,' and (e) 'Licensing.' The author divided the sample into larger firms and SMEs to find out whether SME motives for patenting differ. Large companies responded that they largely apply for patent protection to prevent imitation and secure freedom to operate, scoring low on the more monetary motives of 'Investors' and 'Licensing.' SMEs, on the other hand, are much more strongly motivated by monetary factors.<sup>5</sup>

SMEs are, accordingly, more active in exploiting their patent portfolio for monetary purposes as opposed to larger firms. The author points to two possible explanations for this: first, because patenting is costly and SMEs more resource-constrained, SMEs are more selective in which inventions to patent; second, larger companies are more motivated by freedom to operate concerns compared to SMEs.<sup>6</sup>

An interesting finding is that US SMEs strongly outperform their European counterparts in licensing activity.<sup>7</sup> This might be attributed to either a higher willingness to license, or a better functioning technology market or both.<sup>8</sup>

Based on the findings in his paper, the author makes two policy recommendations:

1. **The European market for inventions must be further developed**, in particular by reducing transaction costs. In this regard, the author hails the creation of the Unitary Patent system in the EU as a major improvement.<sup>9</sup>
2. **Patent offices should raise the quality of examination of patent applications.** According to the author, patents of better quality will send investors stronger signals, thus reducing financing costs for innovative SMEs.<sup>10</sup>

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<sup>4</sup> De Rassenfosse (n. 1) 441 et seq.

<sup>5</sup> *ibid*, 443.

<sup>6</sup> *ibid*, 444.

<sup>7</sup> *ibid*, 445 and 447.

<sup>8</sup> *ibid*.

<sup>9</sup> *ibid*, 449.

<sup>10</sup> *ibid*.