

Surveys/Studies on Intellectual Property and Small and Medium-sized Enterprises: A Review of the Methodologies

Introduction

Aim and structure of the report

This proposed document is to be used for creating a dynamic working space where information can be added by any number of authorized persons. It will thus serve as a recipient of information concerning methodologies used in different studies on intellectual property (IP) and small and medium-sized enterprises (SMEs).

This proposed collaboration has its origin in the World Intellectual Property Organization's (WIPO) Development Agenda. The WIPO Development Agenda aims to ensure that development considerations form an integral part of WIPO's work. While formally establishing the Development Agenda in October 2007, the WIPO General Assembly adopted a set of [45 recommendations](#) to enhance the development dimension of the Organization's activities. The recommendations are divided into six clusters. In addition to the adoption of the WIPO Development Agenda, the Members States also approved a recommendation to establish a [Committee on Development and Intellectual Property](#) (CDIP). Projects were then established to implement the recommendations. Recommendation 10: *"To assist Member States to develop and improve national IP institutional capacity through further development of infrastructure and other facilities with a view to making national IP institutions more efficient and promote fair balance between IP protection and the public interest. This technical assistance should also be extended to sub-regional and regional organizations dealing with IP."* was embodied in a project called "Improvement of National, Sub-Regional and Regional IP Institutional and User Capacity" contained in the annex [IX of CDIP 3](#). This project has a broad reach and many planned outputs, one of them is to create a standardized/harmonized methodology for undertaking surveys and studies on IP and SMEs.

This document is designed to be a working document in which the most relevant studies and surveys on IP and SMEs are proposed to be included. The document seeks to summarize the aims, methodologies and results, so as to be able to easily extract the relevant information with a view to develop good or best practices. It is recognized that surveys or studies encounter different difficulties depending on whether these are done in developed or developing countries. In any case, the surveys or studies may have very different aims, scope, time frames and costs. This document, therefore, also offers the possibility to compare and contrast them. The methodology resulting from this work has to be standardized yet flexible. In order to have a really comprehensive view of different methodologies and tools as well as the difficulties that various researchers have encountered, the basic idea is to open this working document to all researchers wishing to offer their support and experience. This will most probably take the form of a Wiki. *"A **wiki** is a website that uses wiki software, allowing the easy creation and editing of any number of interlinked (often databased) Web pages, using a simplified markup language."*¹ The present document is thus a first draft of information and structure, which could later be used to start an efficient Wiki.

¹ Wikipedia ->Wiki, <http://en.wikipedia.org/wiki/Wiki>

The present document is presently divided in seven categories, each of which can be independently updated, whenever relevant information is found. The categories themselves may also eventually be changed and new ones added. The aim is not only to harness relevant information, but also to test and create a practical structure for the Wiki. These six categories are:

- **List of Surveys/Studies or Contacts of Potential Use (To do List)**

This entry is to be used to include references, contact information or any new plain ideas/proposals which would necessitate more time and consideration before these could be inserted in any of the other five categories. Comments can eventually be added as to how the information should be used or what actions have already been taken (author has been contacted, a summary of the methodology is under preparation, etc)

- **Main Surveys/Studies (Aims, Methodologies and Results)**

The surveys/studies to be inserted here should have certain characteristics. Their **subject** has to be the use of IP by SMEs (their awareness, their management of IP their quantity of IP assets, etc.) or eventually the support institutions or programs which foster the use of IP by SMEs. Their **scope** has to be relatively large, for the studies which will be using the standardized methodology will be nation wide. The **general quality** and level of detail has to be sufficient. The estimation of this characteristic can be quite subjective. What we mean here is that some official institution (IP office, university, chamber of commerce, international organization, etc.) should back the study or the study has been published in a journal with a peer review system, the study has been quoted by other recognized studies. Eventually, the experience or reputation of the authors could be a sign of general quality. The relevant studies are then inserted by describing their *aims, methodologies and results* (see existing examples). Studies or surveys which are focused only on SMEs or only on IP or are somehow relevant to the subject but aren't exclusively on IP and SMEs should be entered in the category "Secondary Surveys/Studies" or "Useful Related References".

- **Secondary Surveys/Studies (Aims, Methodologies and Results)**

The studies or surveys inserted here are those of enough interest, but which are not of the scope necessary to be considered a main study. Typically, this includes studies on enterprise (and not specifically SMEs) and IP or only on a certain sector of SMEs or of reduced geographical scope, etc. Studies included here are to be presented in the same way as main studies.

- **List and Description of Important Tools**

One of the goals of this work is to identify, describe and comment on the different methods/research tools which have been used to study the use of IP by SMEs. Studies are often an aggregation of quantitative and qualitative research tools, which together shed light on different aspects of the issue. The purpose of this category is to be able to show which tools should be used in which situation. What are the advantages and shortcomings of each tool? What are the cost, time-frame and prerequisites of each tool? etc. A certain number of tools are already listed

such as databases, questionnaires, interviews, benchmarking, case studies, etc. Each study listed in “**Main Surveys/Studies**” uses some tool. If a new survey/study is inserted which uses a new tool this new tool should be listed and described here. When a new survey/study may use an already mentioned tool but in a different way, this too should be mentioned here.

- **The Combined Use of Tools**

As mentioned above, surveys/studies are often (but not always) an aggregation of tools. Therefore, how these tools can be combined is of interest to anyone planning a research project. The purpose of this category is to list, describe and comment on experience in combinations of tools used in the main or secondary surveys/studies.

- **Lessons Learned by the Researchers**

The experience of researchers is of course very valuable. The authors of the main and secondary studies will therefore be contacted and hopefully will even participate in the future work of WIPO through the Wiki and/or in some other manner. This category lists their anecdotes, advice and thoughts on their research experience. The information listed here can, therefore, be very eclectic (timeframe, skills required, costs, difficulties, etc.) as long as they come from someone with a prior or present experience.

- **Useful Related References**

This category is used to list the many studies and surveys which are not directly in the scope of our topic but offer useful insights.

LIST OF STUDIES OR CONTACTS OF POTENTIAL USE (TO DO LIST)

Survey on Business Attitudes to Intellectual Property 2008:

http://www.ipd.gov.hk/eng/promotion_edu/annual_survey/final_report_2009.pdf

Small Serial Innovators: The Small Firm Contribution To Technical Change:

<http://www.sba.gov/advo/research/rs225tot.pdf>

Foreign Patenting Behavior of Small and Large Firms: An Update:

http://www.sba.gov/advo/research/rs228_tot.pdf

Intellectual property activity by service sector and manufacturing firms in the UK, 1996-2000:

<http://www.oiprc.ox.ac.uk/EJWP1405.pdf>

UK Intellectual Property Awareness Survey 2006:

<http://www.ipo.gov.uk/ipsurvey.pdf>

Use of Patents in Securing Financing: A Survey of New England Firms:

http://www.wsbe.unh.edu/files/Survey_Summary_FINAL.pdf

THE MAIN STUDIES

Norwegian Small and Medium-sized Enterprises and the Intellectual Property Rights System : Exploration and Analysis

<http://eprints.utas.edu.au/1358/1/Iversen2003WipoStudy.pdf>

Aims of the Study: This study stems from a preoccupation of the Norwegian Ministry of Trade and Industry that Norwegian SMEs were not proficient users of the IPR system. WIPO agreed to fund the study, which had three main goals:

- 1) To evaluate systematically the relationship between Norwegian SMEs and IPRs in terms of needs, concerns and problems
- 2) To provide useful recommendations for enabling Norwegian SMEs to make better use of the IP system so to improve their competitive position
- 3) To serve as a model for eventual future studies on the subject.

