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Bridging the Gap Between Intellectual Property Service Providers and SMEs

**A Qualitative Study of Knowledge Gaps, Incentives, and Strategic
Misalignment in IP Consulting**

Master's thesis in Management and Economics of Innovation

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Abstract

This thesis investigates the relationship between intellectual property service providers (IPSPs) and small and medium-sized enterprises (SMEs), with a particular focus on the persistent knowledge gap and the dynamics of miscommunication that characterize their interaction. Drawing primarily on qualitative data from semi-structured interviews, the study reveals a mutual disconnect: IPSPs often lack understanding of how intellectual property (IP) is used in the practical, day-to-day operations of SMEs, while SMEs frequently lack the foundational knowledge needed to assess IP advice or to proactively seek appropriate support. As a result, even when connections between the two actors are established, communication is strained and essential strategic opportunities are missed. The study also finds that IPSPs may, both knowingly and unknowingly, mislead clients by promoting solutions that align more closely with their service offerings than with the client's actual needs. To address these challenges, the thesis proposes the integration of a management-oriented intermediary within IP service provision: a role that combines legal expertise with business understanding to bridge the gap between strategic IP potential and SME operational reality.

Keywords: Intellectual property, SME, consulting, patent attorney, IP strategy.

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Definitions

There are several different interpretations of IP terminology. To clarify any confusion, we will define words that will appear frequently throughout this report in this section.

Intellectual property (IP): Intangible assets that can be leveraged to attain and protect competitive advantages. Examples include but are not limited to inventions, knowledge, trade secrets, know-how and brand.

IP rights (IPRs): The registered form of IP that grants the owner certain rights of protection. In this paper, patents, trademarks and design rights will be covered, to varying degrees.

IP service provider (IPSP): An organization that provides IP expertise, can be a consultancy firm or an IP department within a firm. This study will focus on consultancy firms.

IP consultant: A consultant providing services in IP, usually a patent attorney or an attorney-at-law.

Small and medium-sized enterprises (SMEs): Firms with fewer than 250 employees and an annual turnover of less than 500 MSEK. For the purpose of this study, this term refers to small and medium-sized enterprises that are not IPSPs, even though IPSPs may be SMEs themselves.

Freedom to operate (FTO): The ability to commercialize a product or process without infringing on the IPRs of others.

1. Introduction

A key capability for innovating firms is the ability to protect their intellectual property (IP). Many firms lack internal departments responsible for handling such tasks, which leads to them often relying on IP service providers to acquire, manage and defend IP assets. Especially in the case of small and medium-sized enterprises (SMEs), reliance on external expertise is the norm, as these firms often lack the competence and resources to undertake IP-related activities (Rothwell & Dodgson, 1991). Additionally, due to their resource-intensive nature and complexity, intellectual property rights (IPRs), such as patents, are generally used strategically rather than operationally (Jensen & Webster, 2006). Despite this, many firms lack the expertise to incorporate their IPRs effectively into their overarching strategy (Fisher & Oberholzer-Gee, 2013; Khawand et al., 2024). As a result, IP service providers (IPSPs) play a key role in the IP landscape.

Although IP requires work on multiple levels, many IPSPs mainly focus on operational tasks, expecting clients to implement IPRs in their business models. In some instances, this is a conscious decision made based on the provider's profile, but in many cases there is demand from both a business and societal perspective to adapt the services provided by IP firms to enhance commercialization of inventions. While filing a patent is a task that requires certain know-how, innovators face challenges beyond such paperwork. Perhaps IPSPs could extend their service offerings to also address these challenges. This would naturally benefit inventors, and by increasing value for clients, it also enhances the value of services provided by IPSPs. From a societal perspective, it is also desirable to move inventions from R&D facilities to market, by definition turning them into innovations. IP plays a key role in this process, as well as in incentivizing innovation in the first place. As such, there is a societal need to support IPSPs in strengthening their ability to guide innovators in making informed decisions, so that new technologies can reach the public.

Intellectual property is highly complex, posing significant challenges for firms that own and manage IPRs. Simply owning a patent is rarely, if ever, enough to protect the IP. The threat of imitation has been researched since at least the 1980s, when Teece (1986) noted that imitators often outperform innovators on the market in the long run. This appears counterintuitive, given that the patent system was designed to prevent this very phenomenon. So how can IP owners effectively leverage their IPRs to maximize long-term profitability? And how can IP service providers better assist their clients in this pursuit?

Early research indicates that SMEs face greater disadvantages compared to larger firms in forming connections with external expertise (Rothwell & Dodgson, 1991). More specifically, Fisher and Oberholzer-Gee (2013) note that IP management requires collaboration among engineers, lawyers, and business executives, who often lack a common language. This view is shared by IP service providers, especially when collaborating with SMEs where the contact person is not an IP specialist. This indicates

opportunities for improved collaborations, possibly by expanding IP service providers' range of services or reducing friction in client interactions. While Holgersson (2013) notes that complete reliance on external IP service providers is an inadequate substitute for internal competence, Jensen and Webster (2006) acknowledge that many SMEs outsource certain functions. Nevertheless, the dynamics between IP service providers and strategic users of intellectual property, such as SMEs, remain largely unexplored in research.

The purpose of this study is to explore how IP service providers can support the business needs of their clients from an IP perspective. From a research perspective, the study fills the literature gap between general IP research and studies on industry dynamics. Preliminary research indicates that the efficiency of information exchange between IP service providers and their clients could be improved, and that the former do not fully satisfy the needs of the latter. The original business models of IPSPs resembled those of product-oriented firms. Although writing patents in itself is a service, the final deliverable to the client was, in essence, a piece of paper. The relevance of owning a patent depends on the integration of the IPR in the business via an IP strategy, something that has been proven to be difficult for SMEs to accomplish alone.

Furthermore, although the traditional business models of IPSPs have historically proven profitable, the emergence of AI-based services may disrupt the industry by automating operational tasks. For example, software could potentially outperform patent attorneys by delivering similar services at a lower cost. Early signs of this shift are already visible in some emerging initiatives, such as using generative AI for preparing patent applications. This development may present both challenges and opportunities for IPSPs and SMEs alike. While it is not the primary focus of this study, considering such a future is essential to ensure the study's continued relevance.

While the importance of IP in supporting innovation and competitiveness has been widely studied, and research has shown that many firms outsource IP functions, there is limited coverage of how IP strategies are implemented within the realms of outsourcing relationships. More specifically, one prominent gap in the literature concerns the role and effectiveness of IPSPs in supporting SMEs beyond operational tasks. While studies such as Wainikka's (2011) acknowledge the reactive and transactional nature of SME-IPSP interactions, they offer limited insights into how these relationships might be reconfigured to provide greater strategic value. Existing research rarely explores what conditions foster more integrated, long-term collaborations between SMEs and IPSPs, or how barriers such as knowledge gaps, misaligned incentives, and communication breakdowns could be addressed.

This study contributes to closing that gap by examining the empirical realities of SME-IPSP interaction through a qualitative lens. It focuses not only on how SMEs currently work with IP, but also on the underlying perceptions, challenges, and expectations that shape their engagement with external IP advisors. Drawing on interview data with both SMEs and IPSPs, this research offers a dual-perspective understanding that allows for

a richer conceptualization of the strategic misalignments and opportunities for value creation. The study is particularly aimed towards managers of IPSPs as it provides potentially valuable insights on SME behaviour and how they can alter their practices to remain competitive in this segment. Further, the study has implications for managers of SMEs, as well as policy makers.

To concretize this aim, the study will be structured around the following two research questions (RQs): *1) How do small and medium-sized enterprises engage with intellectual property and intellectual property service providers? 2) What changes in IPSP practices could improve their alignment with the commercial needs of SMEs?* The study is qualitative in nature and conducted by interviewing four IP service providers and twelve SMEs, some of which are clients to said IPSPs. Two large client firms of IPSPs are also included, to get the perspective of the firms who may be better prepared to articulate needs and evaluate the services of IPSPs. In addition to this, other experts in the field of IP are interviewed.

2. Literature

The literature section offers an overview of intellectual property, innovation, and the relationship between IP strategy and business strategy. Additionally, it summarizes key literature on how SMEs engage with these concepts. The section does not aim to provide an exhaustive review of all existing literature in the field, but rather focuses on works that are directly relevant to the study's empirical findings and analysis.

2.1 Intellectual property and the commercialization of innovation

Granstrand and Holgersson (2015) describe intellectual property rights as legally codified tools that assign ownership to intangible assets such as knowledge, technologies, brand names, and other intellectual creations. The primary forms of IPRs include patents, copyrights, design rights, trademarks, and trade secrets, though the latter is not technically considered an IPR in the same legal sense as the others. IPRs play a central role in society by encouraging investment in the development of new intellectual assets and by promoting the disclosure of knowledge (Granstrand & Holgersson, 2015; Somaya, 2012). When firms act in their own self-interest by seeking higher returns on innovation, they are incentivized to develop new products and technologies. This, in turn, can contribute to an increased overall rate of innovation, ultimately benefiting consumers through greater choice, improved quality, and lower prices. Critics of IPRs argue that they may lead to monopolistic behavior by granting firms excessive competitive advantages (Granstrand & Holgersson, 2015). However, this concern can be mitigated by ensuring that IPR systems are properly balanced, where the long-term societal benefits of innovation and knowledge diffusion outweigh the short-term reduction in market competition (Granstrand & Holgersson, 2015).

As mentioned in the introduction, this study primarily focuses on patent rights, as they play a central role in the interaction between IPSPs and SMEs. For an invention to be patentable, it must satisfy several key criteria: it must be novel (i.e., new and not previously disclosed), involve an inventive step (i.e., not obvious to a person skilled in the relevant field), and demonstrate practical utility or represent a significant improvement over existing knowledge or technologies (Somaya, 2012). Somaya (2012) emphasizes that patents do not grant an absolute monopoly over an invention. Rather, they confer the right to exclude others from using the protected invention for a limited period. However, patents are inherently imperfect, partly due to the limitations faced by patent examiners, who may not be able to identify all relevant prior art. This results in a degree of uncertainty that often remains unresolved until litigation. Furthermore, holding a patent does not guarantee the right to use the protected technology, as competitors may develop alternative solutions that circumvent the patent (Somaya, 2012). Enforcement also poses challenges: detecting infringement is often difficult, and legal proceedings can be both costly and time-consuming (Somaya, 2012).

Crossan and Apaydin (2010) define innovation as *“production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new*

methods of production; and establishment of new management systems.” In other words, innovation extends beyond mere invention; it involves the successful implementation of new ideas that generate value. Investments in innovation are critical to a firm’s competitiveness (Holgersson, 2013), with the objective of generating future returns that exceed initial costs. Consequently, a firm’s ability to convert innovation investments into profit becomes a key strategic capability.

Teece (1986) outlines two foundational concepts for profiting from innovation: the appropriability regime and complementary assets. The appropriability regime refers to “*the environmental factors, excluding firm and market structure, that govern an innovator’s ability to capture the profits generated by an innovation.*” According to Teece (1986), the most influential components of this regime are the nature of the technology and the effectiveness of legal protection mechanisms. A “tight” appropriability regime offers strong profit potential for the innovator, while a “weak” regime increases the risk of imitation and limits the innovator’s ability to capture value. Although firms cannot fully control the appropriability regime, they can influence it, for example, by patenting their inventions to temporarily create private monopolies (Agostini et al., 2014). Nevertheless, patents alone rarely ensure perfect appropriability (Teece, 1986). To commercialize innovation successfully, firms must complement their inventions with critical resources and capabilities, referred to as complementary assets, such as marketing, manufacturing, and customer support (Teece, 1986). One persistent concern for innovating firms is preventing competitors from capitalizing on their R&D investments, a challenge that has historically proven difficult (Teece, 1986). This concern often results in underinvestment in innovation and R&D (Holgersson, 2013; Athreye et al., 2020).

2.2 Business strategy and IP strategy

Fleisher (2018) observes that the term *strategy* is frequently misused to describe a broad range of decisions and actions within a firm, regardless of their actual strategic significance. This confusion is especially evident when *strategic* is used interchangeably with *tactical* or *operational*, thereby diluting the meaning and importance of truly strategic decisions. In this study, the term *strategy* refers specifically to choices or actions that influence a firm’s competitive positioning and long-term direction, guide future decision-making, and affect core organizational activities. In contrast, non-strategic decisions can be categorized as tactics and operations, activities that support the execution of a defined strategy. Fleisher (2018) emphasizes that it is essential for communication practitioners not only to support the development of strategy but also to ensure that all members of the organization understand it and can translate it into their daily work.

Business strategy can be defined as an organisation’s overarching direction in terms of its goals, performance metrics, and the allocation of resources to achieve these objectives (Samson, 2005). More specifically, business strategy encompasses elements such as marketing and positioning, value proposition, the balance between insourcing and outsourcing, and financial strategies including ownership structure (Samson,

2005). When these components are well-aligned, synergistic effects may arise, enhancing the firm's likelihood of achieving its goals. However, it is important to note that coherence in strategy does not necessarily imply effectiveness (Fleisher, 2018). Fleisher (2018) emphasizes the importance of the temporal dimension in business strategy. Given the dynamic nature of the business environment and the inherent difficulty in predicting future outcomes, firms are encouraged to engage in strategy development on a regular basis. Moreover, strategic flexibility is essential; firms must be prepared to revise their strategies in response to changing conditions. As such, effective business strategies should include adaptable components. Communication also plays a critical role in ensuring that a firm's strategy is understood and actionable. By articulating strategic intentions clearly, firms can foster a shared understanding both internally and externally (Fleisher, 2018). However, effective communication of business strategy is not guaranteed. Common barriers include poor articulation, lack of consensus among management, and the exclusion of communication professionals from the strategy development process (Fleisher, 2018).

IP strategy, or IP management strategy as referred to by Grzegorzczuk (2020), is closely linked to a firm's overall business strategy. Specifically, a firm's IP management strategy should be guided by its business model and the mechanisms through which it appropriates value from developed technologies (Grzegorzczuk, 2020). As with business strategy more broadly, it is often not possible to identify a single optimal IP strategy, as identical strategies applied under similar conditions may yield different outcomes (Grzegorzczuk, 2020; Fisher & Oberholzer-Gee, 2013). Nevertheless, findings by Khawand et al. (2024) indicate that well-designed IP strategies have a positive effect on both innovation and firm performance. Furthermore, adopting a more integrated and strategic approach to IP management can significantly enhance a firm's market value and attractiveness to investors, an especially important consideration in exit scenarios (Khawand et al., 2024). Accordingly, IP awareness within firms emerges as a key factor in gaining and sustaining competitive advantages in innovation-driven environments.

IP strategies are, in some cases, mutually exclusive; however, they can also be combined in ways that complement and reinforce one another. Fisher and Oberholzer-Gee (2013) present a framework distinguishing between offensive and defensive approaches to IP management. The offensive approach involves using IP to deter imitators and exert market power. It also encompasses collaborative strategies such as selling, licensing, or donating IP to external actors. In contrast, the defensive approach focuses on responding to competitors' existing IP, and includes strategies such as developing alternative technologies, licensing from competitors, or employing rapid dissemination to undermine exclusivity (Fisher & Oberholzer-Gee, 2013). The strategic dimension of IP management is often most visible in patent strategy, which is also the primary focus of this report. Holgersson and Wallin (2017) argue that patenting is not the only viable approach in managing patents. One alternative is *publishing*, the deliberate creation of prior art to prevent competitors from obtaining IP protection. This strategy, while mutually exclusive with patenting, offers freedom-to-operate (FTO) at a lower cost (Holgersson & Wallin, 2017). Another common alternative is *secrecy*,

where firms take active measures to keep economically valuable information undisclosed (Holgerson & Wallin, 2017; Grzegorzczuk, 2020). If successfully maintained, secrecy can provide monopoly-like advantages similar to those conferred by patents.

