

STARTUP COMPANIES AND IPR SUMMARY

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Summary

Research background, objectives and methodology

The purpose of this research is to evaluate the relationship between startup companies and IPR issues. The research seeks to direct the attention of startup companies and their advisors, investors and supporting actors towards IPR matters. The objective is to start a general discussion about the significance and development of IPR. As a side product, the research will also produce an information package for startup companies that will advise them on how to best manage and organize IPR matters during the company's early stages. This research project has been funded by Papula-Nevinpat, a patent office.

The research first conducted a literature review of the latest publications in the field. Next, drawing on the material collected for the literature review, a questionnaire was developed for interviews with IPR experts and companies.

A total of ten expert interviews were conducted. Four of the interviewees represented public sector organizations, of which three were directly involved with company services, innovation services and IPR advice. The fourth public sector interviewee worked in IPR management and strategy on a national level. Three other interviewees represented investors and while the final three participants worked with other actors closely related to startup firms or IPR matters. Eight companies were interviewed. The interviewed companies were selected as they were relatively young, growing and they owned IPR.

A survey on startup companies and their management of IPR was developed based on the results of the interviews with the experts and companies. The survey was targeted primarily at young companies that were established after the year 2000. A total of 17120 questionnaires were sent out of which 3000 were returned due to a non-functioning e-mail address or a similar reason. The response rate was about 5% as 709 responses were received. The number of responses was sufficient for the purposes of the study.

The world of IPR is often quite unknown for startup companies according to the survey results and the expert and company interviews. IPR is often managed with little planning and without sufficient knowhow. The following will provide an overview of the issues that the study identified that could be further developed in order to avoid the most common mistakes in IPR matters and to improve the knowhow and planning of companies' IPR processes.

What does IPR mean and include?

The experts said that the level of IPR knowhow varied significantly between companies. The level of knowhow was especially varied across industries but also was found to vary within the industry. IPR was often known simply as a patent. Generally, however, the concept includes copyrights, online domains, trademarks, etc. While many matters might be known in theory there was little understanding of how they should be applied in business. IPR is generally learned through experience and unfortunately most often through failure.

The interviewed companies emphasized that the management of IPR matters should be started before the company is even established. This is to ensure that non-disclosure and secrecy agreements between the founders are ready at the establishment phase. In this way IPR matters develop “hand in hand” with the new company's business strategy.

The questionnaire surveyed the companies knowledge about IPR matters by asking them how well they knew terms that related to IPR. Overall, the respondents believed that they had a relatively good understanding of IPR terms. However, simply knowing the term does not say much about how well the respondent knows the content, use of the term and how it is related to the respondent's company's activities. The term that was best known was online domain. This was familiar to three out of every four respondents. Trademarks, copyrights and patents were known by almost two thirds of the respondents while a fifth were not at all familiar with these terms. The least known terms were copyright of design and the protection of utility model. The protection of utility model was unknown to a third of the respondents.

Understanding IPR – The terms related to IPR are insufficiently known. In order for a starting business to be ready to manage its IPR matters it should first understand what is being talked about when IPR is discussed. Information about IPR should already be made available during education whether it is entrepreneurship training or university education. A good example of making IPR matters known amongst startups is the cooperation agreement between patent office Papula-Nevinpat and the Aalto Start-Up Center.

Do startups have IPR or licenses and do they understand the significance of protection?

The company survey showed that almost all firms have IPR if one includes copyrights and online domains. If only so-called strong protection methods are considered (patents, protection of utility models, copyright of design and trademarks) then almost 30% of the companies have IPR. Just over half of the companies saw that IPR matters were relevant to their business activities. The majority of all IPR and their corresponding applications were in Finland. However, there were a number of companies with patents and applications in the EU and the USA.

Neither licensing nor obtaining licenses was very common amongst young companies. About a fifth of companies that possessed IPR had licensed their property. Of the companies that did not have IPR about 90% had not licensed or did not see that the matter related to them. A third of the companies that own IPR have obtained licenses while only a fifth of companies that did not own IPR had done so. Roughly 40% of companies that did not own IPR saw that even obtaining licenses was not relevant to them.