Methodology: To attain its goals, this study follows a three stage methodology.

The first section offers a general overview of the subject in two main parts. It is first of all composed of a description of the environment of SMEs and of the systems of innovation approach which is used to explain the role of IPRs in SMEs environment. Then a review of the existing literature frames the existing concepts.

The second section is equally composed of two parts and its purpose is to offer a snapshot of Norwegian SMEs and their use of the IPR system. The first part is a detailed description of the Norwegian patent system and Norwegian SMEs. The second part is the construction of a database linking statistics of patents and trademarks registered in Norway during the 1990s with Norway employment database (covers all enterprises that have registered employees).

The third section leads to the concluding recommendations and is based on interviews with individuals in organizations central to the Norwegian innovation system (detailed in section 1). In all 27 individuals were interviewed in 14 different organizations (major public funding and advisory agents, specialized advisory agents, regulatory and administrative framework, joint-research activities, research parks, private patent agents, and organizations representing the interests of independent inventors and individual entrepreneurs)

Section 1

General considerations concerning SMEs and their environment and systems of innovation in Norway	A review of the literature to frame existing concepts
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Section 2

Description of the Norwegian IP system	A description of Norwegian SMEs
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A **database** to see present use of IP (patents and trademarks) by SMEs

Section 3

Interviews with central players in IP institutions



Recommendations

Results: The main findings are that Norwegian SMEs are big users of the IP system in absolute terms but that larger companies are more intensive (file for IP 40 times more than micro enterprises, 20 times more than small enterprises and 8 times more than medium enterprises) and better users (level of non granted patents lower) of the IP system. SMEs tend to have a low level of awareness of the IP system, patents being more known than other forms of IP. They also tend to have trouble making strategic decisions on how to use their IP and are generally doubtful of their ability to enforce their rights if infringed.

The Norwegian IPR support system is considered not efficient enough and recommendations are made:

- use a more standardized code to identify applicants in the national databases,
- raise more debates on the use and policy of IP (Ministry of Trade could foster these debates),
- outreach activities seem on the right track but should be monitored and developed,
- there should be more support structures with better coordination between them and a broader scope (not just patents),
- Awareness of design is very low and should be fostered,
- the ability to enforce a patent seems to be the biggest concern so a litigation insurance could be explored,
- some IP stays idle so a state organization to help inventors market their inventions would be helpful,
- the possibility of introducing utility models should be explored
- the university-industry relation should be studied

The last aim of the study was to propose a method of research for other researchers involved in the link between IP and SMEs. The study emphasizes the need for more similar studies, for lack of information is one of the main barriers to addressing the sub-optimal use of IP by SMEs. It also recommends to go further than plain patent counts by, for example, using

surveys. Researchers shouldn't focus only on legal and formal issues but include the institutional framework of the IPR system. Finally, the combination of existing databases proves to be an efficient tool for research.

Factors Affecting the Use of Intellectual Property (IP) Protection by Small and Medium Enterprises (SMEs) in Australia

<http://www.innovation.gov.au/Documents/IPprotectionbysmes20050725153926.pdf>

Aim of the study: The Commonwealth Department of Industry Tourism and Resources mandated the Intellectual Property Research Institute of Australia to verify the assumption that Australian SMEs used intellectual property rights at a sub-optimal level. If this presumption was verified this study was to identify the reasons and note areas for further attention.

Methodology: To attain its goals the study proposes a methodology based on five tools: a review of the literature, a database, consultations with industry groups, a survey to stakeholders and case studies.

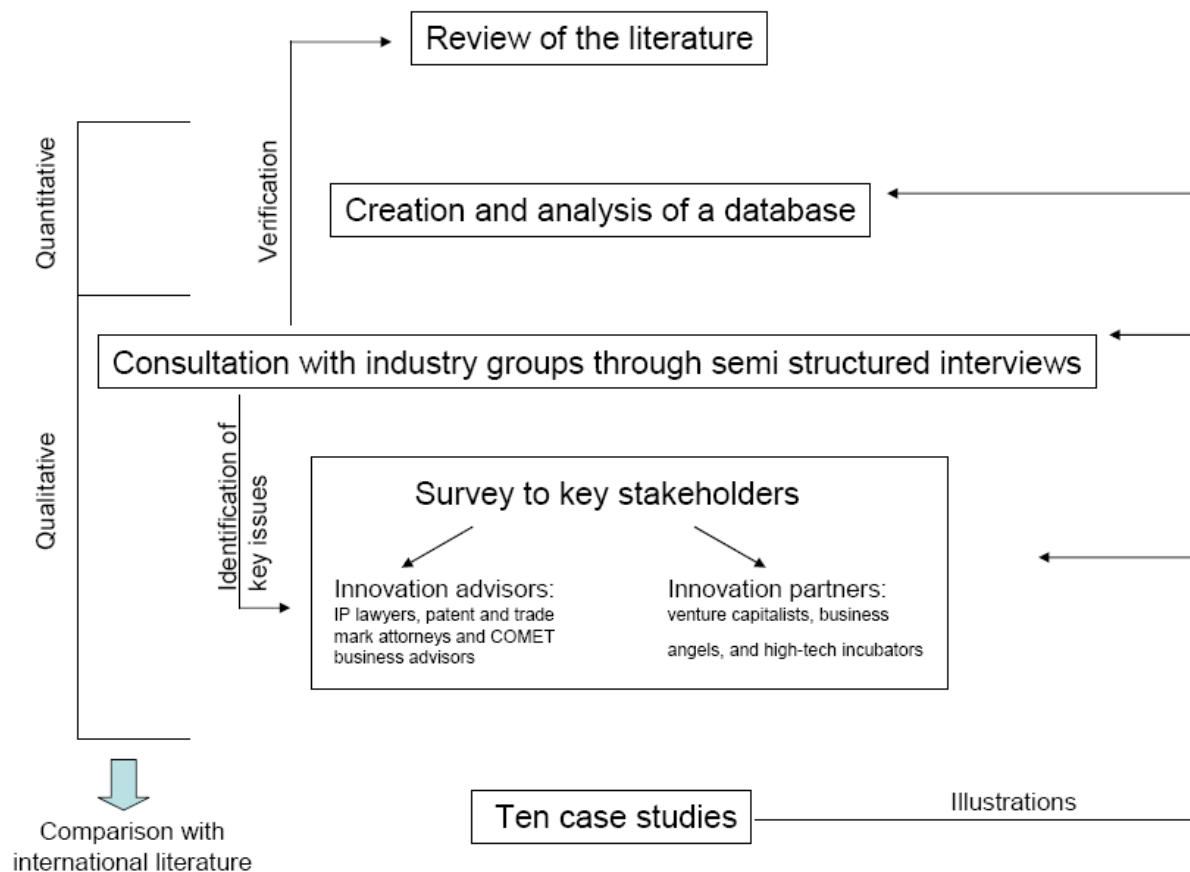
The review of the literature was used to find evidence to sustain the common perception of the sub-use of IP by SMEs and to identify potential reasons for this lack of use.