2.3 External versus internal IP competence

Existing literature notes several advantages of having internal IP competence. For example, Süzeroğlu-Melchioris et al. (2017) state that firms with IP departments and in-house patent attorneys are better equipped to make grounded IP decisions, such as how to choose patent claims, since they have an information advantage over external consultants. The same researchers also note that there are other aspects that may lead to suboptimal decisions for the client. For example, external patent attorneys are driven by maximizing their own revenues, as opposed to in-house IP departments who weigh cost aspects in their decision making. External patent attorneys have an incentive to include more claims, filing in more countries, and having more PCT applications, as this maximizes their billable time and fees (Süzeroğlu-Melchioris et al., 2017).

Grzegorzczuk (2020) defines *integration* as the alignment of IP management strategies with a firm's overall business strategy, as well as the coordination of diverse internal competencies. Fisher and Oberholzer-Gee (2013) highlight that the level of such integration is generally low in practice, leading to a disconnect between IP management and broader strategic objectives. This disconnect often stems from delegating IP responsibilities to legal staff who operate separately from the firm's strategic decision-making units. One of Fisher and Oberholzer-Gee's (2013) central conclusions is that IP-related decisions should not be left solely to specialists who are not involved in the firm's strategic planning. Similarly, Holgerson (2013) emphasizes the importance of maintaining internal patent competence, which is exemplified by one case where a firm's ability to leverage patenting was significantly impaired after it chose to rely exclusively on external IPSPs. This case represents an extreme form of disintegration, where IP activities became isolated from the strategic core of the firm, ultimately to its detriment. Fisher and Oberholzer-Gee (2013) further argue that personnel from various departments, including business executives, legal advisors, and technical experts, should be involved early in the IP management process and maintain continuous communication. This collaborative approach helps identify the most suitable IP path forward. However, achieving such coordination is often challenging due to the lack of a shared language across technological, legal, and business domains, making effective communication at the intersection of these areas a critical yet difficult task.

2.4 SME characteristics

Existing literature consistently identifies strategic planning as a critical success factor for SMEs (Wang et al., 2011). Firms that engage in strategic planning tend to perform better across various metrics, including sales growth, return on assets, profit margins, and employee expansion. Despite this, evidence suggests that most SMEs rarely engage in proactive, long-term planning (Wang et al., 2011). Instead, their decision-making is

often reactive and short-term oriented, with survival being the immediate priority (Street et al., 2017). Even among those SMEs that report engaging in planning, it is frequently conducted in an ad hoc and informal manner, rather than through formalized documentation (Wang et al., 2011).

Robinson and Pearce (1984) identify four main factors contributing to the lack of systematic planning in SMEs. First, managers are typically consumed by daily operational issues, leaving little time for strategic planning. Second, they often lack awareness of the planning process itself. Third, SME owners generally possess broad managerial knowledge but lack the specialized expertise required for structured planning. Fourth, managers are often reluctant to involve employees or external consultants in strategic decision-making. Environmental uncertainty also serves as a barrier to strategic planning. Matthews and Scott (1995) argue that the sophistication of the planning process tends to decline when firms face high levels of uncertainty in financial, competitive, or governmental conditions.

However, Wang et al. (2011) challenge the assumption that planning barriers are primarily structural or resource-based. Instead, they highlight the personal dimension of SME leadership, suggesting that many SMEs do not engage in strategic planning simply because they do not aspire to maximize profits or growth. Rather, SME managers frequently prioritize non-economic goals such as autonomy, personal satisfaction, flexibility, and contributing to society. Thus, it can be argued that the limited engagement in strategic planning is not always a result of constraints, but rather a reflection of alternative motivations.

The vast majority of SMEs reportedly lack an explicit IPR strategy and fail to integrate intellectual property rights into their broader business strategies (Cusmano & Dean, 2011). This shortcoming is largely attributed to limited internal IP knowledge, as employees within SMEs are rarely trained in the field. Agostini et al. (2014) and Khawand et al. (2024) support this view, noting that many SMEs struggle to convert intellectual assets into financial performance, primarily due to a lack of managerial competencies in managing and leveraging IP effectively. Moreover, research indicates that SME managers are often unaware of the potential strategic benefits of developing a formal IPR strategy (Cusmano & Dean, 2011; Khawand et al., 2024). Rather than being embedded in long-term planning, IPRs are frequently employed reactively, in response to short-term needs or opportunities. This lack of strategic orientation is closely tied to limited IP expertise, which in turn stems from financial constraints (Cusmano & Dean, 2011). As a result, IP-related issues often receive low prioritization within SMEs (Khawand et al., 2024). The personal dimension, as emphasized by Wang et al. (2011), is also relevant in this context. Non-economic motivations, such as autonomy, flexibility, and personal fulfillment, can influence how SME managers perceive and engage with IP strategy, further contributing to the limited formalization of IPR management in smaller firms.

SMEs' ad hoc approach to IP is also evident in how they engage with external expertise. Advice is sought infrequently, and when it is, it typically pertains to isolated technical

matters rather than broader, strategic questions related to IP (Wainikka, 2011). This pattern is largely a consequence of limited financial resources and insufficient internal knowledge, which constrain SMEs' ability to engage in meaningful strategic discussions with external consultants. In many cases, SMEs are not even aware that they require assistance, further reducing the likelihood of seeking expert input (Wainikka, 2011).

An alternative to the transactional and issue-specific relationships often observed between SMEs and IPSPs is a more integrated, collaborative model. Rothwell and Dodgson (1991) emphasize the importance of external collaboration for innovating SMEs, as such partnerships can complement internal capabilities. However, establishing and managing external linkages presents several challenges. For SMEs, initiating and sustaining collaborations can be particularly demanding due to limited managerial capacity and high opportunity costs. Additionally, ensuring alignment in terms of culture and strategic goals between partners adds further complexity. The effectiveness of such collaborations hinges on the ability to combine internal and external expertise in a complementary manner. This underscores the importance of a firm's absorptive capacity, defined as its ability to recognize the value of external knowledge, assimilate it, and apply it for commercial benefit (Cohen & Levinthal, 1990). In the context of IP, this implies that SMEs are more likely to benefit from partnerships with IPSPs when they possess at least a basic level of internal IP competence.

2.5 SMEs and patenting

This section presents relevant literature on how SMEs engage with patenting, with a particular focus on patenting motives, barriers, and patent propensity.

2.5.1 Patenting motives among SMEs

Existing literature presents conflicting perspectives on patenting motives, which often vary depending on firm type and size. The traditional rationale for patenting is to protect product technology and prevent imitation (Blind et al., 2006). However, Holgersson's (2013) qualitative study challenges this view in the context of SMEs, revealing that protection against imitation is often of limited importance. This divergence is primarily due to SMEs' general skepticism about the effectiveness of patents in deterring imitation, coupled with their limited resources to monitor and enforce patent rights (Holgersson, 2013; Athreye et al., 2020). As a result, trade secrets have emerged as a common and valuable alternative to patents, particularly among smaller firms (Arundel, 2001; Levine & Sichelman, 2018). For many SMEs, the legal and financial barriers to enforcing patents render them impractical, even when the firm would otherwise prefer to patent. Supporting this, a survey of Nordic SMEs found that 76.5% of respondents did not regularly check for potential infringements on their patents (Wainikka, 2011). Nevertheless, patents may still serve other strategic purposes. For instance, they can help secure FTO by blocking competitors through the publication of prior art

(Granstrand & Holgersson, 2017). This strategy enables firms to operate more freely in the market by reducing the risk that competitors will obtain overlapping IPRs.

Holgersson (2013) identifies customer marketing as a key motive for patenting among SMEs, a finding that diverges from much of the previous literature, although some researchers have questioned the effectiveness of such efforts (Billy & Sukhatme, 2023). For many SMEs, especially those whose products are not yet well known, patents serve as a means to signal innovativeness and quality to potential customers. This is particularly relevant given that SMEs often conduct transactions through external markets rather than internal channels, leading to lower levels of trust between transacting parties (Jensen & Webster, 2006). In such contexts, formal legal instruments like patents become more important as mechanisms to reduce uncertainty and establish credibility.

While the importance of patent rights in capital marketing remains debated in prior literature, Holgersson's (2013) study suggests that this is, in fact, the most significant motive for patenting among entrepreneurial and high-tech SMEs. According to the findings, patents are frequently used to attract venture capital and, in some instances, are even perceived as prerequisites for securing investment. This is because venture capitalists often recognize the long-term value of patents and view them as internal governance tools that help ensure key intellectual capital remains within the firm after investment (Holgersson, 2013). Another potential motive for patenting is the facilitation of licensing, cross-selling, and R&D collaboration (Granstrand & Holgersson, 2017). These functions are particularly relevant for SMEs engaged in external technology acquisition and commercialization, as they offer pathways for leveraging innovation beyond internal development and sales.

2.5.2 Patent propensity and barriers to patenting

Patent propensity can be defined as the likelihood that a firm will patent a patentable innovation (Holgersson, 2013). While it is well established that small firms are, on average, less likely to patent than larger firms, Athreye et al. (2020) found that, conditional on an innovation being patentable, small firms are just as likely as large firms to file a patent. This suggests that the lower overall patenting activity among small firms is not due to a reduced patenting propensity, but rather to the fact that large firms generate a greater number of patentable innovations (Athreye et al., 2020).

SMEs face a range of barriers to patenting, with cost being among the most frequently cited. Patent-related expenses include not only application and maintenance fees, but also the potentially high costs associated with enforcement (Athreye et al., 2020; Holgersson, 2013). Enforcing patent rights presents further challenges, as infringement can be difficult to detect, and litigation is often expensive and time-consuming (Somaya, 2012). SMEs are also more vulnerable to infringement threats than their larger counterparts (Holgersson, 2013). Supporting this, a survey conducted by Athreye et al. (2020) found that over 30% of respondents cited difficulties in enforcement as a reason for not patenting. The most common reason, however, was the perceived ineligibility of their innovations for patent protection. Another frequently mentioned

barrier is the requirement to disclose information when filing a patent. Although the significance of this concern remains debated in the literature, it is still regarded as a deterrent for some firms (Athreya et al., 2020; Holgersson, 2013).

3. Methodology

This study is qualitative in nature and based on semi-structured interviews with stakeholders within the IP industry. In total, 27 individuals, comprising representatives from IP law firms, SMEs, and industry organisations, were interviewed. Almost all interviews were conducted in person, with a few on video meeting software. Interview guides, provided in Appendix A, were used to structure the discussions. All interviews were recorded and transcribed, and the data was analyzed using the Gioia methodology.

3.1 Research design

A qualitative research method, specifically an interview-driven inductive approach, has been chosen mostly with regards to suitability and feasibility. The main objective is to provide a comprehensive and nuanced overview of the potential commercialization benefits that arise from the collaboration between IP service providers and strategic users of IP. Based on this, semi-structured interviews have been determined to be a suitable data collection method, as they allow for more detailed and descriptive responses compared to quantitative methods, e.g. surveys (Bell et al., 2022). Another potential data collection method would have been direct observation, in which interactions between IP firms and their customers could be studied. While this method could provide unique external insights, it has been deemed infeasible due to confidentiality concerns. Additionally, it may be difficult to identify relevant observable scenarios during the relative short time frame of the study.

Bell et al. (2022) highlight both the advantages and limitations of using interviews in qualitative research. One key advantage is that interviews are well-suited for situations where direct observation is not feasible, as in the case of this study. Interviews also offer broad thematic coverage, which is particularly beneficial here given the need to incorporate multiple perspectives for a comprehensive analysis. Furthermore, the interview format facilitates the process of obtaining informed consent, which is a crucial ethical consideration, especially when discussing potentially confidential topics such as IP strategy. However, interviews are not without their limitations. As Bell et al. (2022) note, qualitative interviews are inherently less naturalistic than observational methods. Another important drawback is their tendency toward being “over-rationalistic”; that is, interviewees may present their subjective experiences and perceptions as if they were objective facts. This can introduce bias and misrepresentation if not critically examined. To mitigate this risk, the study incorporates interviews with multiple stakeholders across the IP landscape, thereby enabling cross-validation of perspectives. Additionally, aggregating interview accounts contributes to enhancing the overall validity of the findings.

To support a robust and systematic analysis of the interview material, this study adopts the Gioia Methodology. Magnani and Gioia (2022) describe this approach as a rigorous qualitative method designed to produce trustworthy and transparent research outcomes. One of the strengths of the Gioia Methodology lies in its structured nature, which ensures greater analytical rigor compared to more unstructured case study approaches.

This level of methodological discipline is desirable in this context, as it provides a clearer framework for interpreting the collected data and enhances the scientific credibility of the research. According to Magnani and Gioia (2022), the methodology comprises three key components: (a) constructing a data structure based on first-order concepts and second-order themes; (b) developing a grounded theoretical model; and (c) presenting the findings in a structured manner. These steps are further elaborated in the following sections of this chapter.

3.2 Data collection

The data collection consists of semi-structured interviews with a total of 27 respondents, where 12 of them are owners or business developers of SMEs, and 15 are actors within the IP industry. The average duration of the interviews were 43 minutes. An overview of the interviews is shown in Table 1.

Table 1: Interview information

The table presents the interviewees' affiliated firms and their roles within those firms. Each respondent has been assigned an alias to ensure anonymity. It also includes information on the interview's duration and format.

Subject alias	Role	Type of firm	Duration (min)	Format
S1	Patent Attorney	IPSP	62	In person
S2	Patent Attorney	IPSP	33	In person
S3	Attorney at Law	IPSP	28	In person
S4	Attorney at Law	IPSP	36	In person
S5	CEO	IPSP	37	In person
S6	Manager	International IPSP	48	In person
S7	Manager	International IPSP	54	In person
S8	Self-employed Patent Attorney	IPSP	47	In person
S9	Patent Attorney & IP Strategist	IPSP	60	Virtual
S10	IP Manager	Industrial corporation	42	In person
S11	Manager	IP tech company	74	Virtual
S12	Manager	Investment company	43	In person
S13	Patent Director	Research institute	54	In person
S14	IP Researcher	Industry organization	80	In person
S15	IP Researcher	University	51	In person
S16	Business developer	Biotech company	38	In person
S17	CEO	Biotech company	38	Virtual
S18	CEO	Mechanical company	40	In person
S19	CEO	Life science company	28	In person
S20	CEO	IT company	42	In person
S21	CEO	Materials company	27	In person
S22	CEO	Life science company	32	In person
S23	CEO	Green tech company	30	In person
S24	CEO	Construction equipment company	36	In person
S25	CEO	Materials company	21	In person
S26	CEO	IT company	46	In person
S27	CEO	Consumer goods company	20	In person

The interviews conducted for this study were semi-structured and guided by predetermined interview frameworks, as presented in Appendix A. This approach was chosen for its open-ended format, which enables theories and insights to emerge organically from the data (Bell et al., 2022). Semi-structured interviews strike a balance between the freedom of unstructured interviews, which may risk digressions, and the rigidity of structured interviews, which may overlook important nuances. While the aim was to cover all prepared questions during each session, the structure remained flexible to allow variation in question order and the inclusion of spontaneous follow-up questions. This flexibility ensured a natural conversational flow while maintaining consistency across interviews. To reflect the diversity of stakeholder perspectives, several interview guides were developed to suit different categories of interviewees. These guides were also refined iteratively based on insights from earlier interviews, in line with adaptive principles of qualitative research (Gioia et al., 2012). Each interview was organized using a funnel structure: beginning with broad, exploratory questions before narrowing into more focused topics grouped into defined areas of interest.

