

Intellectual Property as a Success Factor for Startups: Systematic Literature Review

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ABSTRACT

This paper presents a systematic literature review on the impact of intellectual property on startup success. By reviewing 21 relevant articles published in the last five years, sourced from Google Scholar, it analyses the influence of intellectual property on key business factors such as financing, growth, competitiveness, and innovation. The findings show that intellectual property plays a significant role in startup success, though results vary regarding formal (patents) and informal (market advantage, trade secrets) protection methods. A balanced approach to intellectual property management, tailored to startups' needs and developmental stages, is recommended. The article emphasizes the need for further research on different forms of intellectual property, considering regional contexts and long-term effects. Its value lies in offering both theoretical insights and practical recommendations, particularly for policymakers, investors, and startup owners seeking to promote innovation and growth through effective intellectual property management.

KEYWORDS

Intellectual property, startup, trademark, patent, innovation, growth, business success

1 INTRODUCTION

The purpose of our research is to systematically review the literature on the impact of intellectual property (hereinafter referred to as IP) on the business success of startup companies. Through an analysis of existing research results, we aim to explore how IP contributes to achieving these success criteria. Our objective is to determine whether, and how, IP influences the business success of startups, which is crucial for understanding their growth in a dynamic business environment.

In the modern economy, there is a notable impact that new companies have on innovation [9, 15], and the economy as a whole [4, 10]. In particular, startups drive innovation, create new jobs and introduce competitiveness into the business world [17]. The influence of IP is particularly interesting, as it can be crucial for their success.

Globally, the number of new companies, known as startups, is rapidly increasing daily [18]. Such companies, especially innovative startups, often lack historical financial data or a track record, making it more difficult to establish a market reputation. Their innovative products or business processes also lack prior experience or comparative standards [2]. This presents challenges that can lead to the failure of companies due to inadequate or non-existent business models, and insufficient business growth [4].

Díaz-Santamaría and Bulchand-Gidumal identify several factors that can influence the success of startups [6]. The results of their research indicate that the success of a startup can be measured in two ways: the startup achieves significant revenue, and the startup receives funding. In the following sections, we also highlight other indicators for measuring the business success of a startup.

Despite numerous studies in recent years on the impact of innovative practices on the business development and success of startup companies, no comprehensive and systematic analysis of scientific literature has yet been conducted that specifically focuses on the influence of IP rights on the business success of startups. This gap in scientific research indicates the need for an in-depth review of existing scientific sources that would enable a holistic understanding of the impact of IP on the business success of startups.

The research question is, how are a startup's IP and business success connected, i.e., does IP affect business success, and how? In this way, we can better understand how IP contributes to the competitiveness and long-term success of startups.

2 METHOD

For this research, we used the systematic literature review method, conducted between January and April 2024. During this period, we reviewed foreign literature, focusing on the impact of IP on the success of startup companies. We examined professional, scientific, and research publications published in the last five years to ensure the most up-to-date data and discussions in this field. We used the international bibliographic database Google Scholar to collect information, which allows for the search of scientific literature and the ranking of documents in a manner used by researchers. To identify relevant sources, we used the following set of keywords: "Intellectual Property," "Startups," "Start-ups," "Patents," and "Trademark." In total, we obtained 30 relevant articles. After excluding 9 duplicates, we retained 21 suitable articles for further analysis. The four data collection strategies were used to ensure a thorough and comprehensive review of the relevant literature, tailored to the

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research question. Each strategy contributed to refining the search and eliminating irrelevant sources.

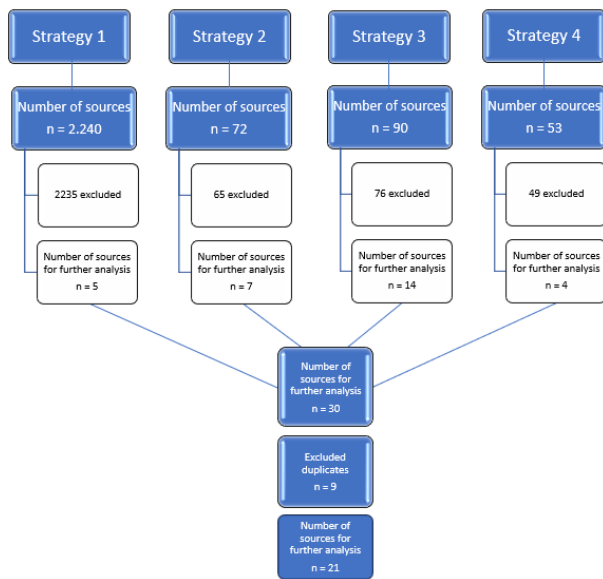


Figure 1: Diagram of the Results of the Systematic Literature Review

3 RESULTS AND DISCUSSION

Most research confirms that IP significantly influences the success of startup companies. Researchers have examined how IP affects various aspects of startups' operations, such as financing, growth, competitiveness, and innovation performance. Below, we summarise the key findings of these studies.

Hellström, Nilsson, Andersson, and Hakanson found that a combination of patents and secrecy positively influences the protection of innovations and market opportunities, thereby increasing companies' competitiveness [8]. Similarly, research by EPO-EUIPO reports that 29% of European startups invest in IP, which increases their chances of securing funding [7]. Krauss, Breitenbach-Koller, and Kutenkeuler emphasise that IP is crucial for the success of biotech startups, as it enhances their value and attractiveness to investors [11].