The database was created by linking IP Australia's databases on patents, trademarks and designs with two enterprise data sets: IBIS World (accounting data) and Australia OnDisc (multiple industry classifications). This is used to obtain an image of the use of IP in relation to company size and sector and eventually compare Australian SME activity with their counterparts abroad.

Consultation with industry groups were made through semi structured interviews and were designed to gather information on the key issues in the use of IP by SMEs. They were also conducted in order to verify certain issues found in the review of the literature and offer insights on the issues which were to be included in the survey questionnaires.

The survey to key stakeholders asked a series of questions related to the factors affecting the use of IP by SMEs. It was sent to two categories of stakeholders: innovation advisors such as IP lawyers or patent and trademark attorneys and innovation partners such as venture capitalists. Each set of survey was sent to 50 organizations.

Ten case studies were led on relevant firms from diverse sectors of industry. The aim was to show the diversity of SMEs and to illustrate elements found in the database, the consultations and the surveys.



Results: SMEs use of the IP system is not lower than large company use if the number of employees is taken into account (number of patents per employee). This contradicts the common perception of SMEs lagging behind large firms.

Broadly speaking SMEs face three main problems: cost, perceived insufficiency of benefits and lack of information (awareness). The perceived difficulties which may be encountered while enforcing rights in overseas jurisdictions are a deterrent for SMEs intending to export. In international comparison there are some similarities: the level of use between large companies and SMEs is broadly the same but there are big differences in overall use between economies (UK SMEs patent nine times more than Australian ones). International barriers to the use of IP seem to be: lack of resources (very important), perceived complexity of the system, problems relative to enforcement, fear of imitation. Generally speaking SMEs seem to be more prolific users of non formal protection methods.

The study does conclude that the Australian IP system is rather effective, but stresses that SMEs are a very heterogeneous group and that further considerations on the effectiveness of the IP system should take into consideration this diversity.

An Analysis of the Characteristics of Small and Medium Enterprises that use Intellectual Property + An Analysis of the Association between the use of Intellectual Property by UK SMEs and subsequent Performance

http://www.wipo.int/sme/es/newsletter/2009/news_0002.html

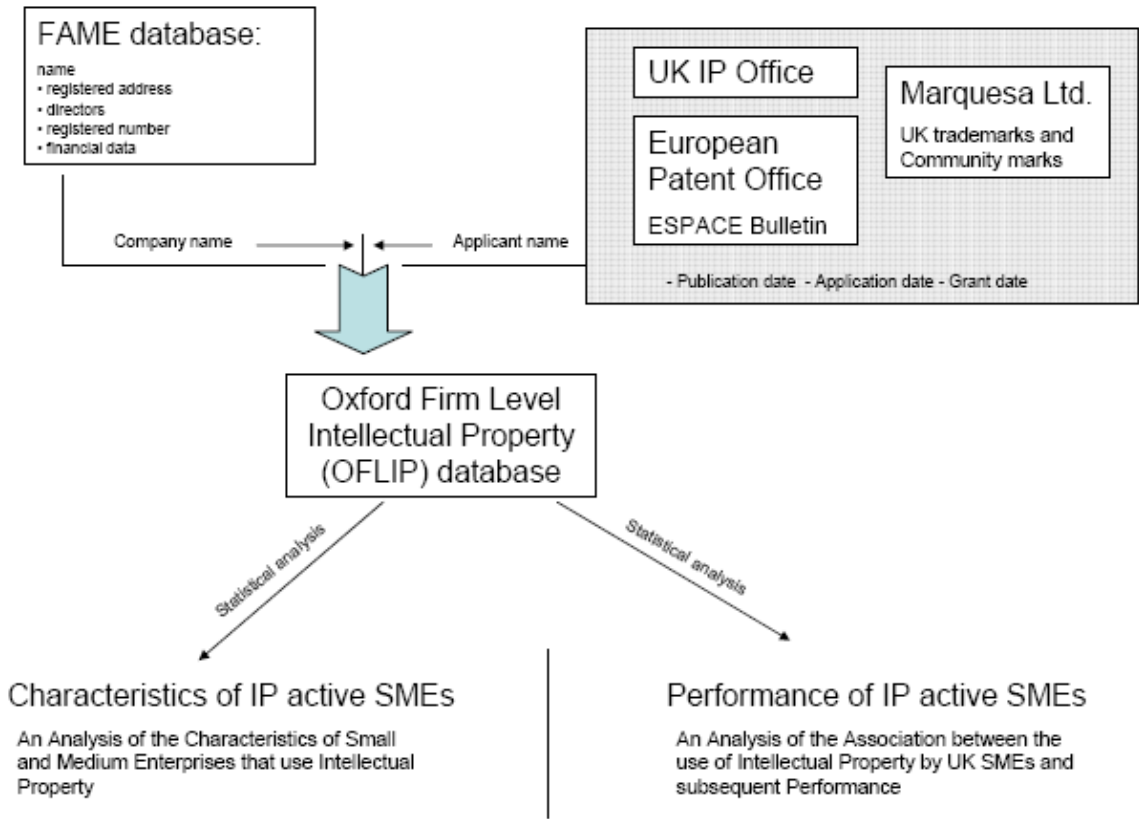
Aim of the Study: Based on the premise that there are many questions surrounding whether, when and how SMEs use IP, this first report documents the creation of a database, called the

Oxford Firm Level Intellectual Property (OFLIP) database. OFLIP links the IP activity in the 2001-2005 period to a large amount of UK firms. The report funded by the UK Intellectual Property Office then analyses the characteristics of IP active firms, such as geographical location, industry, size and profitability, and focuses specifically on SMEs.

The companion report published in the same time by the same authors and also funded by the UK IP office aims to explore the link between intellectual property and SME performance (general, growth and profitability).

Methodology: The basic methodology behind these studies is the combination of multiple databases to create a new database which would contain company information as well as IP information. The statistical analysis of the data contained in this new database will then produce insights on the relation between IP and company size, geographical information, industry sector, profitability, etc.