The most significant protection mechanism was seen to be secrecy, which half of the respondents found to be very important. The next most important mechanism was online domains, followed by copyrights and trademarks. Copyright of design, patents and protection of utility models were only found to be important by a tenth of the respondents. About 40% of the respondents saw that these protection mechanisms were not related to their business activities.

The companies that owned IPR found protection mechanisms to be more significant than those companies that did not have IPR. The biggest differences were between trademarks and patents. This is a reflection of the difference between companies that own and those that do not own IPR. Owning IPR and integrating it into the business strategy increases the significance of protection mechanisms (patents, trademarks) while companies without IPR do not see this as part of their business model and do not find it significant.

The importance of strong protection mechanisms was emphasized by those companies that valued and owned IPR. For example, companies that had patents valued their significance as much as secrecy. This common theme was repeated with trademarks, copyright of design and protection of utility models.

Secrecy – Secrecy or non-disclosure is a startup company's first requirement for successful IPR management. This is a concept that should be emphasized in, for example, entrepreneurship training.

How do startup companies progress in their IPR management?

The questionnaire asked about the company through the following phases:

- Activities at the company’s establishment phase
- How to work out what the company has to protect
- How protection mechanisms are decided upon
- How the company prepared for protection mechanisms

The analysis left out those companies that indicated that they do not have anything to protect or that IPR is not relevant to their company.

The companies were divided evenly between four activities at the establishment phase:

Company establishment phase	We had sufficient expertise in-house to manage our IPR matters	We consulted with an external IPR expert	We attempted to manage the IPR matters in-house despite a lack of knowhow	IPR matters were not managed at the establishment phase
	80 companies	115 companies	92 companies	81 companies

When the company moved on from the establishment phase nearly half of the companies assessed their own needs.

Protection assessment	We assessed our own needs alone	We assessed our needs with an IPR expert	We have not assessed our needs
	162 companies	105 companies	101 companies

At the decision phase over half of the companies decided on their own protection measures.

Decisions regarding protection measures	Decided ourselves	Decided together with an IPR expert	We have yet to decide
	199 companies	77 companies	92 companies

When preparing for protection measures IPR was kept secret or secrecy was not necessary. Only about one in seven companies reported not being secretive enough about their IPR.

Preparation for IPR protection measures	We were very secretive about our IPR	There was no need to be secretive	We were not sufficiently secretive about our IPR
	167 companies	145 companies	56 companies

After this we looked at what options the companies exercised as they progressed from their establishment to the phase in which they took to take protective measures. The model considers the four options that companies could possibly undertake regarding IPR management. Of the four options managing IPR issues internally with sufficient knowhow, consulting external IPR experts from the beginning generally were successful while managing IPR internally without the necessary expertise or leaving IPR matters untended were unsuccessful.

How well do companies manage their IPR issues now compared to how well IPR issues were managed at the establishment phase? Of the firms that initially managed their IPR properly about 80% continued to do so in the subsequent stages. When IPR issues were managed without adequate knowhow or expertise only one half of the companies ended up with a positive result. Of the companies that did not manage their IPR issues at the establishment phase two thirds are still in the process of managing their IPR matters.

IPR management process – The greatest challenges to properly managing IPR matters arise at the company’s establishment phase when companies try to manage their IPR issues internally without adequate knowhow or when they are simply left unattended. Furthermore, companies often find themselves in trouble when they are not secretive enough in their preparation for protective measures. Companies should be better informed about the importance of systematically managing their IPR and advised on how and where they can gain sufficient IPR management knowhow. Obtaining knowhow is often done by recruiting the appropriate employees or by securing outside expertise. However, a startup company may have difficulties hiring IPR personnel thus leaving external experts as the only viable option. There is a wide range of IPR experts that are available though there are great differences in competence amongst them.

What is the ideal model of IPR management for a startup company?

The expert and company interviewees presented an ideal IPR management model designed for startup companies. It includes the important elements and the sequence of activities by which a new company should manage their IPR matters.