All interviews were recorded and transcribed with the informed consent of the participants. The transcription was carried out verbatim to preserve the full richness of the data, a time-consuming but essential step for ensuring analytical accuracy during the coding process. Most interviews were conducted and transcribed in Swedish. The quotations included in the report have been translated as faithfully as possible to preserve both tone and meaning. A summary of the collected data is presented in Table 2.

Table 2: Quantity of data

This table provides a summary of the interview data, presenting both the duration of the interviews (in minutes) and the length of the corresponding transcriptions (in words). It includes minimum, maximum, mean, and total values for each.

Interview Duration (min)				Transcription (words)			
Min	Mean	Max	Total	Min	Mean	Max	Total
19,92	42,50	80,13	1147,48	2579	5949	12 745	160 626

3.3 Sampling

The interview subjects consisted of representatives from IPSPs, SMEs, and industry organisations. Initial interviewees on the IPSP side were identified by contacting an intellectual property law firm, from which several patent attorneys and attorneys-at-law were interviewed. Each interviewee was encouraged to suggest additional relevant participants, a technique known as snowball sampling (Bell et al., 2022). Through this process, IPSP representatives, SME managers, and industry experts were identified. On the SME side, initial respondents were identified by emailing companies using publicly available information from incubator websites. Snowball sampling was also employed

in this group. In addition, the sampling strategy can be characterized as purposive sampling, as defined by Bell et al. (2022), wherein participants are deliberately selected based on their relevance to the study's objectives. The interview process was iterative; individual interviews often indicated areas that warranted further exploration. The number of interviews was guided by the principle of theoretical saturation, defined as the point at which no new information emerges from additional interviews (Glaser & Strauss, 1967). Saturation was considered achieved when interview data began to repeat.

Respondents in each category were contacted in a deliberate sequential order. This approach was partly driven by practical considerations, allowing the researchers to maintain a steady workflow. Moreover, it enabled the researchers to assess whether theoretical saturation had been reached after each round of interviews. This method facilitated a "gap-filling" approach, whereby new interviews were conducted based on emerging informational needs. The number of interviews was therefore determined by continuously evaluating the extent of saturation. As suggested by Gioia et al. (2012), earlier informants were re-contacted when questions arose from subsequent interviews. Finally, it is important to acknowledge that the chosen sampling methods may introduce potential bias. Combined with the limited number of respondents, this constrains the generalizability of the findings. However, the use of theoretical saturation as a criterion for determining sample size provides a degree of protection against this limitation.

3.4 Analysis methodology

The data analysis phase was guided by the development of a data structure comprising first-order concepts, second-order themes, and aggregate dimensions (Magnani & Gioia, 2022). The process began with the identification and categorization of informant-centric codes (Gioia et al., 2012). This first-order analysis aimed to stay close to the informants' terminology, resulting in a relatively large number of initial categories (Gioia et al., 2012). In practice, each interview transcript was thoroughly reviewed, and key points of information were highlighted. These highlighted segments formed the basis for the first-order codes, which were compiled into a spreadsheet. Each code was linked to at least one respondent to facilitate the retrieval of illustrative quotes for inclusion in the report. Additionally, the codes were organized into preliminary categories to streamline the analysis. Subsequently, the number of codes was reduced by merging similar ones and eliminating those deemed irrelevant to the study's objectives.

The second-order analysis involved interpreting the data through the lens of existing theories and concepts (Gioia et al., 2012). This phase assessed whether prior research could explain the phenomena observed in the interviews. Special attention was given to findings that lacked clear theoretical grounding, as well as to opportunities for applying established concepts in new contexts. In this study, existing theories were recontextualized to explore the relationships between SMEs and IPSPs. Second-order themes were developed by clustering related first-order concepts under relevant theoretical perspectives. These themes were then further distilled into aggregate

dimensions. Together, the first-order concepts, second-order themes, and aggregate dimensions formed a data structure, illustrated in Figure 1. This structure also served as the foundation for the analytical framework presented in the *Analysis and Discussion* section, offering a dynamic representation of the study’s findings.

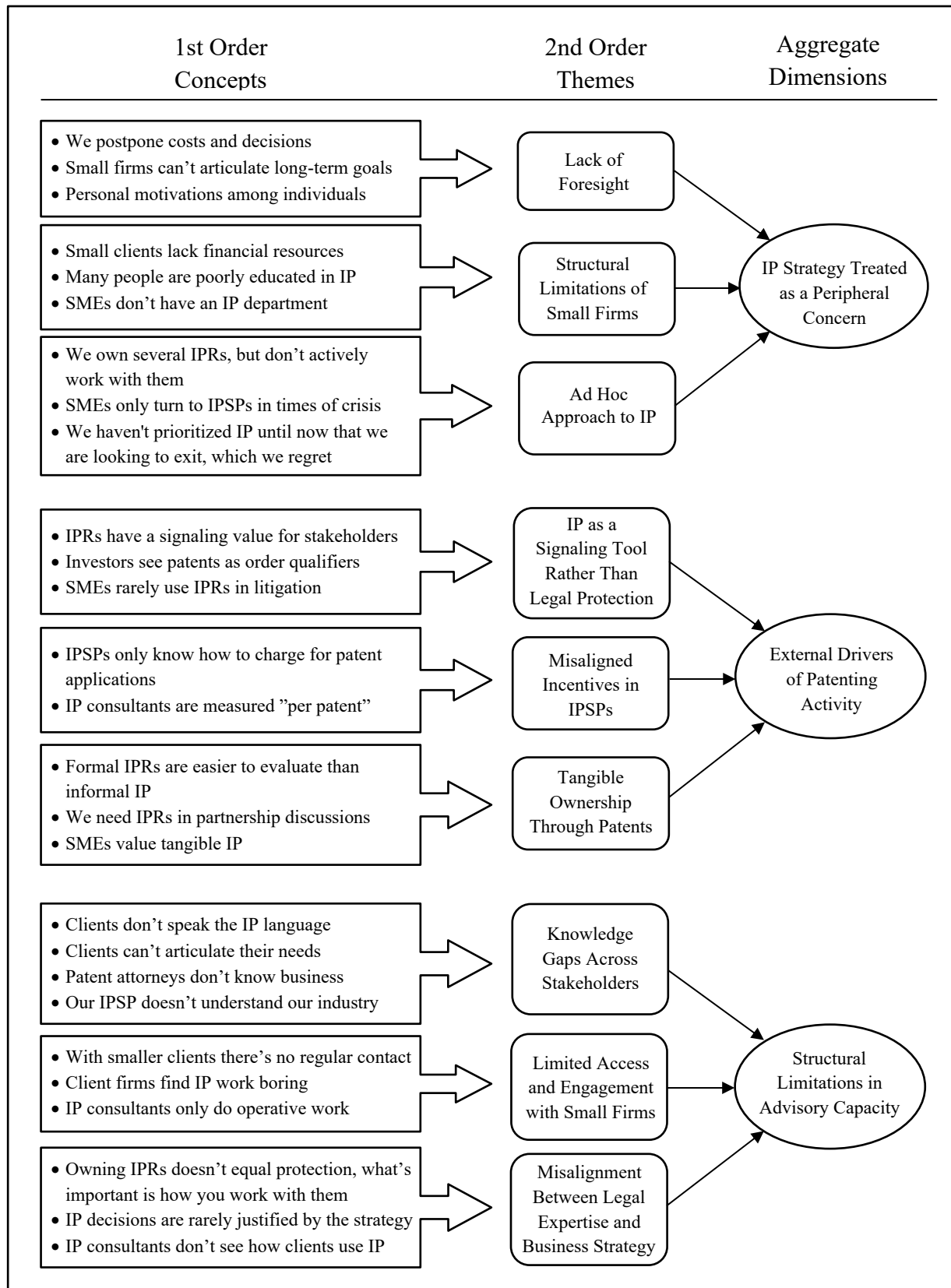


Figure 1. *The relationship between 1st order concepts, 2nd order themes and aggregate dimensions.* 16

4. Empirical findings

The following section presents the findings from the interview study with different stakeholders within the IP industry. The findings are in line with the coding of the interview data, and are divided into different focus areas, (1) SME-IP engagement, (2) SME capabilities, (3) Collaborative dynamics, and (4) IPSP practices and limitations. Each focus area contains several themes describing different observed phenomena within the IP industry.

4.1 SME-IP engagement

SMEs primarily engage with intellectual property as a signaling mechanism, leveraging it as a tactical asset to support various business objectives. While many SMEs hold IPRs, these rights are rarely enforced through litigation or other legal actions. The following sections explore these patterns in greater detail.

4.1.1 Patents serve as a flag in the ground, signaling to stakeholders

When interviewing respondents from the SME side, the signaling value of patents emerged as a central theme. Specifically, patents were described as playing a crucial role in interactions with various stakeholders, including investors, customers, strategic partners, and competitors. Among these, external investors were consistently highlighted as the most significant. A majority of respondents indicated that the primary purpose of patents is to attract external investment. In many cases, patents are not only viewed favourably by investors but are even considered a prerequisite. They become particularly important when a firm's product has not yet gained market traction, as the need for evidence of future commercial potential increases when the product remains unproven. As one startup owner stated, from the perspective of venture capitalists, the perceived value of the firm is closely tied to whether it holds a patent:

Just to be part of the conversation with a VC firm, you need to have a patent. At least if you're at an early stage like we are... A VC firm probably wouldn't have engaged with us as much if we didn't have a patent. It indirectly signals that they see the company's value as zero or close to zero. (S16)

Formal IPRs, such as patents, are particularly important in exit scenarios where sales are relatively low. Consistent with the previously discussed logic, patents often remain one of the few tangible assets of value when a company is sold without established sales channels. Moreover, patents are typically easier to assess than informal IPRs, such as trade secrets. For instance, if a startup holds a patent that is clearly linked to the exclusivity of a specific product, a potential buyer may estimate the value of future sales associated with that exclusivity. One respondent noted that their own exit experience highlighted what creates value for potential buyers and expressed some regret about not having placed greater emphasis on developing other forms of IPRs beyond patents:

Now it becomes very clear what is intangible and what actually holds value for the buyer. And you have to specify it and put a price on it. So it really becomes quite clear now... We haven't really done that much, and it's only now that we're realizing we haven't. (S22)

Many of the interviews suggest that while investors place high value on patents, they often lack the legal or technical expertise required to assess the actual usefulness of these patents in terms of protection and strategic value. As a result, patents are frequently perceived as a "checkbox item," with investors primarily concerned about their existence rather than their substantive function. This limited evaluative capacity is largely attributed to the typical background of Swedish investors, which tends to be rooted in banking and finance. This is further compounded by a simplified understanding of patents, as noted by one respondent, a researcher specializing in IP strategy:

In Sweden, there are quite a few finance and banking people in the VC industry. Not exclusively, of course, there are former tech entrepreneurs as well, and I'd say they tend to have a better grasp of things, since they've personally experienced the pros and cons. But many finance and ex-banking professionals have moved into VC, and that's where we see a fairly naïve attitude. "You need to have a patent, otherwise it's a no-go." Meanwhile, the startup might be thinking, "If we file for a patent, it's going to cost us 3 million SEK a year, it's better if we wait." And that might actually be the reasonable approach. But the investors often have this overly simplified mindset: "You need a patent. It's one of the boxes we check." (S15)

The same view is shared by the SMEs, where one owner of a startup explains that a lack of patents increases the difficulty to convince investors:

For many investors, a patent is often just a checkbox. If you don't have one, you'll have to do a lot more work to explain why you haven't patented this. (S23)

Furthermore, the skewed view of patents from the investors may be counterproductive since patenting is not always the best option for SMEs:

On one hand, you hear entrepreneurs say that patents are difficult to make use of, and that it's often better not to file one. On the other hand, you have venture capital firms insisting that you need to have one, and we do see that companies with patents tend to attract more funding. So how does that add up, when the one being invested in doesn't really want the patent, but the investor insists on it? There's a clear disconnect there. (S15)

This disconnect may partly explain why the vast majority of interviewed SME owners are inclined to pursue patenting, even when it may be suboptimal from a strategic or financial perspective. Moreover, the requirement to patent as a condition for investment has been subject to criticism, as it may not align with the firm's actual goals or needs. This concern is emphasized by an attorney-at-law at an IPSP:

What unites all SMEs is the need for capital. And sooner or later, you always get that Dragons' Den question: "Have you patented this?" I used to get really frustrated with that question for years, because I thought: "Come on". But then I came to realize that, no, they simply don't know better. What they actually mean by the patent question is: "Have you analyzed what your competitive advantages are now and what they'll be in five years? And have you ensured that your organization has the right capabilities to manage and apply them?" That's really what they're asking, even if they don't realize it themselves. The question just gets reduced to: "Do you have a patent?" (S6)

Patents also carry significant signaling value in relation to customers. A majority of the SME respondents indicated that patents are beneficial in customer interactions. For example, some firms incorporate their patents into marketing efforts, where the presence of a patent can function as a stamp of approval, signaling uniqueness, innovation, and quality to potential customers. Additionally, patents may facilitate long-term collaboration with customers by conveying a sense of security and continuity. This perspective is echoed by one of the respondents:

Just as recently as yesterday, we got a question from a customer: "Do you have a patent on this?" And we said, "Yes, it's filed, no problem." For them, it was more about ensuring we wouldn't get pushed aside by another supplier. Because if they're going to work with us—these are companies where you're talking about potential collaborations over 10–15 years—they want to feel confident that we'll survive and not get overtaken by someone else doing the same thing. (S23)

4.1.2 The purpose of a patent is not to be enforced, but to deter

A common theme that emerged from the interviews is that patents are rarely intended for use in litigation. All but one respondent indicated that they lack the financial resources to pursue legal action, particularly when infringement originates from large competitors or foreign companies. Additionally, several respondents acknowledged that their patents do not offer complete protection and are, in some cases, relatively easy to circumvent. International patent coverage also varies, as firms must prioritize specific geographic markets due to financial constraints. Some respondents expressed limited concern about being imitated, noting that their products remain relatively

unknown. However, they also observed that the risk of imitation increases once their innovations begin to gain market traction.

The majority of responses suggest that the protective function of a patent lies more in deterrence than in actual enforcement. Because potential imitators often lack insight into a firm's financial standing or the detailed scope of its patent protection, they may be uncertain about the ease of infringement or the legal risks involved. As a result, patents serve as a psychological barrier to imitation. This view is encapsulated by one respondent, who likened the strategic use of patents to the deterrent function of a baseball bat:

It's not that you need to use a baseball bat, but the opponent should know you have one. So it's more about the threat of the bat being there, that should be enough. It's not about actually starting to use it. (S23)

Some respondents also noted that including the phrase “*patent pending*” in external communications can be equally, if not more, effective than an issued patent in terms of protection. This is because “*patent pending*” introduces a heightened level of uncertainty for competitors, who are aware that a patent application has been filed but do not know the specific scope or content of the claims. As a result, potential imitators may hesitate due to the unknown legal risks. As one respondent explained:

For competitors, absolutely, it's pretty intimidating when someone says they have a patent-pending solution. I think it creates a bit of fear. It even makes us a bit uneasy sometimes when we read about theirs... you get curious about what exactly they've patented. Because they haven't disclosed it yet, it's not published, so you can't really see what it is. (S17)

4.2 SME capabilities

SMEs are characterized by limited resources, both financial and informational, compared to larger firms. As a result, their capabilities differ significantly from those of larger organizations, which typically have specialized functions dedicated to various aspects of their operations. These differences also extend to how SMEs manage and utilize intellectual property. The following sections explore SME capabilities and practices in relation to IP.