The information on companies came from the Financial Analysis Made Easy (FAME) database which holds about 2.04 million enterprises active in the UK. FAME lists information such as addresses, directors, registration numbers as well as some financial data (not for all companies and the extent of this financial data can also vary). Information on IP came for three different databases: the UK IP Office, Marquesa Ltd. and the European Patent Office (ESPACE Bulletin). The two sets of information were joined by matching company names of the FAME database with applicant names from the different IP databases (this demanded a certain amount of standardization of the names such as removing capitals and unifying Ltd. and Limited). This information was used in the first study to characterize the SMEs which use IP where in the second study it was used to link IP with company performance.



Results: The aim of the study not being a formulation of policy recommendation the authors simply state the correlations they have found between the possession of IP by SMEs and the different characteristics and performance of the firms. Their main observations (this is our selection but much more can be found in the studies) are:

Vol. 1

- The share of IP active SMEs is between 2.1 and 2.4% for the years 2001 to 2005.
- In proportion to their asset base, SME and micro firms are more IP intensive than large firms.
- The intensity of both patents and trade marks falls with size.
- Patenting firms are less likely to be aged between 1 and 3 years, but are more likely to be 5 to 10 years old.
- The numbers of IP active SMEs varies across industry and IP type.
- The South East region of the UK has the most patent publications by SMEs, followed by Greater London and the East Midlands, trade mark activity is dominated by SMEs in Greater London, followed by the South East.
- Joint patenting by UK firms is relatively common in UK patents (around 31% are joint), but much less common in EPO patents (around 7%).
- The view that SMEs may be so financially disadvantaged or lacking in information about IP assets, that they do not widely use these systems of protection is rejected by this study.

Vol. 2

- Only UK trade marking significantly reduces the probability of exit (going out of business), UK patenting, EPO patenting or Community trade marking have no significant association with exit probability.
- UK trade marking is associated with higher rates of subsequent growth, younger SMEs show the largest association and there is no significant association of the other three types of IP with subsequent growth, except for some indications that a Community trade mark raises growth in turnover.
- IP active SMEs tend to be pushed towards either 'poor' or 'high' profitability. IP activity seems to "hollow out" the center of the distribution. This is consistent with IP activity proxying innovation. Innovation can be a risky activity for SMEs, hence some fail and end up in the "poor" group, while others succeed and move to "high" profitability.
- The youngest IP active SMEs (age 4 and less) tend to perform poorly, for SMEs aged between 5 and 10 years the analysis indicates that UK trade marking and patenting can raise subsequent profitability. For mature SMEs (aged over 10) having a UK patent or UK trade mark published in 2001 is associated with an increase in profitability

Some recommendations for further research topics are made at the end of each study such as: Indications of proportions between published and granted patents, Analysis by technology sector and industry structure, a focus on company directors who sometimes personally own IP, joint patenting, spillovers and clusters in IP activity in the UK (knowledge spillovers), profitability, finance and the benefits of IP, high growth SMEs and IP, Micro firms.

Benchmarking National and Regional Support Services for SMEs in the Field of Intellectual and Industrial Property

http://www.proinno-europe.eu/admin/uploaded_documents/Benchmarking-Report-SME.pdf

Aim of the Study: Based on the premise that SMEs make little use of the available legal protection systems, the European Commission (DG Enterprise and Industry, as part of its PRO INNO activities) commissioned this study. Its aim is to identify, analyse, classify and benchmark support services for SMEs in the area of IPR as provided in the EU-27, Iceland, Iceland, Liechtenstein, Norway, and Turkey and in non-European countries (USA, Canada, Japan, and Australia). In particular:

- to collect and analyse information on existing support services for SMEs in the area of IPR;
- to benchmark a selected number of relevant support services;
- to identify good practices;
- to disseminate the results.

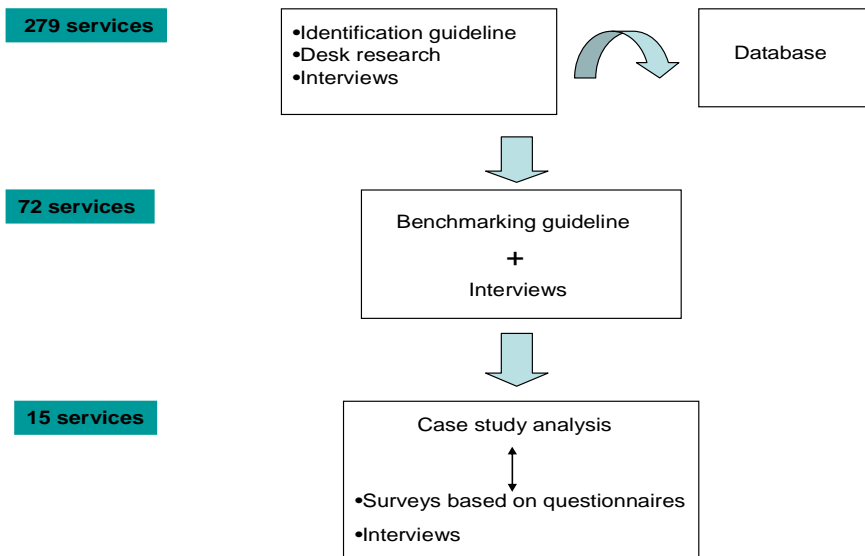
As a result, policymakers, interested stakeholders and SMEs would have an inventory of available support services and an analysis of how these should be designed in order to be of value for SMEs.

Methodology: The study uses qualitative and quantitative methods applied in three research phases conducted from January 2006 until June 2007:

In Phase 1 (*identification phase*), 279 services (224 in Europe and 55 overseas) were identified using a semi-standardized identification guideline, desk research and selected interviews with service providers. The information gathered was compiled into a database which provides service descriptions as well as key data such as contact details, customer groups targeted and type of IPR instrument/activity supported.

In Phase 2 (*benchmarking phase*), based on this data, 72 services which were considered aspiring candidates to become good practices were subject to a benchmarking exercise. The benchmarking phase employed a semi-standardized benchmarking guideline which enquired into a range of benchmarking indicators measuring the performance and outcome of the service, particulars of the operation and implementation and elements referring to the design and set-up of the measures. The methodology included a compulsory interview with the respective service provider and an analysis of available documents such as evaluation reports.

In Phase 3 (*case-study phase*), 15 services were selected to display elements of good practice. The case study analysis involved a user survey using a standardized questionnaire which aimed for 50 respondents per service and additional open expert interviews. In the end, 630 users were questioned with respect to their experiences with the services.



Results: The findings and recommendations are organised in three parts: the service level, the institutional level, and the policy level.