- Contact an expert when the company is established (or even before the company is founded) and product development work is started. This way you will know right away if you have something to protect. At this stage you will also go over general issues related to IPR.
- Go over what requires protective measures (trademarks, patents, models, online domains)
- Secrecy or non-disclosure before protection measures
- Deciding what to protect with the expert
- Protective measures are started
- Seek financing to fund the protective measures (Foundation for Finnish Inventions, investors, TEKES)

Experts were asked to assess the ideal model for a company starting on its path into the world of IPR. Companies, on the other hand, were asked if their path into IPR was similar to the ideal model and what the ideal model looks like from the company perspective.

A company’s IPR strategy has to be integrated into the company’s business strategy. These two strategies need to complement each other. If this is true then the company knows how to deal with IPR matters. One company’s strategy might well be not to patent anything while another might want to start to patent quickly and grow rapidly through licensing. The ideal model is a useful when a company decides to start managing IPR matters and to take care of them in a professional manner.

When discussing the ideal model the experts emphasized the role of secrecy. It is crucial and necessary for the IPR process. It can also be seen as the most important measure as IPR (especially patents) protection can be quite expensive. A startup must think carefully about the how far it can go with its funds or resources. In order for a patent to provide enough protection it is often necessary to patent widely and establish ”patent families” in numerous countries. This is very expensive and a startup firm may not find it useful to invest all of its meager resources on this. Thus, it may be more useful to keep everything secret until the company has made enough money through its operations and its finances are stable so that it can cover the patenting

expenses. This is emphasized by one respondent's statement, "You have to understand if you are going to patent or not patent. How widely you are going to patent and if you have the resources to maintain your patents and if you can afford to defend them."

When evaluating the ideal model may startup company respondents found it to be adequate. An issue that was emphasized was that IPR matters should be managed already before the firm is established, especially in companies that are based on inventions. Additionally, the need for secrecy was stressed and how this was a viable, lighter option to patenting. It was also important to remember the significance of the online domain and that it must be protected in social media (for example, Twitter, Facebook). The respondents also stated that it is important to remember the motive for IPR activities. One has to be clear on why IPR is so important for companies all while remembering how expensive patenting can be. There is no such thing as a "patent police" that enforces potential infringements. This matters must be monitored and acting in defense of a patent may, depending on the process, be much more expensive than the actual patenting. A piece of good advice is to patent only when the IPR generates some business and thus the customers, in a way, can pay for the patenting.

Marketing the ideal model – One way by which to develop IPR knowhow is to create an IPR guidebook. This book would present the so-called ideal model by which to manage IPR matters in a startup company. It would clearly identify the stages that a company should go through in order to manage IPR effectively and be a source of in-depth information. The basis for the ideal model would be the model discussed in the company and expert interviews. The guidebook would also include information on where to obtain knowhow, how secrecy works, how to draft an employment, partnership, assignment and cooperation contract, how to obtain a license, how to license, where to look for funding, how to avoid conflicts, etc. Furthermore, the guide should have a section on the motivation for IPR and why it is important for startup companies to manage their IPR issues as soon as possible with expert advice.

Where to find the money for protection and is IPR useful when looking for funding?

Almost half of the companies stated that they did not have IPR protection and about 40% realized that they had not sought funding for their protection measures. If the company did in fact have protection measures they were funded with general funds used for the rest of the company's operations. Some companies had applied and received funding from public sources. Very few companies had applied or received funding from investors. A very small number of companies reported that they had sought funding for protective measures from public funds and/or private investors but had not received financing.

Of the companies that owned IPR half had not sought out funding for protective measures and almost one third reported financing their protective measures through general company funding. Almost 40% of companies reported seeking financing for protective measures. Of these about one third stated that they had not received funding. Of the companies that received funding, a majority had approached public sector sources. Most of the companies that did not own IPR reported that their protective measures did not have expenses or that they had not sought financing.