The role of IP is particularly pronounced in international markets, where the protection of innovations is essential for the survival and growth of companies. Tula, Ofodile, Okoye, Nifise, and Odeyemi highlight that IP plays a key role in ensuring the business success of startups in a global context, as it prevents the copying and exploitation of innovations by competitors, with registered patents and trademarks serving as signals to investors of startups' innovation and credibility [23].

Brandt, Laibach, Kamrath, and Bröring also point out that IP increases the value of companies and attracts investors, which is crucial for success in corporate investments. Startups with well-protected IP find it easier to attract investors, as they perceive protected technology as a lower-risk investment with greater potential for profitability [3]. Additionally, IP enables startups to collaborate more easily with larger corporations, further strengthening their financial and strategic positions.

Schaberg explores various forms of IP protection and finds that startups with a diverse portfolio of protected rights grow and innovate more easily [19]. Various forms of protection, such as patents, trademarks and copyrights, provide comprehensive protection, increase investor confidence, and facilitate access to capital, which encourages further innovation. Ljungqvist, Hegde, and Raj add that the rapid granting of patents stimulates innovation and facilitates the acquisition of capital, while delays in patent granting negatively impact startups' growth [13].

Despite the numerous positive impacts of IP on startup companies, some research shows mixed results. Power and Reid caution that patents can negatively affect the success of startups, while trademarks and licensing have a positive impact [16]. Teixeira and Ferreira, as well as YunQi and Lin, find that formal methods such as patents often reduce companies' competitiveness, while informal mechanisms such as market advantage and trade secrets can improve competitiveness [22, 24].

Some studies recommend a balanced approach to IP management. Silva Júnior, Siluk, Neuenfeldt Júnior, Rosa, and Michelin believe that a combination of formal and informal protection mechanisms, such as patents, trademarks, and copyrights, is crucial for protecting innovations and enhancing competitive advantage [21]. Audretsch, Colombelli, Grilli, Minola, and Rasmussen emphasise that policies for innovation and IP protection must be tailored to the specific needs and stages of startups' development [1]. Chou adds that patents help in securing funding, but startups often face patent litigation, which reduces their productivity [5]. The solution lies in commercialisation patents, which would reduce the negative impacts of disputes and enable better protection and marketing of innovations.

Research by EPO-EUIPO, Krauss, Breitenbach-Koller, and Kutenkeuler, Brandt, Laibach, Kamrath, and Bröring, Schaberg and Ljungqvist, Hegde and Raj emphasise the importance of effective IP management for startup success [7, 11, 3, 19, 13]. However, these studies primarily focus on specific sectors or particular cases and only certain forms of IP, which can lead to a limited understanding of the overall picture and strategies that would be beneficial for startups across different fields.

Some studies focus on specific countries or geographical areas, such as EPO-EUIPO on European startups or Li, Gan, and Zhang on Chinese startups [7, 12]. These studies highlight regional particularities in the use of IP, which can affect the innovation and competitiveness of companies in specific geographical environments.

University startups, as discussed by Shahidan, Latiff, and Wahab, represent a special category where innovation intertwines with academic knowledge [20]. These startups often face specific challenges in commercialising technologies, which can hinder the value creation process. Successful university startups must identify market opportunities, ensure entrepreneurial commitment, and continuously develop their technologies to meet market demands.

The inclusion of perspectives such as that proposed by Panagopoulos and Park, where patents serve as negotiation tools, highlights the potential for strategic use of IP in corporate negotiations, not just as a defensive mechanism [14].

Effective IP management generally has a positive impact on the success of startups, but some results indicate the need for a

balanced approach that also includes informal protection methods. Therefore, it is essential that future research expands existing methodological frameworks and includes analyses that capture the complexity and interdependencies of different IP rights, including on an international level.

4 CONCLUSION

Based on the review of existing research, we can confirm that IP is an important factor in supporting innovation and competitiveness of startups. IP protects ideas and innovations and contributes to securing capital and sustainable growth of companies.

Although most research confirms the positive impact of IP, there are also studies that suggest a negative impact of certain forms. Further research is needed to clarify the impact of different types of IP on the success of startups, including an analysis of specific geographical contexts and the long-term effects on company survival.

With the doctoral dissertation currently in preparation, we will explore the impact of IP on the success of innovative startups that have received funding from the Slovenian Enterprise Fund in the P2 tender between 2008 and 2023, analysing their operations and registered IP. We will adopt a mixed-methods approach, combining quantitative and qualitative strategies. Primary and secondary data will be collected from recipients of the P2 grant (2008–2023), using IP databases (Espacenet, Global Brand Database, DesignView), and conducting in-depth interviews with selected companies. Quantitatively, we will analyse the IP portfolios of these startups and assess their business performance through statistical analysis in JASP and Excel, using univariate, bivariate, and multivariate methods. Qualitatively, we will conduct 20 in-depth interviews—10 with startups that have registered IP and 10 with those that have not—to uncover insights that quantitative methods cannot fully address. This mixed-methods approach will allow us to comprehensively explore the impact of IP on startup success, offering both statistical analysis and qualitative insights into the broader role of IP in innovation and business growth.

Future research will thus contribute to a better theoretical understanding and offer practical recommendations for policymakers, investors, and startup owners regarding the optimal use of IP to promote innovation and long-term growth.

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