The main findings and recommendations for the service level are:

- Fairly few services can be described as high performers.
- The support services in place mainly focus on technical aspects (“how to patent”, registration issues) and on patents.
- Services should be offered in integrated packages, taking into account the complexity of the subject of IPR.
- The business perspective should be given more place in IPR service provision.
- A big bottleneck can be seen in the number of qualified people available for providing IPR support.
- For the institutional level:
- For implementing new or improved IPR services, it is not unimportant to consider who is offering such services.
- It is desirable to have technology/innovation development agencies act as entry points for clients.
- Moreover, bring the world of patent offices and innovation agencies together.
- The interaction of private and public service provision should be addressed.
- Attracting qualified staff.
- For the policy level:
- Co-operation between patent offices and innovation agencies should be well-balanced.
- Proper endowment with resources pre-determines the performance of the services.
- There is generally no significant evidence for fostering a strong regional approach, but there are several arguments for a national coverage.
- The field of IPR related services is suffering from a rather poor policy culture.
- Given the importance of a firm’s IP in today’s economy, policy should address the know-how of SMEs, trainers and the general public on IP management/protection/usage matters.

The recommendations aim at strengthening the usage of IPR by SMEs, but may also prove to be useful for fostering IPR utilisation as a whole.

Support Services in the Field of Intellectual Property Rights (IPR) for SMEs in Switzerland - A Review

<http://www.ige.ch/e/institut/documents/i1050101e.pdf>

Aim of the Study: The Swiss Federal Institute of Intellectual Property started this project in order to motivate SMEs to deal with intellectual property in a confident manner. The project aims at realising four key goals:

- to identify all relevant publicly funded IPR support services for SMEs;
- to provide an overview over the private market of service providers to SMEs;
- to benchmark the most relevant public support services in terms of their efficiency and effectiveness;
- to derive recommendations on how to improve the overall IPR support system provided to Swiss SMEs.

The analysis stems from the fact that the European Commission mandated a similar investigation (the report above mentioned), covering many countries but not Switzerland. One of the goals of the Swiss study was thus to “close the gap” of the Commission study with respect to Switzerland, but at the same time also to provide more in-depth and Swiss-specific information on the respective support system.

Methodology: The methodological approach involved three stages conducted from August 2007 until November 2008:

In Phase 1 (*identification phase*), all relevant Swiss IPR support services for SMEs were identified and, together with key data around the measures, entered into a database. This task was performed on the basis of desk research and (occasional) interviews with service providers.

In Phase 2 (*benchmarking phase*) services of sufficient scope were subjected to a benchmarking exercise, where several aspects of service design (i.e., how well the service was set up and planned), implementation (i.e., the governance structure and administration of the service) and performance (i.e., the output and impact of the service) were examined in detail. This study did not completely apply the selection criteria of the EC study in order to allow for a full assessment of the IPR-SME support system (not only the services considered best practices).

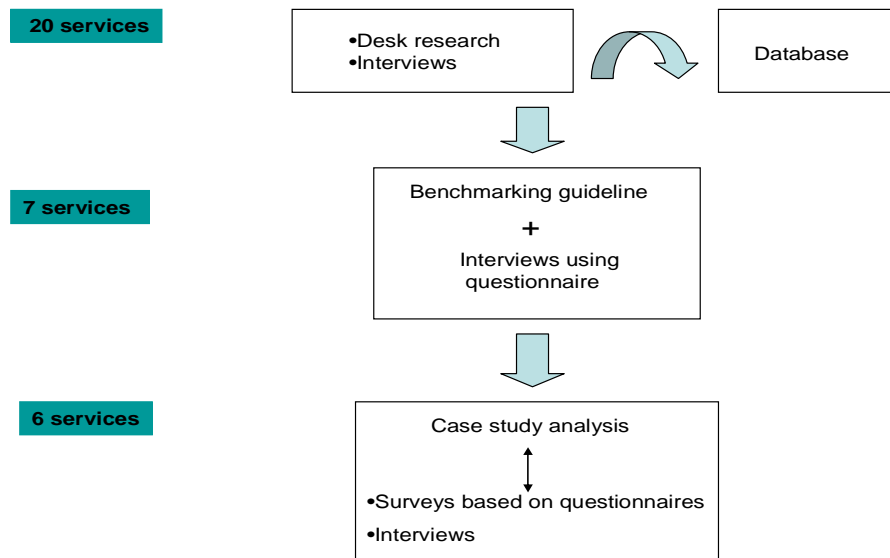
For obtaining the relevant data, interviews were conducted with all respective service providers, using a semi-standardized questionnaire.

In Phase 3 (*case-study phase*) a survey applying a mostly standardised questionnaire was carried out by telephone with the SME users of the benchmarked services; this survey provided the backbone for the documentation of the case studies. In the course of the user survey, 182 users were successfully questioned on their experiences with the services they utilized.

All three research stages were complemented by a series of 31 open interviews with IPR experts and stakeholders of the Swiss innovation system tackling questions on the necessity, effectiveness and efficiency of IPR support services for SMEs in Switzerland, as well as by a document/literature analysis.

Although the methodological approaches of the Swiss and the EC studies are similar, they differ in subtle details. The most relevant one concerns the scope of the IPR service system

that had to be scrutinised: the EC study had to seek good practice services, thus services that performed less favourably were not included in the subsequent phases. The Swiss study seeks all the Swiss IPR support service system for SMEs, therefore case study services presented in the Swiss analysis are not necessarily all “best practice” services.



Results: The general findings derived from this study are the following:

- IPR support in Switzerland is provided mostly in an embedded way, as part of non-IPR related offerings.
- There are hardly any dedicated and self-contained IPR support programmes.
- Existing IPR services are usually enacted and run in a very thought-through and structured manner.
- As a result, a number of the scrutinised Swiss IPR services for SMEs are performing even better than some of the best offerings found in other countries of the EU.
- However, with respect to the systemic set-up (and thus also the institutional work-division) and the identification of blind spots in the field in question may need to be tackled further through respective policy intervention.
- Some recommendations are made:
 - Develop and solidify a clear role of the IPI within the Swiss innovation system.
 - Examine in detail whether there are instances of market failure with regard to SMEs and IPR usage in Switzerland which make the implementation of new support schemes (or the extension of existing ones) in this field necessary.
 - Foster the dissemination of IPR and IP management know-how at the academic level.
 - Increase specific IPR awareness with stakeholders active in supporting businesses.
 - Foster cooperation activities between the IPI and other institutions.
 - Maintain close ties with the private sector in order to allow for a well-concerted division of tasks between private and public IPR support services.
 - Develop an IP/innovation strategy which would involve all important institutions in innovation support in Switzerland.