Integrating business and IPR strategy – It became apparent during the expert interviews that a company's business and IPR strategy must be integrated with each other, especially when seeking financing. A common problem is that management consultants and IPR consultants rarely work together and, thus, the advice is rarely integrated. IPR is also very important for potential investors. A company's IPR provides something concrete that can be evaluated and can promise a bright future for the company. Generally, investors first scrutinize a company's financial state and management, however the existence of IPR also ranks very high on the list of investment criteria.

Have property contracts been drafted correctly? Has IPR been infringed upon? Does the company find itself in a conflict?

Companies that own IPR have generally taken IPR into account in their contracts. Roughly two thirds of companies take immaterial property rights into account in their assignment or commission and cooperation agreements while about one half of companies consider this in their employment contracts. In companies that do not own IPR, immaterial rights are much less significant and are only taken into account in 40% of assignment and cooperation agreements and 30% of employment contracts.

The expert and company interviews revealed that the second most important factor, after secrecy, was the proper drafting of contracts. Contracts are crucial in situations where questions about IPR ownership arise. A general rule of thumb in companies is that employment and partnership contracts are clearly agreed upon and that inventions and any possible IPR belong to the company. This is also most often the case with commission or assignment, cooperation and supplier contracts. When these contracts are correctly drafted companies can avoid many unnecessary conflicts and potential lawsuits. The potential savings for all parties involved are significant.

IPR infringements, conflicts and legal proceedings were experience by at most 10% of companies. Thus, they are quite rare. Very few firms had ended up in court over these matters. Companies that own IPR have naturally found themselves in these situations somewhat more frequently than companies that do not own any IPR.

Drafting contracts – Both the experts and companies emphasized that contracts are best drafted by an expert. An experienced company may also draft them internally though in most cases they are then examined by external experts. It was stressed that it is rather foolish to try to save money by not consulting experts when drafting contracts. Contracts that are poorly or incorrectly drafted can prove to be very costly to a company. During company acquisitions these contracts are generally examined very carefully. If there are significant faults in the contracts these may become insurmountable obstacles. If conflicts arise a company should always try to negotiate a solution. Winning a legal battle in court is hugely expensive, a lot of work and requires an army of experts and generally small companies do not stand much of a chance of winning.

Do startup companies use external IPR expert services?

According to the company survey the three most popular IPR advisory service providers are the National Board of Patents and Registration, law firms and patent offices. The companies that had IPR preferred the services of patent offices, the National Board of Patents and Registration, law firms and the Foundation for Finnish Inventions. The companies that did not have IPR turned to the services of the National Board of Patents and Registration, law firms and Centres for Economic Development, Transport and the Environment. The companies that owned IPR used the services of advisors significantly more frequently than companies that did not own IPR (4,8 times per company compared with 1,3 times per company), which is quite natural. The use of the advisory services was also weighted in these groups rather differently. The companies that owned IPR drew upon the expertise of the experts specializing in IPR, namely the National Board of Patents and Registration and the Foundation for Finnish Inventions much more than companies that do not own IPR. The companies that do not own IPR turned to expert services that provide advice on general business matters related to the industry or particular product, such as copyright organizations and industry and company associations, more than companies that own IPR.

Of the advisory services, the general IPR advice and financial services were used quite evenly by both those firms that had and did not own IPR. On the other hand, the advisors were directly related to the management of IPR matters (processes of protecting rights, IPR legislation advice, commercializing/licensing, infringement of rights/legal process and IPR portfolio management) were used much more frequently by companies that owned IPR compared to those companies that did not own IPR.

Advisory services – There is a wide array of advisory services and there are as many advisors as there are companies seeking advice. Companies that are starting up initially need general advice including information about all of what is included in the world of IPR and what is relevant to the company in question. As a company advances in its IPR matters it requires more specific and customized advice. In the early stages it can use public sector actors (National Board of Patents and Registration, Foundation for Finnish Inventions, Centres for Economic Development, Transport and the Environment). However, by contacting a patent office already at this stage the company can gain all its information from one source and also receive more specific customized advice on such issues as IPR portfolio management. Patent offices can also provide advice on legislation pertaining to IPR as can specialized law firms. There are many kinds and levels of advisory services of which the price can also vary greatly. It is also important for a startup company to know where it can find financing for IPR expenses.