4.2.1 SMEs often overlook strategic planning

The interviews revealed a general absence of formal strategic planning among the firms. While some companies consciously chose not to engage in such processes, others appeared unaware of their existence or relevance. Many respondents indicated that formulating a strategy is challenging due to the high degree of uncertainty they face. For instance, effective strategic planning often requires a clearly defined value proposition, something that is particularly difficult for early-stage firms whose products

have received limited or no market exposure. This challenge is reflected in the frequent emphasis on activities such as proof-of-concept development and early client involvement, which were highlighted by a majority of respondents. Furthermore, some firms stressed the importance of not prematurely excluding potential markets, a view articulated by one respondent:

The basic idea is that we don't want to close any doors at this stage. Of course, if we spend a lot of time on the food industry, let's say, that will mean we're not spending time on human diagnostics or water security or other relevant markets. So in that sense, you could say we're closing doors, but we're not really closing them, we're just postponing them. (S16)

Many responses also emphasized the importance of the owners' personal long-term goals for their respective firms. SME owners often face the strategic choice between remaining involved in the company over the long term or pursuing an exit by selling part or all of the business to external investors. This decision has significant implications for the overall strategic direction, as the objectives associated with these paths can be conflicting. Given the inherent uncertainty faced by early-stage SMEs, many respondents reported preparing for multiple potential outcomes in parallel. One respondent articulated the challenge of balancing short-term profitability, aimed at maximizing exit value, with the pursuit of long-term strategic advantages:

Both sides affect each other. This is something we are trying to think about and figure out, which we will hopefully learn more about. A big exit can happen if we have a very large annual turnover, if we're worth a lot. Someone pays a lot of money for the company. Or you can put yourself in a very nice strategic position so that someone else would make a ton of money with us. And that's why we have a high value. I'm not really sure. There are extremes, of course, but I think maybe we'll be more on the side of having that strategic position rather than having a really high annual turnover ourselves. (S25)

Conversely, non-economic factors are sometimes more important motivators for remaining in business than the pursuit of profit maximization or growth. This perspective is highlighted by one CEO of an SME, who stated:

Well, fun, that's the basic idea. You should go to work and do fun things. And then maybe... if we do that and have fun, I think we'll make money too, because you have to. But that's kind of... that's number two. Fun is number one. (S26)

4.2.2 Many SMEs own IPRs but only a few actively work with them

A firm's IP strategy is, by definition, closely aligned with its overall business strategy. Ideally, decisions regarding IP should be made in a way that supports the firm's strategic objectives, particularly given that many of these decisions are irreversible. For

instance, choosing to patent an invention eliminates the possibility of maintaining it as a trade secret. Consequently, it is essential to first define the firm's intended business model and long-term goals before selecting an IP strategy. This view is emphasized by one respondent from the IPSP side:

To some extent, this question, or this challenge, lies with the companies themselves. They need to decide what kind of company they want to be and how they want to compete. It's only once that decision is made that they can determine what kind of IP they need, or what kind of IP strategy to pursue. And that's not always obvious.
(S7)

The interviews with SMEs revealed that the integration of IP into overall business strategy is often limited or inconsistent. While many respondents demonstrated a general understanding of the functions of different types of IPRs, few reported actively developing or implementing a formal IP strategy. In most cases, firms indicate that they hold several IPRs, yet do not engage with them in a strategic manner. This limited strategic engagement is also reflected in their interactions with IPSPs, where they typically approach them with specific operational questions, such as “*Is this patentable?*,” rather than broader strategic concerns. Several IPSP respondents noted that SMEs tend to engage with IP reactively rather than proactively.

An important factor influencing this dynamic is whether the company's founding was based on a technological discovery or the identification of a market opportunity. According to several responses, the former scenario often involves pre-existing patents generated through research. In such cases, the patents form the basis for subsequent decision-making, with one of the main challenges being to identify viable business opportunities for the underlying technology:

Most of the time when you start a startup, it's like—you start with a problem, or you have a problem and then you develop a solution. But in our case, we had a solution without a problem. So [NAME] and I spent maybe six to nine months after starting the company trying to find a problem that we could solve with the technology... (S20)

In other cases, the company is founded on an invention without any associated patents. These firms share the same objective of identifying business applications for the technology but have greater flexibility in making IP-related decisions. As with overall strategy, the formulation of an IP strategy may be constrained by the uncertainties that characterize a firm's early stages. As one respondent states:

The next step is that we're not really in a rush to develop a patent strategy. Because it's not even certain that we know what we should focus on yet. My view is that the only real benefit of patents is that they tend to get investors more excited. That's number one. If you look at the numbers, like 99% of all patents in Europe just sit on a

shelf and aren't used in practice. So based on that, we've taken the approach that it's great if we have a patent, but then the patent has to be worth something. Otherwise, we're not in a hurry to patent anything. (S17)

Some firms originate from the identification of a market opportunity, which in turn influences their attitude toward IP. In these cases, the primary focus is on generating sales and identifying future business opportunities, with IP viewed mainly as a set of tools to support these objectives. One respondent emphasized the importance of moving quickly, without becoming overly focused on developing deliberate IP strategies. When asked whether they believed the company would benefit from incorporating more deliberate IP considerations into business decisions, the respondent replied:

Yes, it probably could, spontaneously speaking. At the same time, I'm increasingly leaning toward the idea that it's better to just move quickly. And if someone copies you... I mean, I imagine it's fairly easy to get around patents anyway. (S24)

Another common pattern is that strategic IP work is often deprioritized in small firms, due to a range of factors. Some respondents acknowledged the importance of IP but admitted they find it uninteresting, preferring to focus on technical and business development, which they consider more engaging. Others expressed a desire to engage more with IP but cited financial constraints and lack of time as major barriers. A third group viewed IP work as a poor use of resources, believing it adds little value to the firm. At the far end of the spectrum, one firm had deliberately chosen not to engage with any formal IPRs. In this case, patents were not only seen as impractical but also as potentially sending the wrong message:

I think I would actually find it a bit strange if someone selling what we do came and said, "We've patented this." I'd find that a bit odd too, like, what is there to even patent in what we're doing? I'd actually think it was a bit weird. (S26)

This particular firm has instead chosen to protect its products by integrating them into specific hardware. By developing products within a proprietary platform, the use case of the technology becomes more narrowly defined, thereby increasing the difficulty for imitators to appropriate value. According to the respondent, the primary risk of imitation stems either from the platform owner or from end users. However, the potential loss from such imitation is considered relatively minor, as each individual product contributes only marginally to the firm's overall value. This perception further reinforces the firm's decision not to pursue patent protection.

4.2.3 SMEs have a varied degree of IP knowledge

One observation from the interviews with individuals working in SMEs is the varying levels of interest in and knowledge of IP. A key factor influencing this variation is the educational and professional background of the firm's owners. Some respondents

reported having taken IP-related courses as part of their formal education, which provided them with a foundational understanding of IP. While this background does not make them experts in strategic IP management, it enables them to engage with the terminology and basic concepts of the field. When a respondent with formal education that included IP was asked whether they felt comfortable discussing IP-related matters with consultants, they responded:

To some extent, I think so. I believe I have a decent understanding of the topic. But I also think that a meeting like that wouldn't necessarily lead to a decision, it would more likely result in a project aimed at figuring out the necessary things in order to make a decision. (S25)

In a similar vein, another SME owner emphasized that the key is not to possess comprehensive knowledge of IP, but rather to know how and where to acquire the necessary information when needed:

You don't need to know how to do it, you just need to know that it needs to be done. So being open-minded and asking others for help, I think that can take you quite far. It helps you avoid being overly afraid of the steps ahead. (S17)

IP knowledge also influences the strategic decisions made during the early stages of a firm. Founders with prior academic or practical training are often more aware of different types of IPRs and their respective functions. This awareness allows them to evaluate alternative strategies and understand the steps required to implement each one, reducing the risk of making suboptimal IP-related decisions early on. One patent attorney underscored the importance of developing internal competence in IP, noting that it is more critical to address strategic considerations than to focus solely on specific legal questions:

It's better training young people who are about to start professional careers, but this is something they can do. So instead of hiring an external company to do this, they know when they're in a particular position: Oh wait, we the company should do this, because the truth of the matter is: the most important parts about IP strategy don't have diddly squat to do with the IP right. It has to do with the company, it's their business, how they make money, who their competitors are, what their fears are, what their plans are. Then it comes down to knowing enough about IP to figure out. (S9)

Additionally, a lack of internal IP competence makes it difficult for clients to accurately identify their actual needs, which in turn complicates their interactions with consultants. This challenge was highlighted by a former IP consultant, who noted:

That's the challenge with consultancy sometimes, is if you listen to what they just ask you for help with, it may not be what they need help with. It could be something totally different. (S8)

Finally, certain patterns emerged regarding the firms' IP knowledge. While no clear correlation was found between firm size and IP competence, both industry and technology type appeared to influence the level of understanding. Firms operating in sectors such as biotech or life sciences, where patents play a central role, generally demonstrated a relatively strong grasp of registered forms of IP. However, even among these firms, knowledge of the broader IP landscape remained limited. Few were familiar with the strategic use of tools such as branding, secrecy, or other non-registered forms of protection, and none had established structured processes for IP management. Firms in industries such as IT, construction, and materials shared these limitations, but also tended to have a weaker understanding of registered IPRs, including patents.

4.2.4 SMEs have limited resources, and only turn to IPSPs in times of crisis

A majority of respondents from the SME side reported having limited resources. Moreover, nearly all respondents described IP work as costly, both in terms of initial investment and potential enforcement. As none of the firms have sufficient IP-related needs to justify hiring in-house expertise, they rely on external consultants, making consultancy fees the primary component of their IP-related expenses. At the same time, the early stages of a company are typically marked by high development costs, which often leads to the deprioritization of IP. This is exemplified by one of the respondents, who stated:

Right now, we're representing a very small company. We're six people with a limited budget. We get help from certain lawyers when we really need to. But every time you make a call or send an email, you wonder, "Will this be added to the bill?" /.../ Even if we felt a strong need for an IP lawyer right now, we probably wouldn't go for it because of the cost. To be honest, it just feels insanely expensive. (S20)

The quote above also illustrates a commonly observed phenomenon: SMEs often seek IP consultation only during times of crisis. This behavior reflects a broader tendency among SMEs to engage with IP reactively rather than proactively. As explained by a patent attorney:

But companies tend to buy IP strategy services when they think they need them. Which quite often as in: when they're in a crisis of some sort. Could be an investment crisis, could be a litigation crisis, could be they've been sued, or they're about to be sued. But it's some kind of crisis, it's driven by their needs. So all of the proactive stuff that we want to do, we rarely get to do. It's mainly fixing emergencies. (S9)

The reluctance to invest proactively in IP may stem from a combination of factors, including SMEs' financial constraints, their current strategic priorities, and their perceived value of IP strategy. This interplay is highlighted by a researcher in IP, who noted:

For many, the focus is on making money here and now. And the connection [from IP strategy] to making money in the moment isn't always understood... This means that for SMEs, since many of them don't have this ingrained, it becomes a slightly uncomfortable and somewhat costly issue. As soon as they approach a lawyer, the money starts ticking away. And they don't necessarily see the real value... That's part of the knowledge gap—many don't fully understand what it means in the long run. (S14)

A reactive approach to IP can also lead to problematic situations for small firms, as certain IP decisions are irreversible. Other issues may become difficult or costly to resolve if identified too late in the process. By engaging more proactively with IPSPs, firms can avoid many of these challenges. When asked about their most important advice for current or prospective clients, one patent attorney responded:

Ask someone first... One of my colleague's clients had signed something really foolish. "Why did you sign this?" It turned out he was obligated to something—it was a huge hassle. Trying to back out of something like that afterward is really difficult. (S1)

4.3 Collaborative dynamics

Several notable findings emerged regarding the dynamics that shape collaborations between IPSPs and their SME clients. The empirical evidence suggests that these relationships are rarely transformational or characterized by long-term, continuous engagement. Instead, the interactions tend to be transactional and project-based. Additionally, the study revealed a mutual lack of understanding, coupled with strong incentives that IPSPs may exploit due to their informational advantage. These themes are explored in the sections that follow.

4.3.1 IPSPs and SMEs have transactional relationships

Collaboration between intellectual property service providers and their clients is typically organized around individual projects, yet the relationships often extend over long periods. This continuity is driven by two main factors. First, the nature of IP-related work, particularly patent processes, requires long time horizons, often spanning over a year from initiation to completion. Second, clients frequently return to the same IPSP when new needs arise, such as patenting additional inventions. While this pattern can benefit both parties, several interviewees noted challenges in maintaining consistent engagement with smaller clients, particularly those with low patenting frequency. One attorney-at-law at an IPSP reflected:

That's something I've felt we need to pick up on and become more structured in actually showing the care for all our clients that we believe they deserve by being our clients. Often, it ends up being like, "Oh, we need help with this contract," and then you work intensively for a few weeks on that specific contract. And once it's done, they're like, "Yes, we're very satisfied, thank you so much!" And then there's no contact for, well, it can be several years, and you don't really know what's going on. And that's where I feel we need to get much better at consistently running this client care line – having more frequent or at least more regular contact where we actually remind them that we're here, what we do, and how we can assist. (S4)

This perspective suggests that while the relationships may span several years in calendar time, they are often intermittent rather than continuous, with each project marking a discrete engagement that must effectively be reinitiated. This pattern was particularly common in relationships with SMEs, although the extent of the issue varied among IPSPs.

Findings also indicate that the pricing models used by IPSPs may discourage SMEs from maintaining regular contact. All IPSPs in the study charged by the hour, but their invoicing structures varied slightly in ways that influenced the nature of their client relationships. Most firms billed per inquiry, meaning every interaction or consultation incurred a charge. Several interviewees suggested that this model made SME clients reluctant to reach out with minor questions, fearing escalating and unpredictable costs.

One notable exception was a firm that emphasized informal client contact and adopted a more flexible billing approach. This IPSP often postponed billing for short meetings, integrating the costs into later invoices, typically when the client's liquidity had improved. According to one patent attorney at the firm, this approach was well-received, as it allowed clients to defer minor expenses and reduced their hesitation to seek advice. He also described instances where the firm would intentionally absorb small costs as a gesture of goodwill to strengthen the client relationship. One SME client confirmed this dynamic:

"So it's really appreciated to have someone you can bounce ideas off of without getting a thousand-SEK invoice from [Name of IPSP] just for making a call." (S22)

This approach fostered a more open, trust-based collaboration in which clients were less constrained by financial concerns. It also facilitated richer information flows between the firm and its clients, as SMEs felt more comfortable sharing developments or asking spontaneous questions. When asked whether this practice helped him gain better insight into client activities, the patent attorney replied:

Yes, much better insight. Because the patent process is so long. Let's say we draft a patent application that tries to protect some part of a technology. Then you have twelve months to file a subsequent

application, and then not much happens for 18 months, and then you choose countries. So, two and a half years for a typical process. A lot can happen during that time. And if you only report the deadlines and talk to the client when you need input from them, you miss quite a lot. For example, a lot might happen two months after you've filed the patent application, and they might not realize they should discuss what they've developed. But if you meet them in the kitchen or they feel like, "I just had a really interesting discussion with a researcher. I can just drop by and talk to [Name]," then you catch those interesting things. (S8)

This way of working was only discovered between this particular IPSP and its clients. In practice, similar patterns may arise between other IPSPs and their clients, but none of the other ones explicitly stated that they worked in this way, nor did their clients claim that they did.