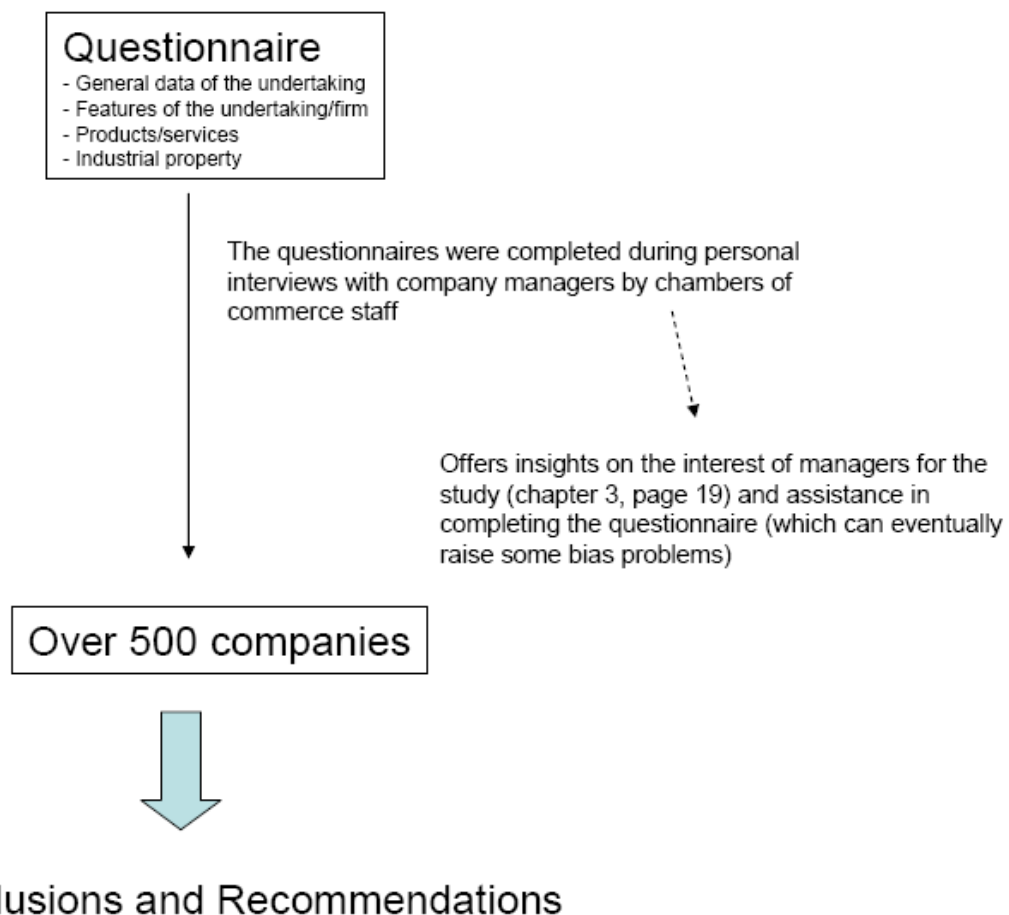
Survey on doing business, innovativeness, IP knowledge and application of Hungarian SMEs

http://www.mszh.hu/English/ip_survey/IP_1.pdf

Aim of the study: This study was made in the aftermath of Hungary's accession to the European Union. Its main subject of study is the use of IP by SMEs, however the effect of EU membership on innovation can be considered the second aim of this research.

Methodology: The structure of this study is quite simple and is based almost entirely on a questionnaire given to SMEs of various sectors. In all, over 500 companies (precise numbers are not given) have answered the questionnaire. This is a rather large number of responses which conveys weight to the conclusions.

The particularity resides in the fact that even though the questionnaire was in a fixed multiple choice format (with some space for comments or "others" in some of the questions) they were filled out with the help of chamber of commerce staff during personal interviews with company managers. So this study uses a hybrid method between interviews and questionnaires. This offers some insight on the respondents' interest and doubts on the subject, but can also lead to bias. Standardized questionnaires to be used as statistics are meant to be as neutral as possible. The help from diverse staff members and the discussions of the questions can distort the necessary neutrality.



Results: The study results in a series of conclusions on the awareness and use of intellectual property by SMEs in Hungary and some recommendations mainly stemming from participants' suggestions.

The conclusions are:

- Managing of intellectual property is a neglected field and improvement is important.
- Industrial property is recognized as important its benefits are mainly to create fairness in competition and offer direct market benefit, but about 1/3 of the respondents have no real knowledge of it.
- The main advantages of having IP are: guarantee of returns of R&D expenses, exclusive rights and increase in value of the company.
- The main disadvantages are that IP is complicated and time consuming, the costs are high (especially patent attorneys and translation), the experience of enforcement is negative and finally IP can prevent ideas from being available to the public.
- There is a rather big potential for IP in Hungary.
- SMEs sources of information are mainly professional contacts, internet and professional media; the Hungarian patent office plays a big role for firms engaged in industrial property.

The SME recommendations are:

- More business oriented information and education material, organization of trainings, preparation of a data base with investors and innovative undertakings, help finding patent agents, monitoring of competitors, monitoring of IP infringement.

SECONDARY STUDIES

Evaluation Report, INTELLECTUAL PROPERTY SURVEY (Technology for Business Growth-funded firms)

http://www.frst.govt.nz/files/Intellectual_Property_Survey.pdf

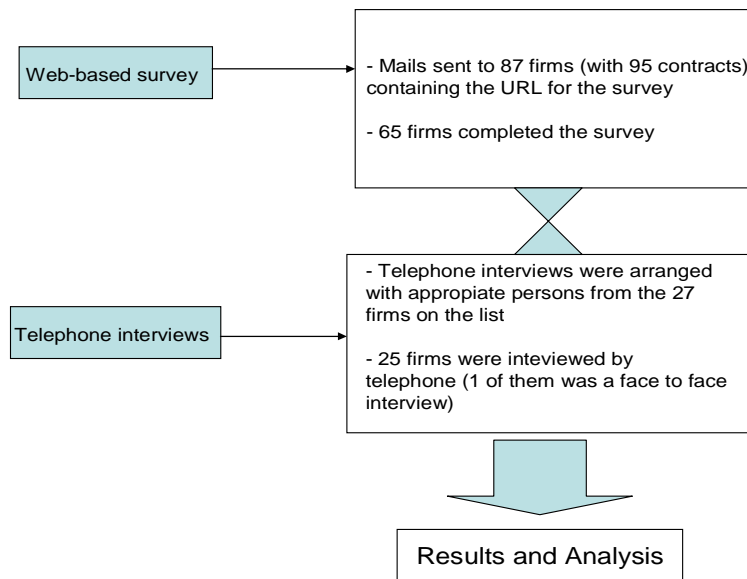
Aim of the study: This report was commissioned by the Foundation for Research, Science and Technology (FRST), in New Zealand, to gain a better understanding of private sector firms' experiences in relation to Intellectual Property (IP) developed as a result of, and/or used in, research and development (R&D) projects. This would also contribute to helping FRST ensure that its strategies support, where appropriate, effective private/public partnership in technology development.

Methodology: The methodology used is based on two survey approaches (during March-April 2003). 87 firms (with 95 Technology for Business Growth (TBG) contracts) were invited to take part in a **web-based survey** (final response rate was 72% of contracts). A further 27 firms (with 35 TBG contracts) were invited to take part in **telephone interviews** (a response rate 91% of contracts).

The telephone interviews allowed inclusion of some further questions and the collection of more qualitative information than was possible through a forced-choice web-based survey. Many of the questions in the two surveys were identical and, despite the different approaches to data collection, it was felt that this allowed aggregated analysis (of the two sets of survey data) for some of the responses.