How are IPR matters managed today?

Around 40% of companies use external experts to some degree in drafting their contracts and documents. Of the respondents roughly 20% used some kind of private and public advisory services. About 15% of the companies had more or less externalized their IPR matters completely to a specialist or a person that manages IPR matters full-time. The size and age of the responding firms was reflected in the fact that only a few companies had progressed so far as to have a full-time IPR person or an external IPR specialist.

The company interviewees were especially experienced with IPR. Those with large IPR portfolios had their own IPR personnel (IP council, IP management team, etc.) but most of those still handled IPR matters on a part-time basis. Typically, smaller patent portfolios were managed by the company's CEO or a similar individual. All of the companies that were interviewed also relied on, in addition to their own personnel, IPR specialists. The external specialists were mostly patent offices and law firms. These experts played an important role in the drafting of applications and contracts. This work was often externalized to them or was conducted internally and then examined by the experts. The interviewees emphasized the systematic management of IPR matters, which truly could not be “left on the back burner”.

The expert interviews revealed a lack of knowhow and professionalism in preparing and drafting applications and contracts. A small startup company should be especially careful in these matters. Many bigger problems related to IPR can be avoided if the documentation is prepared in such a way that misinterpretations are not possible. In order to ensure this experts must be consulted. It is also useful to remember this is a small investment that can prevent conflicts later.

Managing IPR matters – Generally, many startup companies handle IPR matters quite negligently. If a company does not have enough IPR knowhow it should get this from external sources. Leaving IPR issues unattended will undoubtedly result in problems cumulating later on. This is an important issue that should be stressed in business education and by consulting services.

Has a company been successful in managing its IPR?

The survey asked each company to evaluate its performance in the management of IPR issues. The respondents had the option of answering, “IPR matters are not relevant to us”. This answer was selected by over 200 companies (about 30%) while 50 respondents did not answer the question.

Of the companies that owned IPR, 70% gave themselves a grade of 7. Less than half of the companies that did not own IPR gave themselves a grade of at least 7. In terms of a school grade scale, the self-evaluation yielded an average of 6+. The companies that own IPR gave themselves a grade of 7 and the companies that did not gave themselves a 6.

The companies had two options by which to manage their IPR matters so that they could have been able to give themselves a high grade on their IPR management performance. One of these was the so-called independent option by which the company has seen that its own expertise was sufficient to manage IPR matters, to assess what needed protection and make its decisions regarding protective measures (7½). The other option was that companies, due to their lack of expertise, turned to external IPR experts and worked together with them to assess that which needed protecting and made the appropriate decisions (7). When these two options were complemented by strict secrecy concerning IPR before the protection measures were initiated then a company can say that they managed their IPR matters better than most.

Two groups of companies can be identified at the establishment stage. In one group IPR matters were primarily handled internally due to sufficient expertise, external IPR experts were consulted from the very beginning and continued to be consulted until the very end or IPR matters were handled internally and supported with external specialists. In the other group companies attempted to manage their IPR matters internally despite a lack of expertise or IPR matters were simply not managed. The performance of these two groups differed significantly.

The companies that had expertly managed their IPR themselves or those that had turned to outside specialists gave themselves grades ranging from 7 to 8. Only those companies that belonged to this group that had not been sufficiently secretive about their IPR gave themselves lower grades. On the other hand, those companies that had decided to manage their own IPR without the necessary knowhow or had simply left the IPR issues unattended during the establishment phase gave themselves, with a few exceptions, grades ranging between 4 and 5.

IPR knowhow – The management of IPR matters was, according to this self-evaluation, most successful in those companies that had sufficient IPR knowhow or those that, from the earliest stages, had gained external expert advice. The companies that had attempted to manage their IPR matters without the necessary knowhow or had simply left them unattended evaluated themselves to have clearly failed in the management of their IPR matters. A startup company should be able to admit its weaknesses and seek to address IPR issues either by recruiting or externalizing IPR matters at the earliest possible stage.