4.3.2 IPSPs and SMEs do not understand each other

A major obstacle in the collaborations between IPSPs and SMEs is a mutual lack of understanding. IPSPs do not understand how SMEs engage with IP and SMEs struggle to comprehend the services that IPSPs deliver in the way it is usually packaged. Several CEOs of SMEs stated that they could not understand the language with which their patent attorney communicated, for example via email. There were several accounts of CEOs not even understanding if an email required action from them, or if the email simply delivered information to them. One CEO described a typical interaction with their IPSP as follows:

They come with a bunch of things I don't understand. /.../ It's like, "Do these things, sign these papers," and I don't really know what I'm supposed to do. (S22)

Similar experiences were reported by other CEOs, many of whom felt that IP-related matters had to be explained to them "as if they were children." A few even expressed embarrassment, which contributed to their reluctance to engage with IP consultants proactively. On the other side, several patent attorneys acknowledged the communication gap, noting that they often had to drastically simplify technical or legal information to ensure basic understanding. Some reported that it was difficult to convey all the necessary details without overwhelming the client, which led to compromises in clarity or completeness.

The findings of this study suggest that the communication gap is not unidirectional. While SMEs often struggle to understand IPSPs, the reverse is also true: IP consultants often have limited understanding of how SMEs integrate IP into their broader business strategy. One attorney-at-law summarized their role as follows:

“I spend more time assisting companies in the exploitation of their assets, or primarily in protecting them so that they obtain the exclusive rights they need.” (S3)

This framing, emphasizing legal protection and exclusive rights, was echoed by nearly all interviewed IP consultants. From the SME perspective, however, exclusive rights were rarely described as the most important outcome of owning intellectual property. While many acknowledged the importance of protection, their emphasis was often on IP as a strategic or commercial tool used to signal value, facilitate partnerships, or guide innovation.

This reflects a deeper misalignment in how the two groups conceptualize IP. IP consultants tend to focus on the legal function of intellectual property, whereas SMEs often view IP in a broader, more business-oriented context. A similar divergence emerged in how each group defined the concept of “strategy.” For SMEs, “strategy” typically refers to a company’s overall ambition or guiding vision, and something that informs decision-making and defines business identity. For IPSPs, on the other hand, strategy was described in narrower, functional terms: as any action or decision with long-term consequences, such as a filing plan or territorial coverage.

4.3.3 IPSPs have a disincentive to telling their client to do the right thing

A major issue that was raised by several interviewees was that IPSPs have strong incentives to prioritize patenting over alternative forms of protection. Two main reasons were identified: financial incentives and competence-based constraints. The most frequent reason that was mentioned was that they are financially motivated to prioritize patents over alternative options, such as trade secrets. IPSPs earn revenue primarily through billable hours, and patenting activities, such as drafting and filing applications, are time-consuming and well-suited to this model. When an IP strategist at a large IPSP was asked why almost no IPSPs work with trade secrets, the reply was:

They don't make much money from that, which means that they have a disincentive to telling their clients to do the right thing. (S9)

This business model has also been proven over time, so the IPSP faces little uncertainty. A researcher in IP shared this view, adding that the prevailing business models of IPSPs are not structured to support alternative forms of IP consultancy:

For the established players, their incentives lie in filing patents for their clients. Because that's how they know how to charge for their services. (S16)

These statements suggest that the lack of trade secret services is not due to a lack of relevance or demand, but rather to the difficulty in monetizing them. Unlike patents, which follow a structured application and prosecution process, trade secret consulting lacks clear deliverables. This makes it harder for IPSPs to justify billing by the hour. The same researcher noted that:

It's quite difficult to justify having spent 300,000 to conclude that you should keep this a secret. And then you think, okay, but that's what we were doing from the start. (S15)

This points to a phenomenon which reinforces the inclination to patenting, which is that SMEs find it easier to justify an IP investment if it results in something tangible, such as a registered right. Most of the SMEs that participated in this study held patents, and very few had considered other alternatives for protection, at least not in the cases where a patent was theoretically possible to acquire. This was found to be due to two main reasons. First, almost all firms claimed that they needed the patent to satisfy investors. Second, many SMEs indicated they pursued patents simply because they were advised to by patent attorneys or other consultants. While many could articulate benefits related to signaling and credibility, one firm openly stated they would have chosen trade secret protection had they understood their options better. This indicates that there is a problem, at least for some clients, with the inclination to patenting.

The incentives are not only financial, but also professional and cultural. Most IPSP consultants are patent attorneys or attorneys-at-law, whose core expertise lies in handling registered IPRs, especially patents and trademarks. Thus, it is not unexpected to find a heavy emphasis on such IP. As one IP manager explained:

If you're really good at hammering, the solution for the client will almost always end up being that you should hammer in a nail somewhere. And if you're great at sawing, the solution will be that you need to saw this off. And it's a bit like that with patents too. If you're great at framing and drafting a patent application, that's where you'll end up. (S10)

This analogy highlights a structural bias: IPSPs are organized around specific legal competencies, and their default recommendations reflect this. Adding competence or extending service offering would require a relatively large restructuring of the organization. On the same topic, another subject noted:

It's very rare as a representative to step in and say, "No, it's probably not patentable, but I think you should structure your project like this." Because that's not a role you're typically used to taking. (S13)

In other words, IPSPs are not just incentivized to focus on patents—they are structurally and culturally shaped to do so. These firms are often optimized for delivering high-quality services within their established domain, and as long as that remains commercially viable, there is little internal pressure to diversify, even when clients express unmet needs. Personal motivations of the consultants also play a role. As one manager candidly stated:

We're dealing with people who all have their egos. We're not selling a product – a consulting firm is a group of prima donnas, and they need to be satisfied. (S6)

This comment, though blunt, reflects a broader theme in professional services: personal identity and professional pride can reinforce the boundaries of competence. On the one hand, consultants are motivated by the satisfaction of delivering recognized expertise. On the other, they may fear stepping into areas where they are less confident, or where their relevance may be diminished. One consultant recounted internal resistance at their firm when a strategy group was introduced:

They were afraid we'd lose them work, not gain them work. They had this horrible fear that we'd take over their clients, which we actually never did. (S9)

This points to a fear among patent attorneys that working with IP in a broader sense might render their competence obsolete, giving incentives to gatekeep certain knowledge. If there would be a shift towards other sorts of consultancy, they may feel the risk of losing out on opportunities themselves, or to lose status.

Finally, the incentive to prioritize patents is institutionally embedded. Internal reward systems in many IPSPs are tied directly to quantifiable outputs such as the number of patent applications handled. This reinforces a focus on patenting not just at the firm level, but also at the level of individual performance metrics. In such systems, consultants are rewarded for maximizing patent throughput, not necessarily for providing holistic or strategy-aligned advice. As a result, they may implicitly or explicitly steer clients away from alternative approaches, either by omission or through overemphasis on patenting, even when those alternatives may be more suitable.

4.4 IPSP practices and limitations

This study identified several recurring themes in how IPSPs engage with SME clients. First, it was evident that SMEs differ quite significantly compared larger firms in the way they interact with IPSPs. Second, findings indicate that services provided by IPSPs are largely operational in nature. Third, the findings suggest that IPSPs often lack an understanding of how IP is practically used and integrated within SME business contexts. These three themes are examined in the sections that follow.

4.4.1 Client segments of IPSPs

The role of IPSPs is particularly central for SMEs. While large corporations may also engage IPSPs for specialized services, SMEs typically lack internal IP competence, if they possess any at all. As such, collaboration with an IPSP often constitutes the SME's entire engagement with the IP system.

From the IPSP's perspective, clients can broadly be segmented into two categories: large corporations and SMEs. All interviewed IPSPs recognized this distinction and described similar differences in process. Large corporations usually maintain in-house

legal or IP departments, whereas SMEs often lack both. Consequently, SMEs have a far more limited capacity to absorb IPSP services in a sustained or strategic manner.

Although large corporations make up a smaller share of the IPSP's client base, they account for a disproportionately large share of revenue. Given the lower number of such corporations, this is expected, but what stands out is the clarity and structure of these engagements, which are also often more lucrative. All eight interviewed patent attorneys and attorneys-at-law emphasized that large corporations typically present well-defined, operational tasks, such as patent drafting or filing in a new jurisdiction.

Furthermore, the corporate client's contact is usually an experienced IP, patent, or legal manager, which facilitates efficient communication and minimizes ambiguity. These operational services are not necessarily simpler; they demand a high level of technical expertise and can be time-intensive. As one patent attorney explained:

If you're going to file a proper patent application, even if it's a fairly simple thing, let's say you need to put together at least 15 pages of text and maybe three pages of figures. It's quite an extensive task.
(S1)

While these tasks are complex, they are advantageous for the IPSP because they are clearly scoped, and the client is fluent in the "IP language". The complexity, therefore, lies primarily in the execution rather than in understanding the client's technology, objectives, or strategic positioning. Strategic input from the IPSP is generally limited in these interactions, as the overarching IP strategy is set before engagement.

In contrast, SMEs often present a different challenge. Many struggle to articulate their business model, objectives, or innovation focus, placing the burden on the consultant to uncover and interpret this information. As a result, engagements with SMEs often require significantly more exploratory work and contextual understanding.

4.4.2 IPSPs only do operative work

The activities and decisions of SMEs are commonly categorized into three managerial levels: strategic, tactical, and operational. The strategic level reflects the long-term ambitions of the firm. Rather than constituting a detailed plan, strategy serves as a general direction that guides decision-making across the organization. The tactical level is more concrete, focusing on how to achieve the strategic objectives through mid-term planning and resource allocation. Finally, the operational level concerns the execution of specific tasks in the day-to-day activities of the firm. In other words, it represents how the firm's tactics are implemented in practice.

A notable finding from the interviews is the pronounced discrepancy between how IPSPs and SMEs perceive the strategic dimension of their collaboration. None of the SMEs interviewed claimed to have worked strategically with their IPSP, while three out of four IPSPs asserted that they offered strategic IP services. Even in cases where both the IPSP and its client were interviewed about the same collaboration, this

mismatch persisted, which reinforces the view that SMEs and IPSPs have different definitions of the word “strategy”.

When SMEs were asked about the services their IPSPs provided, the most common responses included patent drafting, FTO analysis, trademark registrations, and legal advice, all of which were considered operational tasks. In contrast, most IPSPs described their offerings in terms such as “business-driven IP consultancy” and claimed to support clients in developing IP strategies. However, the empirical material reveals little evidence of such strategic collaboration, especially at a systemic level. While a few instances of strategic engagement were mentioned, these appeared to be individual initiatives by patent attorneys, not part of a structured offering within the firm. As one former patent attorney, now working as an IP strategist, explained:

Rarely will any of these consultancies actually really, they pretend that they do sometimes, but in reality they really don't answer that kind of question [developing an IP strategy]. I would say almost never. So you know, so that's another thing. I mean, if you're really not bullshitting, but if you're really gonna offer strategy services, you need to have the background, the skills and the expertise to actually do it. (S9)

It remains unclear whether this discrepancy is due to misunderstandings between parties or a form of misrepresentation by IPSPs. What is clear, however, is that IPSPs and their clients have fundamentally different interpretations of the word “strategy.” The same respondent elaborated:

You have to define what you mean by strategy advice very, very carefully. Because what the average one of these guys will do is they will call... Whether you file a PCT application as strategy. They will call when you do your national phase, whether you go into Japan, Korea, China, strategy. They will call all kinds of stuff that are really choices made during patent prosecution, strategy. (S9)

This highlights the findings made in this study: that IPSPs do rather operative work and package it as something strategic. It should also be noted that there were no large differences in the way services were described, only the terms used for them, and how much each actor believed the other one to grasp the topic. For example, several IP consultants mentioned compiling licensing agreements as a strategic service, further noting a low level of IP strategy understanding, as clients are unfamiliar with the legal intricacies of contract agreements. Clients agreed to being offered this service, but disagreed that it was a strategic one. Instead, they argued that it was the IP consultants who had a low understanding of IP strategy, because the consultants could not provide any advice related to the licensing decision itself.

A few IPSPs claimed to provide IP strategies in the form of written reports. However, these were widely criticized by clients. One IP manager at a large industrial firm commented:

Ninety-five percent of the IP strategies I've seen that I consider absolutely terrible usually contain a deep analysis of the SME's existing one, two, or three patent applications. (S10)

Once again, there seems to be a lack of strategic dimension to what IPSPs consider “IP strategy”. Instead, they focus narrowly on patent data without contextualizing the firm’s goals, market, or innovation pipeline. This contributes to a decline in credibility, as SMEs come to view these reports as low-value deliverables rather than meaningful strategic tools.

When asked whether IPSPs could provide more strategic support and whether that would be valuable, most SMEs responded with cautious interest. The general view was that IPSPs often lacked sufficient understanding of the firm’s technology or industry to offer relevant guidance. One patent director at a research organization articulated this challenge:

The tricky thing about strategic advising and patents is that you need to understand so much about the technology. You need to understand so much about the business logic in that specific area. Because it can look completely different in different fields. And you need to have an in-depth understanding of patents—how they work, what you're actually protecting, and the entire mechanism. And if you remove some competence—it doesn't necessarily have to be a person, but whoever is working on it—you can't remove a part of it, because then the quality of the advice drops, and things can really go wrong if you take out any part of it. (S13)

This suggests that meaningful IP strategy development requires either deep interdisciplinary expertise within the IPSP or the ability to source that knowledge effectively. Whether this is equally important in more operational collaborations is unclear. However, what was observed is that only one out of twelve firms reported that their IPSP had a comprehensive understanding of their technology and industry. While this IPSP could not be studied in detail, the client reflected positively on the relationship:

We reached out to them, and they have been very competent so far. We started from the assumption that we don't know enough about IP to claim that we have an IP strategy in-house. But we also can't rely on an average IP firm to help us sufficiently. So what we did was to niche ourselves with a very specific IP firm that can help us with the specific thing we're looking for. And it seems like they can do that. (S17)

This case highlights several important points. First, it was one of the few instances where a firm actively selected its IPSP based on specific strategic needs, rather than passively inheriting one through incubators or informal networks as is usually the case.

Second, it demonstrates that demand for strategic IP support does exist, and some clients are not only aware of it but are willing to seek it out. While this example cannot be generalized, it shows that effective strategic collaboration is possible, provided that the IPSP has the right competence and alignment with the client's business goals.

Furthermore, in relation to the operational aspects of IP work, several respondents identified AI as a potential disruptor, revealing two main perspectives. Respondents from IP service providers viewed AI primarily as a tool to increase efficiency in their work. One CEO of an IP service provider expressed the following view:

The more you hear from people who actively work with AI tools, the clearer it becomes that it's not something that takes over—it's something that acts as your assistant and supports you. (S5)

In contrast, several SMEs believed that AI has the potential to revolutionize the IP system as a whole. None of the interviewed SMEs had first-hand experience of AI-based patent drafting software, but several shared the belief that it could drastically shorten lead times and cut costs dramatically. The interviewed industry experts shared the SME view that the technology has potential to disrupt the IP-industry, where software enables comparable service quality at a much lower cost.