The scope of the evaluation covered both formal (codified) and informal (un-codified) IP.

The aim was to survey firms that had completed significant R&D (research and development) projects, on the basis that these were more likely to provide useful information on IP. Thus, following some criteria a list of potential firms suitable for the evaluation was generated, from a list of all TBG contracts between the 1990/91 and 2000/01 funding years.



Results: The findings were divided in two sections: intellectual property and success of TBG. Concerning intellectual property, conclusions were drawn about:

-The importance of codified and un-codified IP:

- 28% of firms used “first to market” as their primary strategy for capturing value from their TBG R&D projects;
- 46% of firms considered some form of IP protection (incorporated into new products, processes or services) as the primary means of capturing value from their TBG R&D projects;
- 47% of projects used trade secret/confidential information, compared with 22% using NZ patents, 26% overseas patents, 24% copyright and 23% trademarks, as a means of protecting IP;
- Although uncodified IP was seen as the most important, around two-thirds of interview firms that had used some form of codified IP protection in the past believed it had been beneficial in capturing value from their R&D.

-Patenting strategy:

- A number of firms use NZ patents primarily as a means of accessing the overseas patent process.
- Some use the filing of patent applications in NZ and/or through the PCT process as a strategic tool to deter competition while not finally going through with the full patent.

- IP and research provider involvement:

- 75% of the original 149 projects involved collaboration with a CRI, University, research Association of Polytechnic.
- Where external research organisations were involved in ownership of IP, commercialisation outcomes appeared poorer.
- Very few projects involved other parties (other than research providers) owning IP with the firm.

- IP and innovation:

- The high level of success in developing new knowledge/IP (89% of projects resulted in new IP) is positive.

- Firms appear to be actively reviewing their IP strategy as their needs change (technology, product, market etc) and as their understanding of the strengths and weaknesses of codified IP increase.

Some more conclusions were also drawn concerning the success, impact and export focus of TBG funding.

LIST AND DESCRIPTION OF IMPORTANT

Databases

Databases seem to be one of the main tools used for obtaining a picture of the use of the IP system by SMEs. Such a tool doesn't really answer the question how or why SMEs use or don't use IP but shows if they do or don't and who does and doesn't. Databases are very efficient tools to start a research or to launch a series of researches. As above studies show, many studies complete the information obtained by databases with more qualitative tools, such as interviews and case study. Databases get their efficiency from the fact that they build on work that has already been done often for completely different purposes. The UK study for example combines a database originally constructed for financial analysis with IP data from different offices. The Norwegian study combines an employment database with IP data. The Australian study uses two different databases one with accounting information the other with industry classifications which are then combined with IP data. This tool for all its advantages in cost effectiveness has the major flaw of depending on the existence of prior work. This is not always the case especially in developing countries. The IP data can probably very often be found as by nature IP activities have to be registered to exist, they may however not always be available in electronic form. Databases on accounting, employment or performance of firms do not necessarily exist. There is also the problem of matching the datasets. The UK study discusses this issue and explains that often data sets are not standardized. Company names and abbreviations may differ and this can take an important amount of time to fix. The interpretations of results may also need a proper understanding of statistical tools, which is a relatively rare and therefore costly skill.

Review of the literature

Surveys

Interviews

Case Studies

Benchmarking

THE COMBINED USE OF TOOLS

LESSONS LEARNED BY THE AUTHORS

USEFUL RELATED REFERENCES

Business management

- *Business in SMEs*
- Enhancing the Role of SMEs in Global Value Chains http://j-net21.smrj.go.jp/expand/kokusai/oecd/statement/statement_en.pdf
- How Does Capability Emerge Within SMEs to Engage With Public Sector Procurement [http://www.ribm.mmu.ac.uk/symposium2009/Extended Abstracts 09/Turner, Paula.pdf](http://www.ribm.mmu.ac.uk/symposium2009/Extended%20Abstracts%2009/Turner,%20Paula.pdf)
- Key Determinants of Knowledge Sharing and the Building of Competitiveness in SMEs in Sabah Malaysia <http://nova.newcastle.edu.au/vital/access/manager/Repository/uon:2139>
- Management of SMEs [http://www.mdm.hit.edu.tw/data/Management SMEs.ppt - 284,23,Questions](http://www.mdm.hit.edu.tw/data/Management%20SMEs.ppt-284,23,Questions)
- On Building Competitiveness in Strategic SME Networks Empirical Evidence of 54 Firms in Two Networks <https://www.ltu.se/web/1.39383?!=en&pureId=175369&pureFamily=dk.atira.pure.families.publication.shared.model.Publication>
- Organizational Dimensions as Determinant Factors of KM Approaches in SMEs <http://www.waset.org/pwaset/v35/v35-69.pdf>
- Request for Proposal for Determinants of Competitiveness and Growth of SME Manufacturers of New & Renewable Energy Equipments in India http://www.drumindia.org/admine/newsevent-file/ne_9_24_2008_3_27_01_PM271.pdf
- Seminar on Industrial Modernization Policy, Practice and Evaluation, Factors Influencing Technology Use in Small and Mid-Sized Firms http://www.cherry.gatech.edu/sim/students/papers97S/tejada.PDFhttp://emnet.univie.ac.at/fileadmin/user_upload/conf_EMNet/2007/papers/Knop.pdf
- Success Factors of Strategic Networks of SME http://emnet.univie.ac.at/fileadmin/user_upload/conf_EMNet/2007/papers/Knop.pdf
- The Plue Print for a Successful SME in South Africa <http://www.smu.ca/events/icsb/proceedings/chald26s.html>
- The Competitiveness of SMEs in the Libyan Tourism Industry <http://www.managementjournals.com/journals/entrepreneur/article71.htm>
- *Corporate Social Responsibility in SMEs*
- CSR and Competitiveness European SMEs' Good Practice http://www.kmuforschung.ac.at/de/Projekte/CSR/European_Report.pdf
- CSR in the SME and Regional Competitiveness Working Group Introduction http://ec.europa.eu/enterprise/csr/documents/mainstreaming/ms_sme_topic1_discussion_en.pdf
- Promoting SMEs for Sustainable Development <http://www.wbcds.org/web/publications/sme.pdf>

- Questionnaire on Training Needs for SMEs on CSR Leonardo
http://www.esesme.eu/upload/1072007155820Questionnaire_on_training_needs_SMEs.pdf
- *Innovation management*
- High-growth, Innovative Asian SMEs for International Trade and Competitiveness Challenges and Solutions for APO Member Countries http://www.apo-tokyo.org/rr_papers/rr2007_11_13.pdf
- Innovation and Organizational Size in Irish SMEs An Empirical Study <http://www.familybusinesscentre.com/downloads/report1.pdf>
- Innovation Performance and Government Financing <http://www.ifn.se/BinaryLoader.axd?OwnerID=083826a2-2d65-4201-b20e-19af03b44b39&OwnerType=0&PropertyName=File1&FileName=Wp664.pdf>
- Innovation Policy and Performance http://www.eib.org/attachments/general/events/forum_2005_article2_en.pdf
- Innovation Process and Competitiveness in Romanian SMEs [http://globelics2007.sstu.ru/globelics.nsf/0/8824DD2FF44245FCC32572F30030B779/\\$File/Full%20paper_Deselnicu_Rusu_Martin.doc](http://globelics2007.sstu.ru/globelics.nsf/0/8824DD2FF44245FCC32572F30030B779/$File/Full%20paper_Deselnicu_Rusu_Martin.doc)
- Key Characteristics of the Small Innovative Firm http://cesis.abe.kth.se/documents/WP175_000.pdf
- Nordic Innovation Monitor 2009 http://www.foranet.dk/upload/nordicinnovation_09_lang.pdf
- Open Innovation and Globalization Theory, Evidence and Implications http://www.visioneranet.org/files/391/openING_report_final.pdf
- Technology Sourcing by Large Incumbents Through Acquisition of Small Firms http://www.epip.eu/conferences/epip03/papers/Wagner_EPIP_2008.pdf
- Towards a European Strategy in Support of Innovation in Services Challenges and Key Issues for Future Actions http://ec.europa.eu/enterprise/newsroom/cf/document.cfm?action=display&doc_id=537

Intellectual property not directly related to SMEs

- Briefing Note - Protection of Computer Software - A Synopsis of Intellectual Property Rights <http://www.gillhams.com/articles/174.cfm>
- Does IPR Protection Affect High Growth Entrepreneurship http://www.epip.eu/conferences/epip02/files/EPIP_ihdf.pdf
- IP Management and Support Policies a Mismatch <http://www.innovationconference.net/images/site/assets/Kuusisto.pdf>

Overviews of existing literature

- OECD Work on Innovation A Stocktaking of Existing Work <http://lysander.sourceoecd.org/vl=2001819/cl=26/nw=1/rpsv/cgi-bin/wppdf?file=5ksntsb4f771.pdf>

- Working Party on SMEs and Entrepreneurship (WPSMEE) High Growth SMEs, Literature Review [http://sme-centre.massey.ac.nz/files/CFE-SME_2007_16 - HGSMEs-FINAL VERSION.pdf](http://sme-centre.massey.ac.nz/files/CFE-SME_2007_16-HGSMEs-FINAL_VERSION.pdf)

IP and SMEs

- A Memorandum on Removing Barriers for a Better Use of IPR by SMEs http://www.proinno-europe.eu/NWEV/uploaded_documents/IPR_Expert_group_report_final_23_07_07.pdf
- A Portrait of the Innovative Firm as a Small Patenting Entrepreneur http://cesis.abe.kth.se/documents/WP127_001.pdf
- An Analysis of Small Business Patents by Industry and Firm Size <http://www.sba.gov/advo/research/rs335.pdf>
- Bearing the Burden Small Firms and the Patent System http://www2.warwick.ac.uk/fac/soc/law/elj/jilt/2003_1/macdonald/
- Does Patenting Help High Tech Startups http://www.epip.eu/conferences/epip03/papers/Rogers_HelmersRogersEIPPatents14092008.pdf
- Enforcing Small Firms Patent Rights ftp://ftp.cordis.europa.eu/pub/innovation-policy/studies/studies_enforcing_firms_patent_rights.pdf
- Foreign Patenting Behavior of Small and Large Firms http://www.sba.gov/advo/research/rs228_tot.pdf
- How do Small, High-Tech Firms Manage the Patenting Process <http://www2.druid.dk/conferences/viewpaper.php?id=164&cf=8>
- Intellectual Property (IP) Rights and Innovation in SMEs http://www.wipo.int/export/sites/www/sme/en/documents/pdf/iprs_innovation.pdf
- Intellectual Property in the Welsh Production Sector <http://www.swan.ac.uk/sbe/research/papers/Econ0401.pdf>
- Intellectual Property Protection in Service Sector http://www.iccwbo.org/uploadedFiles/ICC/policy/intellectual_property/pages/IP_protection_in_service_sector.pdf
- Intellectual Property Rights and Competitiveness Challenges for ICT-Producing SMEs http://www.ebusiness-watch.org/studies/special_topics/2007/documents/Study_08-2008_IPR.pdf
- IPR Protection A Motor for Mexican Competitiveness http://webadmin.pfizer.com.mx/files/crossContent/ccFile_1397.PDF
- Little Firms and Big Patents Abstract http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1306725
- Protecting Intellectual Property Rights Are Small Firms Handicapped <http://personal.lse.ac.uk/schanker/jle.final.pdf>
- SME's Approach to IP Protection Informal IP Protection and Management http://www.wipo.int/edocs/mdocs/sme/en/wipo_icc_smes_08/wipo_icc_smes_08_topic02_2.pdf
- The Bearer of the Mechanism of Change Small Firm Inventiveness and Patenting in Norway <http://eprints.utas.edu.au/1356/1/IVERSEN2007BearerOfMechanism.pdf>

- The Impact of Heisenberg Uncertainty Principle in IPR and SME Innovation Management http://www.mac-ssiim.com/Docs/200505/Verdelho_Abstract_LdV.pdf
- The IPR System, Venture Capital and Capital Markets Contributions and Distortions of Small Firm Innovation <http://www.business.aau.dk/wp/08-03.pdf>
- Transaction Costs and Trolls Individual Inventors Small Firms and Entrepreneurs in Patent Litigation https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=IIOC2008&paper_id=571
- Why IP Matters the importance of IP for SMEs (see footnotes) <http://www.wipo.int/sme/en/documents/pdf/ipmatters.pdf>
- Firm Size and the Use of Intellectual Property Rights (Abstract only) http://papers.ssrn.com/sol3/papers.cfm?abstract_id=889138
- Intellectual Property Rights: a PPT that refers to a study of a small set of SMEs <http://www.fi.dk/forskning/erhvervsphd/erhvervsphd-forlobet/elementer-i-forlobet/erhvervskursus/holdiv/Intellectual%20property%20rights.pdf>
- Patent database Searches – New Commission Initiatives ftp://ftp.cordis.europa.eu/pub/patinnova99/docs/1_5_kutt.pdf
- A Real time Evaluation of Intellectual Capital, Intellectual Property and Intellectual Property Rights in Early-stage On-line Enterprises http://www.ebrc.info/kuvat/710-719_04.pdf
- Barriers to Innovation in SMEs: Can the Internationalization of R&D Mitigate their Effects http://www.global-innovation.net/publications/PDF/Working_Paper_50.pdf
- The Strategic Management of Innovation in SMEs: A Multiple Case Study Approach in Switzerland http://www.kmu.unisg.ch/rencontres/Renc2008/Topics_2008/D/Rencontres_2008_Volery_f.pdf
- Intellectual Property Rights Business Management Practices: A survey of literature http://www.cirst.uqam.ca/Portals/0/docs/note_rech/2004_01.pdf