4.4.3 IPSPs don't understand how IPRs are used in practice

A recurring theme in the interviews was that IPSPs often lack an understanding of how IPRs align with business models. This critique was voiced by both SME representatives and IP professionals outside of IPSPs, although none of the interviewed patent attorneys acknowledged this issue directly.

Several SMEs expressed dissatisfaction with the support they had received from IPSPs. Some reported that the patents they were granted were poorly aligned with their intended purpose. One firm even stated that pursuing a patent had been a mistake and that a trade secret would have been a more advantageous form of protection. These cases point to a broader issue: IP consultants often operate with limited insight into their clients' business contexts. Patent attorneys typically base their applications on technical descriptions but seldom engage with the strategic or commercial applicability of the patent itself. While patent professionals often take pride in the technical craftsmanship of the application, their clients tend to view the strategic implementation of the IPR as the true value of intellectual property.

This disconnect is particularly pronounced among SMEs, who often lack the internal competence required to question or guide their IP consultants. Although this study includes only a small sample of large companies (two firms) for comparative purposes, there are indications that larger firms are better positioned to demand strategic alignment. One former IP manager at a major telecommunications corporation illustrated this more proactive approach:

We're no longer just going to cut it and say, please draft this patent. We're going to say, no, no, no, no. You need to understand our

strategy, what we're up to, then you're going to draft our patent. Because how are you going to draft the patent if you don't know what we're about and what our roadmap is and where we want to be? (S11)

This example highlights a critical gap: even if SMEs were able to articulate such strategic expectations, it is doubtful whether many IPSPs would be capable of responding effectively. The underlying issue is that most patent attorneys lack sufficient business experience to offer commercially relevant advice or even to fully grasp how IP functions within broader business strategies. As established throughout this study, IP consultants typically have backgrounds in engineering or law, and only a minority possess meaningful business training. This makes it difficult for them not only to shape IPRs that fit within a business model but also to communicate the strategic rationale behind their recommendations to clients.

Importantly, this study found no widespread complaints about the technical quality of deliverables from IPSPs. Only one client reported dissatisfaction with the formal output itself. Rather, the issue lies in the strategic misalignment: while the patents may be technically sound, they are often poorly integrated into the client's commercial and innovation context.

5. Analysis and discussion

The purpose of this study is to examine how SMEs engage with IP, particularly in relation to IPSPs, and to identify changes IPSPs can implement to better align with the commercial needs of SMEs. Empirical data has been gathered through interviews with various actors in the IP industry, including SME managers, patent attorneys, and other IP experts. Based on this data, three key areas of focus have been identified: *IP Strategy Treated as a Peripheral Concern*, *External Drivers of Patenting Activity*, and *Structural Limitations in Advisory Capacity*. These areas will be examined in depth in the Analysis & Discussion section, where existing theory is applied to the empirical findings. Each focus area also comprises several themes, and the interrelationships between these themes are illustrated in Figure 2.

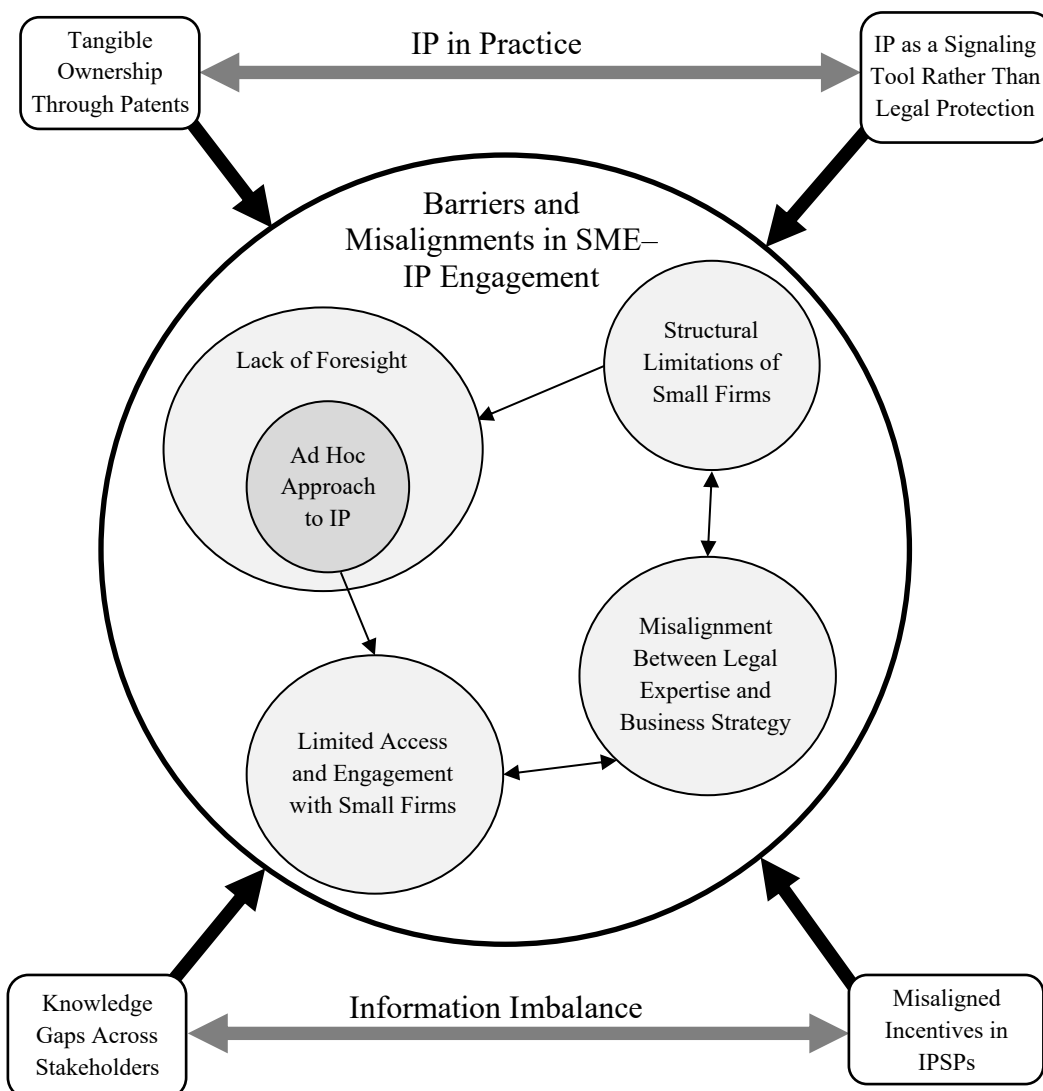


Figure 2. Barriers and misalignments in SME-IP engagement. The figure illustrates how the identified themes relate to and affect each other. The large circle encapsulates the barriers and misalignments existing between SMEs and IPSPs. These are further enhanced by outside factors relating to how IP is used in practice, and information imbalance.

Several barriers and misalignments have been identified in relation to SMEs' engagement with IP. Firstly, SMEs face structural limitations, typically lacking the resources and internal capabilities needed to engage effectively with IP. These limitations hinder their ability and inclination to participate in strategic planning, where IP is often overlooked due to constraints in time, budget, and knowledge. This contributes to SMEs' current ad hoc approach to IP, in which IP issues are addressed at a tactical or operational level rather than strategically.

This ad hoc approach is mirrored in SMEs' interactions with IPSPs, which tend to be transactional and limited in scope. These interactions are typically characterized by a few points of contact, reflecting the primarily operative nature of the services provided. This dynamic contributes to a mutual disconnect: IPSPs often lack a deep understanding of how their clients utilize IP, while SMEs often lack the expertise needed to integrate IP into their overall business strategy. As illustrated in Figure 2, this misalignment is reinforced by SMEs' resource constraints and the resulting infrequent contact between the two parties. Consequently, a negative cycle emerges, leading to suboptimal IP strategy practices among SMEs.

This cycle is further exacerbated by certain push factors related to how IP is used in practice and by the information imbalance between stakeholders in the IP industry. IPRs, particularly patents, are shown to have value beyond legal protection, serving as signaling tools and ownership documentation. The informational barriers include knowledge gaps, wherein clients struggle to articulate their perceived and actual IP-related needs, and IPSPs have difficulty understanding the business context of their clients. Lastly, misaligned internal incentives within IPSPs further contribute to the perpetuation of this cycle. Each of these themes is explored in greater detail in the remainder of this chapter.

5.1 IP strategy treated as a peripheral concern

One major finding from the integration of empirical data and existing theory is that long-term IP strategy tends to be a secondary concern for SMEs, often overlooked in their operations. The primary contributing factors include a lack of strategic foresight, structural limitations, and an ad hoc approach to IP. An overview of the related themes, along with their corresponding first-order codes, is presented in Figure 3.

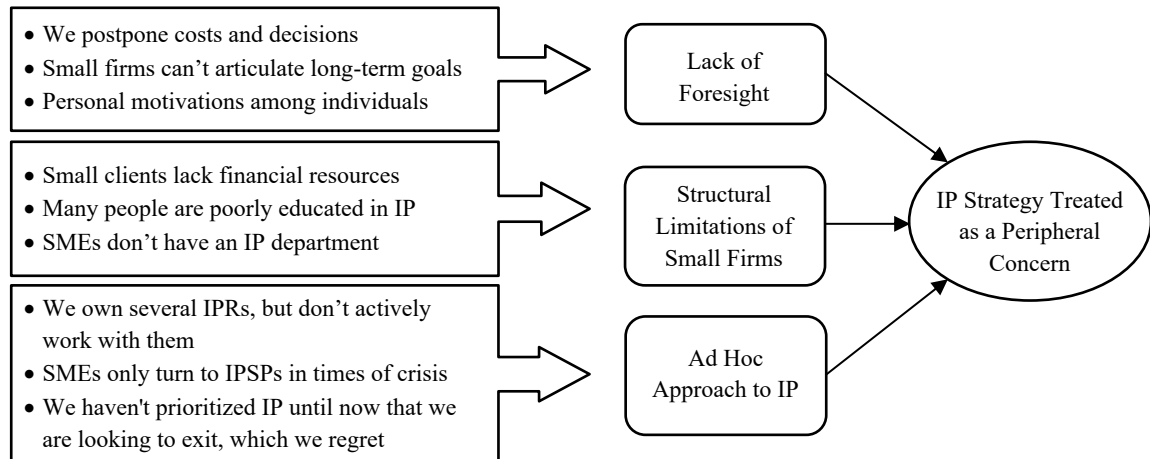


Figure 3. *IP strategy treated as a peripheral concern.*

The figure depicts the identified second order themes relating to SMEs' tendency to overlook IP strategy, and their corresponding first order codes.

5.1.1 Lack of foresight

The empirical findings suggest that few SMEs operate with a clearly defined strategic direction or explicit goals. Moreover, only a small number report engaging in strategic planning, and when they do, it is typically in an informal and unstructured manner, consistent with insights from existing literature (Wang et al., 2011). The barriers to

strategic planning identified in the study closely resemble those outlined by Robinson and Pearce (1984), namely: lack of time, lack of expertise, inadequate knowledge of planning processes, and reluctance to share strategic ideas with employees or external consultants. Of these, the first and third barriers were particularly supported by the empirical data. The first, lack of time, was especially evident, as many SME managers reported being preoccupied with daily operational tasks. Common examples included product testing, marketing, sales, and pursuing external investment.

Although the lack of knowledge about planning processes was not explicitly addressed in the interviews, some responses suggested a general unawareness in this area. Furthermore, the findings support the view that external uncertainties are a significant barrier to strategic planning, as commonly emphasized in the literature (Matthews & Scott, 1995). Many respondents highlighted the need to prove their products in various markets and to test different business models. This likely stems from the high degree of uncertainty faced by early-stage firms, where long-term strategic commitments depend on outcomes that are difficult to predict. For example, some firms may avoid

committing to a specific strategy until their product proves commercially viable within a particular customer segment. Furthermore, the findings suggest that overall strategy also depends on whether the company was founded based on a technological discovery or the identification of a market opportunity. The former is typically more constrained, as it often involves pre-existing patents.

The responses also indicate that SMEs typically adopt a short-term, reactive approach, focusing on immediate threats and opportunities, again aligning with the findings of Wang et al. (2011). Managers often described facing an overwhelming number of daily challenges. As a result, agility and the ability to respond quickly to new situations were highly valued traits, echoing the conclusions of Fleisher (2018). Additionally, the strategic planning practices of SMEs appeared to be influenced by the personal motivations of their managers. Contrary to the findings of Wang et al. (2011), most respondents cited economic motivations for being in business. In cases where strategic planning was lacking, this was often linked to the owner's intent to sell the company. However, one notable exception emphasized non-economic motivations, such as personal fulfillment and freedom, as the primary drivers behind running the business. In this case, these values significantly shaped how the company was managed, with a strong focus on spending time developing and selling products.

5.1.2 Structural limitations of small firms

The established view is that SMEs typically face resource limitations, which significantly influence how they operate. This view is supported by the findings, as many respondents pointed to constraints related to their financial situation, time availability, and internal capabilities. Relating to the previous chapter, the first two limitations, time and financial resources, also hinder strategic planning, causing firms to prioritize short-term survival over long-term goals (Street et al., 2017). A recurring theme in the interviews was that respondents often expressed a desire to undertake strategy work but felt unable to do so due to their current resource constraints. Resource limitations also affect how small firms bring their products to market. As previously noted, many of the interviewed SMEs focused on proof-of-concept efforts, targeting niche markets with the intention of expanding to broader applications later. Several firms also emphasized the need to rely on external collaboration to distribute and sell their products, which brings further considerations with regards to IP.

SMEs are commonly characterized by limited human capital, where a lack of specialization results in lower internal capabilities and know-how. Robinson and Pearce (1984) describe how SME owners often adopt a “generalist” role, requiring competence across a range of functions. This observation is supported by the findings, with many respondents stressing the importance of acquiring knowledge through hands-on experience. For example, through founder-led sales, owners gain valuable insights into marketing and customer interaction. Such practical learning contributes to a firm’s absorptive capacity, its ability to recognize external knowledge and transform it into commercial value (Cohen & Levinthal, 1990).

Nevertheless, the lack of internal specialization persists, reinforcing the potential value of external collaboration to complement internal capabilities (Rothwell & Dodgson, 1991). In practice, however, this is rarely realized. All of the SMEs in the study reported keeping strategic activities in-house and working with external entities in primarily transactional, non-collaborative ways. This is likely due to a combination of SME managers preferring to retain control and seeking to minimize transaction costs. Moreover, initiating and maintaining collaborative relationships can be especially challenging for small firms, as noted by Rothwell and Dodgson (1991). These dynamics are particularly relevant in the context of IP, which will be further explored in the following section.

5.1.3 Ad hoc approach to IP

The findings from the previous two chapters can be directly applied to the context of IP. The empirical data clearly indicate that SMEs often lack explicit IP strategies and that IP considerations are frequently absent from their overall business strategy, an observation that aligns with existing literature (Cusmano & Dean, 2011). This was noted both explicitly by some respondents and inferred from others' responses. Since strategic IP management is inherently a component of broader strategic planning, the barriers discussed previously, such as limited resources, lack of time, and insufficient planning capabilities, are equally relevant in this context. However, several nuances further increase the difficulty SMEs face in developing IP strategies. While many SME managers have a basic understanding of IP, none reported having in-house IP specialists, nor the financial capacity to employ one. This aligns with findings from prior studies (Cusmano & Dean, 2011; Khawand et al., 2024). Additionally, nearly all respondents noted that the volume of legal work did not justify hiring a full-time expert. As a result, SMEs tend to rely on external consultants for IP matters. The absence of internal expertise may lead to a lack of awareness regarding the potential strategic benefits of intellectual property rights (Cusmano & Dean, 2011; Khawand et al., 2024). The personal dimension, discussed by Wang et al. (2011), was also evident in the findings. Some respondents deprioritized IP-related work simply because they lacked interest in it, despite acknowledging its importance, preferring instead to focus on tasks they found more engaging.

Consistent with their broader operational behavior, SMEs typically adopt an ad hoc approach to IP. This reactive mindset also shapes how they seek external advice, with most interactions occurring in response to immediate technical issues rather than as part of a long-term strategic dialogue. This finding supports Wainikka's (2011) observation that SMEs primarily reach out to IPSPs for help with specific tasks, such as patent filings, or during crises. The nature of the relationship between SMEs and IPSPs will be explored further in the following sections of the analysis.

5.2 External drivers of patent activity

When innovating firms are making IP decisions there are several possible alternatives. The two main options are to either protect one's invention with a patent, or to protect it

by keeping it as a trade secret. There is also the alternative of simply not protecting the invention at all, either because the value of protection is too low, or because it may be beneficial for the inventor to enable other actors to use the invention freely. Despite this, empirical findings in this study suggest a heavy emphasis on patents, which is in line with previous research (Süzeroğlu-Melchioris et al., 2017). It is perhaps not surprising to find that few firms opt not to protect their intellectual property at all, but

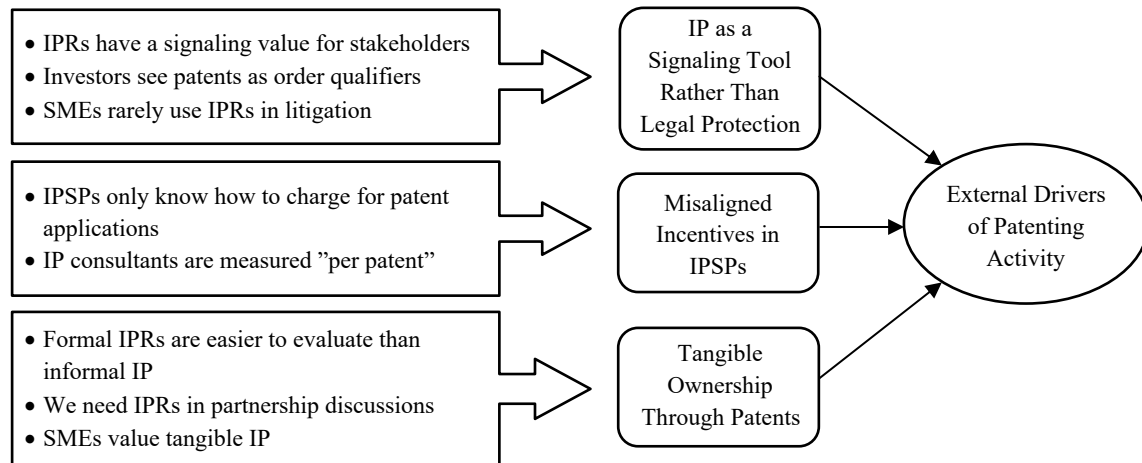


Figure 4. *External drivers of patenting activity.*

The figure depicts the identified second order themes relating to external drivers to patenting, and their corresponding first order codes.

what stood out was that several firms had patents they claimed to have no use for, or that they even regretted getting. This indicates that the emphasis on patents leads to real problems for firms that would benefit more from trade secrets. The study identified three main categories, as depicted in Figure 4, of reasons as to why patents were prioritized over trade secrets: signaling value towards stakeholders, IPSP incentives and technology ownership.

5.2.1 IP as a signaling tool rather than legal protection

Empirical findings from this study indicates that IP is rather used for its signaling value than the legal protection that IPRs provide, with some going as far as naming investor attraction the sole purpose of acquiring the patent, which aligns with previous research (Holgerson, 2013). The view of IP as mainly being a signaling tool is in contrast to the view of almost all studied IP consultants, both patent attorneys and attorneys-at-law, who stated that patents are important for innovating firms to ensure sole right to appropriability. The issue for small firms is that they often lack the resources to monitor and enforce their patents (Somaya, 2012). Whether this misalignment leads to issues or not depends on the case, but there is a risk that bad decisions are made when firms are pushed to patent (Süzeroğlu-Melchioris et al., 2017), which some of the studied firms had run into.

The study found that SMEs are steered into patenting from several actors, no matter what the optimal means of protection may be for a certain innovation. Alternatives such

as trade secrets and IP strategies such as open innovation are often overlooked in favor of patents for many reasons, despite research showing that small firms often find trade secrets more practically useful (Arundel, 2001). In the startup case, patents do fill one key purpose, however, as they are almost essential to attract investors. Many investors view patents as prerequisites, so in order to even be allowed to pitch their case, the inventors must have a patent to show for it. It has also been shown in research that firms with patents are more successful in bringing in external capital (Holgersson, 2013). In some cases, the patent is the best strategy, but in the cases where it is not, investors run the risk of pushing firms in a non-optimal way, before investing in them. This is a serious flaw with the system, and investors need to gain a more comprehensive understanding of the many intricacies and nuances of intellectual property. This would benefit both the SMEs who will be more free in choosing an IP strategy, as well as the investor who may get a higher return on the investment. The investors' IP knowledge is difficult for SMEs and IPSPs to affect, but as has been found empirically, what the investors really want is a plan of securing appropriability of an innovation. If a firm decides not to patent, but still wants to bring in external capital, IPSPs could help SMEs gain legitimacy, for example by being present in investor discussions and arguing for the trade secret case.

Patents also carry a signaling value towards other stakeholders. For example, a patent can have a signaling value to customers and may be perceived as a stamp of quality. This importance varies from industry to industry, but in many technological fields, a patent is perceived as an indication of uniqueness and new technology, although both empirical findings and research (Billy & Sukhatme, 2023) questions the impact this has on purchasing decisions by consumers. Nevertheless, such parameters should be considered, which is something this study indicates that SMEs struggle to achieve.

5.2.2 Misaligned incentives in IPSPs

Also, IPSPs have strong incentives to push for patents, since they are more lucrative than the alternatives (Süzeroğlu-Melchiors et al., 2017). Both empirical findings in this study and research (Arundel, 2001; Levine & Sichelman, 2018) support the fact that trade secrets are important complements to patents, especially for startup firms. When the incentives of the IPSP are not aligned with the business goals of the client, the collaboration as a whole becomes less valuable, although the IPSP may benefit from it, especially if the client has low internal IP competence (Süzeroğlu-Melchiors et al., 2017). While it may seem counterintuitive that adding less value to the client will be more valuable for the IPSP, this stems from difficulties in valuation of IP. A patent, useful or not, is something tangible which empirical data indicate that clients appreciate, and that has other benefits apart from protection thanks to its signaling value.

Not only the IPSP as a company have incentives to push for patents, but so do the individual patent attorneys (Süzeroğlu-Melchiors et al., 2017). Patent attorneys are the majority of the skilled personnel at IPSPs and they are trained in drafting patents, not giving business advice. As such, it makes sense to have an inclination to patenting. The

problem is that this has led to a system where an IP consultant's performance is usually measured in how many patent applications are filed. As such, the consultant has individual incentives to push for a patent no matter what may suit the client's needs best.

In the long term, this may have negative effect on the client's business and perception of the IPSP. The pro-patent orientation of IPSPs leads to an underutilization of alternatives, such as trade secrets, as well as client dissatisfaction due to low strategic relevance of IPRs, as shown both by empirical evidence in this study and research by Granstrand and Holgersson (2012). It also makes it difficult for other types of consultants, such as business consultants, to enter the IP space, as they perform work that is less tangible than patent drafts. Realistically, a combined workforce of patent attorneys, attorneys-at-law and management consultants could lead to increased value for clients as well as give the IPSP better insight into their clients' businesses. By gaining such insight, the IPSP could spot more issues and help the client work more proactively, which is something that all four IPSPs in this study desired and also something that could strengthen the relationships between both parties.

As has been established, IPSPs have their incentives to push for patents, and investors require patents to even talk to small firms, but what is the reason behind this? It may be difficult to answer such a question fully, but what can be said is that it has, to a large extent, to do with difficulties in evaluating alternative strategies. What is the value of a trade secret, or IP in a broader sense, for that matter? The success of a strategy cannot be fully evaluated until after it has been implemented and tested, and even then it would be difficult to put a price on it. So how would an IPSP do so from the beginning?

5.2.3 Tangible ownership through patents

The final reason as to why SMEs are inclined to patent is that patents are useful for defining technology ownership. While this is not an outright pressure put on firms by an external actor, they essentially need to own an IPR, usually a patent, to be able to negotiate partnerships, exits or technology transfer. As such, the system requires some sort of formal IPR, which nudges SMEs in the patenting direction. While trade secrets may be viable means of protection, empirical findings support the fact that SMEs are aware that they need something tangible to bring to a negotiation table, which a patent provides. An invention protected by secrecy would reasonably not be subject to collaborations, as the protection would be lost as soon as the information is shared, which would limit opportunities for the inventor. For example, without a patent it would be impossible for a firm to license a technology.

5.3 Structural limitations in advisory capacity

The collaborations between IPSPs and SMEs are limited in their possibilities due to several mechanics in the current system. The following main limitations which prevent both actors from achieving the most potential out of these collaborations have been found: knowledge gaps, limited engagement with small firms and misalignment of expertise. The limitations are illustrated in Figure 5.

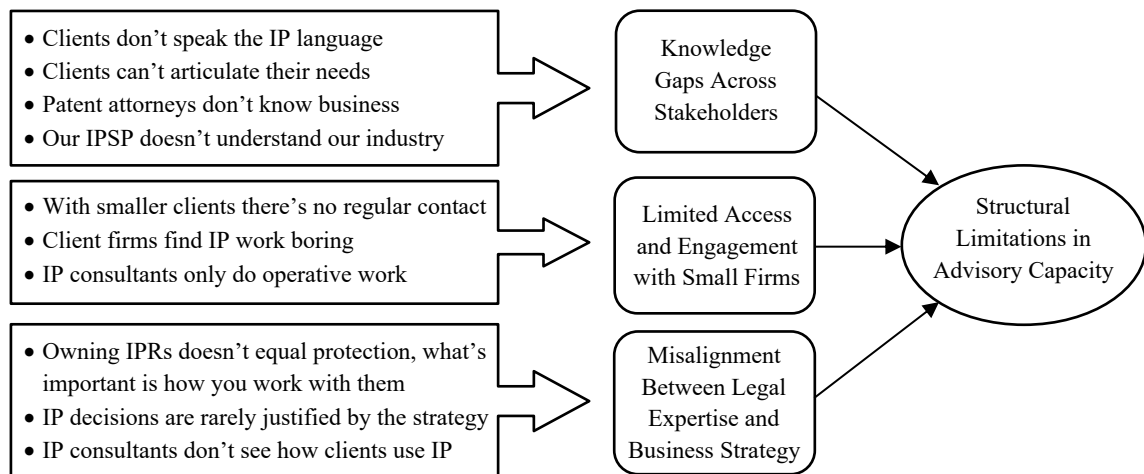


Figure 5. *Structural limitations in advisory capacity.*

The figure depicts the identified second order themes relating to limitations in advisory capacity, and their corresponding first order codes.

5.3.1 Knowledge gaps across stakeholders

A significant and recurring theme in the relationship between IPSPs and SMEs is the knowledge gap. This asymmetry in understanding affects both actors and has a tangible impact on the quality and outcomes of their collaboration. From the perspective of IPSPs, the gap often results in frustration. IP consultants frequently report that their work is not fully understood or appreciated by SME clients. This is particularly evident when clients lack the contextual or strategic knowledge to grasp the long-term implications of IP decisions. As a result, IP consultants may feel that their services are undervalued, not because of a lack of quality, but due to the clients' limited capacity to assess their relevance or impact.

This disconnect can lead to a dynamic in which essential nuances are lost in translation. While simplification is often necessary when explaining complex legal and strategic matters, several consultants noted that “not everything can be simplified.” When key concepts are oversimplified or misunderstood, critical elements of the IP strategy may be overlooked or misinterpreted. In practice, this may lead to missed opportunities or decisions that are misaligned with the SME's business objectives. Lost in translation are also the demands and requests of SMEs, who ask for strategic services but are misunderstood by IPSPs who use the word “strategy” quite liberally, similarly to what

Fleisher (2018) describes. SMEs request strategic, or tactical services, while IPSPs deliver operations under an illusion that this satisfies client needs.

Furthermore, since SMEs often operate without in-house IP expertise, they are limited in their ability to critically evaluate the services they receive. Without sufficient internal capacity, it becomes difficult to assess whether the IP advice provided aligns with broader commercial goals or to determine if alternative strategies, such as trade secrets instead of patents, might be more appropriate. Another example could be a licensing strategy, which requires the company to have at least some IP knowledge in order to make an informed decision. This dependency on external expertise, combined with limited evaluative ability, places SMEs in a vulnerable position where they must rely heavily on the judgment of their advisors, often without the tools to verify or challenge it.

The consequences of this knowledge gap are substantial. Miscommunication and misaligned expectations can result in ineffective IP strategies, underutilized assets, or unnecessary expenditures. Moreover, the lack of mutual understanding can erode trust between SMEs and their service providers, diminishing the potential for long-term strategic collaboration. Addressing this gap requires action from both sides. IPSPs may benefit from developing new methods to communicate the value and strategic purpose of their services in ways that are accessible yet accurate. Simultaneously, there is a clear need to strengthen the IP literacy of SMEs, either through formal training initiatives or embedded support structures, to enable more informed participation in IP-related decisions.

5.3.2 Limited access and engagement with smaller firms

For IPSPs, establishing relationships with SMEs poses a persistent challenge. While these firms may represent a substantial segment of the innovation landscape, they are often difficult to identify, access, and engage in a sustained manner. This difficulty is rooted in a combination of structural, perceptual, and resource-related barriers that affect both outreach and relationship development. IP consultants in this study noted that small firms often have low visibility, making it difficult to find contact points.

Even when contact is established, initial engagement can be limited. Many smaller firms perceive intellectual property as a distant or secondary concern, particularly if they are in the early stages of commercial development. From the IPSP perspective, this perceived lack of interest often translates into difficulty initiating meaningful conversations about long-term IP strategy. IP consultants report that smaller firms are frequently unaware of the potential strategic value of IP, beyond basic legal protection, and may see IP services as abstract, expensive, or irrelevant to their immediate operational needs. This perception creates a communication barrier, in which IPSPs struggle to demonstrate the value of their services in terms that resonate with the short-term priorities of the SME.

Another contributing factor is the resource constraint that characterizes most smaller firms. Limited budgets, staff capacity, and management bandwidth mean that IP is often

deprioritized in favor of more urgent operational concerns. Even when SMEs express interest in IP support, they may lack the time, personnel, or capital to follow through on engagements. From the service provider's standpoint, this can lead to a high cost of client acquisition and retention, particularly when compared to larger clients with dedicated innovation budgets and longer-term planning horizons. As a result, many IPSPs focus their business development efforts on larger firms or high-growth startups that are more likely to convert into viable long-term clients.

In sum, while smaller firms represent important clients from a policy and innovation system perspective, IPSPs face tangible difficulties in reaching and engaging them. These challenges include limited visibility, differing priorities, resource constraints, and cultural mismatch, all of which contribute to a market dynamic in which many SMEs remain underserved or unengaged in strategic IP matters. There is also a risk that these challenges will intensify as new technologies, such as AI-based software, emerge and begin to replace parts of the service offerings provided by IPSPs. Addressing these challenges may require IPSPs to adopt more tailored outreach strategies, flexible service models, and relationship-building approaches that better align with the realities of smaller firms.

5.3.3 Misalignment between legal expertise and business strategy

A large portion of the discussion about competence in IP is about what level of knowledge the client has about IPRs and how to apply for them. For example, when a patent attorney says that a client has a low level of understanding of patents, they are usually referring to the ability to draft a patent application. Does this mean that the client does not understand IP? Although often true, it is not necessarily the case. This study indicates that the client has a better understanding of the useability of a patent in a business than a patent attorney does. That is not to say that SMEs have perfect knowledge in IP, but they have more practical experience of working with it, although they sometimes do not realize that they are doing so. Fisher and Oberholzer-Gee (2013) point out that many firms struggle to incorporate their IPRs in their strategies, however, which indicates an opportunity to sell such a service. At the same time, Holgersson (2013) does note disadvantages with sole reliance on external IP services, stating that this is an inadequate substitution for internal expertise.

Furthermore, findings from this study indicate that IPSPs are limited in their understanding of the business side of intellectual property. The industry is so focused around IP itself, which has led to the illusion of a stand-alone value of IP, which is usually close to zero. It has been known in research for a long time that patents alone are insufficient to ensure appropriability (Teece, 1986), indicating a more strategic mindset. Fleisher (2018) recognizes that this is not straightforward, however, as firms struggle to articulate long term ambitions and goals, which is supported by empirical findings of this study.

IPSPs overvalue the protection that IPRs provide, because that is not how the client uses their IPRs. In fact, even if they wanted to enforce their IPRs in litigation, few would be able to, as shown by empirical data in this study as well as research by

Holgersson (2013). What is important is how these IPRs affect other parts of the business of the owner. Does a patent signal quality in the client’s industry? Could it be licensed? Would the client benefit from having an open innovation strategy, to increase the total market size of its technology? Assuming the client needs a patent, does the IPSP understand the business well enough to spot what exactly should be protected? None of these answers are simple to find, especially since clients seldom have the answers themselves, and most IPSPs lack the competence and ambition to understand their clients to this extent.

5.4 Aligning IPSP practices with SMEs’ commercial needs

There is a clear potential for a more collaborative approach from IPSPs. In this envisioned model, the IPSP would take on an integrated role within the client’s organization, effectively functioning as the client’s external IP department. This would require the IPSP representative to possess deep insight into the client’s operations and a comprehensive understanding of their long-term business strategy. It would also provide clients with greater visibility into their IP activities, enabling more strategic, informed evaluations and decisions about their intellectual property portfolio.

Figure 6 illustrates the overlap between the current service offerings of IPSPs and the management levels of SMEs, as well as proposed future services. At present, IPSPs primarily address the operational needs of SMEs and, in some cases, extend into the tactical level. Activities such as patent drafting and trademark registration are typically regarded by SMEs as operational tasks. In contrast, advisory services on matters like the geographical scope of patent protection may be seen as more tactical in nature. However, few services were found to engage with the higher end of the tactical spectrum, let alone the strategic level. Accordingly, current IPSP offerings can be characterized as covering the operational level and the lower end of the tactical level.

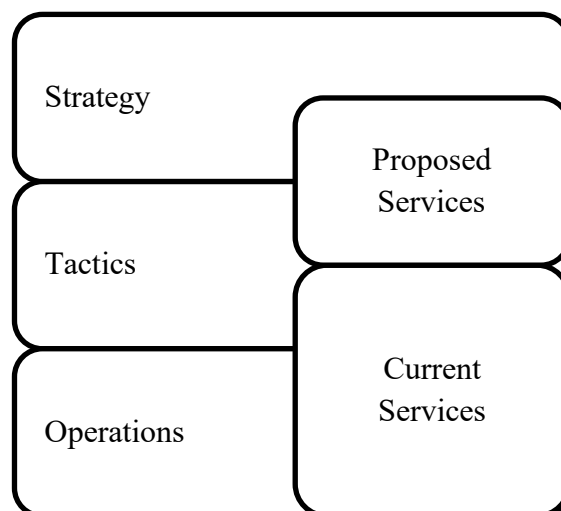


Figure 6. *The relation between current services, proposed services and the three decision levels of SMEs.*

Since this study focused exclusively on existing businesses, a certain degree of survivorship bias is naturally present. However, while all SMEs included in the study are still in operation, they have experienced—and continue to experience—mistakes. Notably, none of these issues were attributed to shortcomings in the operational dimension. In other words, the services provided by IPSPs have generally been adequate in terms of operational quality. Instead, the challenges these firms faced stemmed from how IP and IP rights were implemented. Notably, this was the case regardless of industry, indicating that this is a systemic issue across the business landscape.

Such issues lie high on the management spectrum, within both the tactical and strategic dimensions. This suggests a clear need for SMEs, and a corresponding opportunity for IPSPs, to collaborate more effectively at these levels. As such, a key proposition is to expand current service offerings into the higher tactical level and the lower end of the strategic level. The uppermost layer of strategic decision-making, however, lies beyond the domain of intellectual property; it is up to the client firms themselves to define the kind of business they aspire to be. IP should serve to support and enable that ambition, something IPSPs are well-positioned to facilitate.

One way to implement the proposed solution is to employ individuals with strong business acumen and a solid foundation in IP to act as intermediaries between clients and patent attorneys. In practice, this intermediary would serve as a consultant, learning about the client's business, formulating and recommending long-term IP strategies, and delegating specific operational IP tasks to patent attorneys or legal professionals. From a practical standpoint, such a shift would be logical for SMEs. The primary point of contact between IPSPs and SMEs is typically the CEO or another senior manager who operate primarily at the higher levels of management, and whose expertise lies in strategic or tactical decision-making. If IPSPs were able to engage with clients at this level, it could help bridge existing gaps in communication and understanding.

This proposed model aims to disrupt the negative cycle depicted in Figure 2. First, it addresses the current gap between legal expertise and business understanding. A generalist with knowledge in both domains would be well-positioned to align business demands with appropriate IP solutions. Second, it would increase engagement between IPSPs and their SME clients by fostering more collaboration and creating additional points of contact. These representatives could also play a supportive role in guiding SMEs through their broader strategic planning processes.

Furthermore, the empirical findings suggest a future in which AI automates operational tasks such as drafting patent applications. This development could disrupt the IP industry by replacing traditional services with software solutions. Although the full scope of future AI adoption remains uncertain, it would be prudent for IPSPs to adapt their service models in response. In particular, they should focus on leveraging internal capabilities that are less susceptible to automation. In such a future, SMEs that rely on software instead of IPSPs are likely to face new challenges, particularly due to the

absence of human communication. For instance, working with IP in this way would demand a deeper understanding of its contextual nature, rather than merely focusing on the creation of IPRs—an area where IPSPs could provide valuable support. However, to fulfill this role, IPSPs must align their competencies with these emerging needs and adapt their processes accordingly. A more integrated approach could position them for a future in which operational tasks are entirely handled by AI, allowing them to shift their focus toward the strategic implementation of IP.

However, there are several barriers to implementing such a shift toward a more integrated approach. First, IPSPs may need to adopt more dynamic pricing models to ensure that representatives are not incentivized to always recommend patenting as the default solution. Similarly, internal incentive structures may need to be revised to support broader strategic thinking. Another challenge lies in the adaptation required from current staff, such as patent attorneys, who may find it difficult to transition to a more collaborative and interdisciplinary mode of working. Coordinating between different units within the IPSP could also present logistical challenges.

Lastly, while it is important to consider the apparent preferences of SMEs, this study reveals a latent demand for more strategic IP services—one that is not yet fully recognized by either SMEs themselves or the service providers. Although the transactional model currently dominates, this may reflect a lack of awareness or capability rather than a true preference. Furthermore, the proposed integrated approach would require a higher degree of strategic planning from the client, which many SMEs currently lack, but the findings suggest this is precisely the kind of support they need to move toward a more proactive and value-driven IP strategy.

6. Conclusions and implications

The purpose of this study has been to examine how SMEs interact with IP and how IPSPs can better align their services with the commercial needs of SME clients. The findings indicate that SMEs rarely engage in long-term strategic planning, primarily due to external uncertainties and a lack of time and resources. A recurring theme is that SMEs struggle to articulate their needs; furthermore, their perceived needs often do not align with their actual requirements. These issues are particularly pronounced in an IP context, where SMEs frequently fail to incorporate IP into their broader business strategies. Instead, they tend to adopt an ad hoc approach, reacting to immediate threats or opportunities as they arise. This reactive pattern is also reflected in their interactions with IPSPs, which are typically limited to operative tasks and involve infrequent, transactional contact.

Moreover, IPSPs are often highly specialized and focused on executing such operative tasks. At present, the average IPSP lacks the capabilities and contextual knowledge needed to fully understand a client's business on a strategic level. Efforts that have been made rarely solve the main problem that an IP strategy should, which is how to implement IPRs in the overall business plan of a firm. All in all, this results in a reality where IPSPs believe that they satisfy their SME clients' needs, while clients solely rely on their own, sometimes lacking, competence to make such decisions.

This results in a disconnect between IPSPs and SMEs, leading to suboptimal IP arrangements that are misaligned with business objectives. This disconnect is further exacerbated by external pressures, such as investor demands and internal IPSP incentives, that encourage patenting regardless of strategic relevance. Consequently, SME owners may be further discouraged from engaging with IP, especially given the high costs associated with patenting. To address these challenges, this study proposes a more integrated and collaborative business model for IPSPs. In this model, generalists with strong business acumen and a foundational understanding of IP would serve as intermediaries between SMEs and patent attorneys. These individuals would translate business needs into appropriate IP strategies and delegate technical tasks to IP specialists. Ideally, such an approach would bridge the current gap, ensuring that IP strategy is driven by the actual commercial needs of SMEs.

This study contributes to the existing body of research by highlighting key barriers and misalignments in SME-IP engagement from a strategic perspective. It emphasizes that the misalignment originates both from SME-specific characteristics and from the nature of their interactions with IPSPs. Importantly, the study incorporates perspectives from multiple stakeholders within the IP ecosystem, providing a nuanced understanding of the issue.

For IPSP managers, the findings offer actionable insights when considering new business models. While traditional models have long been viable, shifting market dynamics, such as the rise of artificial intelligence and increased international competition, may necessitate greater adaptability. In this context, moving toward a

more collaborative and integrated client service model could provide a competitive advantage. For SMEs, the study underscores the widespread lack of strategic planning, particularly regarding IP. While IP rights serve important functions as signaling tools and instruments of ownership, overlooking their strategic dimension can be detrimental. Greater awareness of this issue could help SMEs extract more value from IPSP services and make more informed decisions.

For policymakers, the findings highlight a general lack of knowledge about the strategic aspects of IP. Prior research has shown that entrepreneurial SMEs benefit from having a foundational understanding of IP and how it can be integrated into business strategy. Therefore, there is a strong case for expanding educational efforts, particularly those targeted at current and future SME owners. Additionally, the influence of investors, who often treat patents as check-box requirements without considering their strategic value, may promote suboptimal IP practices. This misalignment is counterproductive both for individual firms and for broader societal innovation goals, since fewer innovations successfully reach the consumer market in a sustainable way. As such, there is a compelling rationale for policymakers to increase awareness and understanding of strategic IP management at a systemic level.

7. Suggestions for further research

This study has explored the relationships between IPSPs and SMEs with a quite broad scope, but the intricacies of each aspect has largely been left untouched. For further research, it would be both interesting and beneficial for both actors to understand these nuances in more detail. This study has found that several advisory firms have tried to move in a more strategic direction with their IP consultancy, but most of these seem to have failed. Many startup consultancies, niched into strategic services, have been acquired by large firms where they are absorbed into the operational space and stop providing the market with the strategy aspect. Furthermore, larger actors who have established IP strategy departments have closed them down. While the findings of this study clearly indicates that there is a demand, and need, for IP strategy services, it would be wise to explore why such attempts have failed in the past.

A limitation of the scope for this study has been that only existing firms have been possible to explore in a structured manner. Only in the cases where subjects by coincidence have had experiences of failures, have such perspectives been included. This becomes a survivorship bias, where only somewhat successful firms, or firms that are yet to fail, can be studied. It would be of value to study those who have already failed, to see why they did so and if it can be connected to flaws in IP management. Additionally, this study is primarily limited to the Swedish IP industry. While the findings are considered relevant in an international context, comparisons across different IP systems could provide additional nuance and insight.

A view that was shared by many subjects is that people are poorly educated in the field of IP. This motivates a study on a more societal level, looking into how IP could be integrated in the curriculum of general education, but also higher level university studies, as even academically trained people often are unfamiliar with relatively basic concepts of IP. While students of law run in to intellectual property from a legal standpoint, the informal nuances of IP largely remains left to be explored in professional settings, requiring the wheel to be reinvented each time. Thus, business and engineering students could benefit from touching upon these subjects in their academic training. Finally, while this study touched upon the potential shift caused by AI, further research is needed to assess the full extent of its impact.

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Appendix

Appendices A, B, and C present the interview guides used for the semi-structured interviews conducted in this study. Appendix A contains the questions posed to IPSP representatives, Appendix B includes the questions directed at SME managers, and Appendix C outlines the questions asked to IP experts.

A. Interview guide for IPSP representatives

Can you tell us a little about your background and describe your role at the company?

What does a typical workday look like for you?

Which industries and types of companies do you primarily work with?

What does a collaboration with clients typically look like? Are there differences between different companies?

How much knowledge about IP do clients generally have from the start?

How does communication between you and the client take place? Who are the main points of contact on the client's side?

What are the key steps in the commercialization process of intellectual property rights?

Can you give an example of an interesting case of IP commercialization that you have worked on?

What new trends do you see influencing the commercialization of intellectual property rights?

What are the biggest obstacles companies face when commercializing IP? Legal, regulatory, or other challenges?

Do you have any prior experience working strategically with IP, and would you feel comfortable advising a client on these matters if needed?

If you could change one thing about your firm's operations as they stand today, what would it be?

If you could give one general piece of advice to someone considering applying for a patent and commercializing a product, what would it be?

Is there any important area within IP commercialization that we haven't asked about, or is there anything else you would like to add?

What two other people that you know do you think would be the most relevant to interview next?

Which two people would you recommend we interview next?

B. Interview guide for SME managers

Can you tell us about your company?

Can you share some information about your background and describe your role at the company?

What is the overall strategy for the company?

What are your long-term goals?

What does the competition look like in your industry?

How do you work with your intellectual property rights?

Do you have a strategy for managing your IP?

Do you have an in-house lawyer or someone else handling your intellectual property?

Have you ever worked with an IP firm? Any other types of consulting firms?

Have you considered any alternative ways of managing your IP?

C. Interview guide for IP experts

Can you tell us about your organisation?

Can you share some information about your background and describe your role at the organisation?

How does your organisation work with innovation?

In what ways do you encounter IP in your daily work?

What are the biggest challenges with regards to IP and SMEs?

In your view, what is the general knowledge level of IP, particularly IP strategy, within SMEs?

What is your view of IPSPs?

What are some potential improvements to the IP industry, and what can be done to achieve this?

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