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ORIGINAL ARTICLE

Strategic trademark management: a systematic literature review and prospects for future research

Yougen Cao[1] · Shengce Ren[1] · Mei Du[1]

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Abstract
Although recent studies have investigated trademarks in terms of economics, marketing, and management, strategic trademark management on the part of enterprises remains poorly understood, and a unified theoretical framework has not been established. To promote research in this area and guide enterprises' strategic trademark management, we have performed a systematic literature review covering articles from the last 40 years and developed a theoretical framework based on three dimensions: antecedents–core mechanisms–outcomes. After defining and highlighting three activity domains: rights, licensing, and litigation—within which trademark-related strategic actions are typically undertaken, we focus on two core mechanisms: trademark strategy and strategic trademark management. Furthermore, four types of trademark strategy and five decision-making factors in trademark management are summarized, in addition to the antecedents and outcomes of strategic trademark management. Finally, according to the theoretical framework, we propose four areas of future research: trademark activity domains, trademark strategy, strategic trademark management, and enterprise performance of trademark management.

Keywords Trademark · Brand · Trademark strategy · Strategic trademark management · Literature review · Research prospects

Introduction

With the mobility and development of service and technology elements in the global economy, brand and innovation have increasingly become the two crucial means for enterprises to obtain competitive advantage (Aaker 1997; Clayton and Turner 1998; Bhat and Bowonder 2001; Slotegraaf and Pauwels 2008; Nedergaard and Gyrd-Jones 2013; Brexendorf et al. 2015; Lee et al. 2016; Flikkema et al. 2019; Paswan et al. 2021). In this regard, the related intellectual property rights have gradually emerged as strategic resources for enterprises, regions, and even countries, which has aroused considerable research interest (Pitkethly 2001; Greenhalgh and Rogers 2007; Candelin-Palmqvist et al. 2012; Neves et al. 2021). Nevertheless, in the past few decades, research on brands, innovation, and intellectual property (IP) has mainly focused on patents and their effects on technological progress (von Wartburg et al. 2005; Encaoua et al. 2006; Haupt et al. 2007; Nelson 2009; Mihm et al. 2015; Verhoeven et al. 2016; Daim et al. 2020; Ponta et al. 2021; Zhu and Hu 2021). Economic restructuring has prompted policymakers and researchers to reexamine the innovation indicators and seek new ways to identify, monitor, and evaluate previously neglected processes and practices (Nasirov 2018; Castaldi 2020; Castaldi and Mendonca, 2022). A typical example is innovation and trademark activity in the service industry. Since firms in this industry file very few patents, traditional metrics have limited explanatory power and might not be adequate measures of innovation. Therefore, trademarks have emerged as an alternative approach, given their wide use by organizations and their close connections with brand building and product development (Mendonca et al. 2004; Zhang et al. 2021).

Trademarks are usually registered and licensed locally and then nationally or internationally. Trademark rights grant the owner the right to use or permit others to use a registered trademark on approved goods or services (Chohen 1986 1991; Kong 2009). Compared with patents, the registration cost for a trademark is lower, the processing time is

✉ Shengce Ren
renshengce@tongji.edu.cn

[1] Shanghai International College of Intellectual Property, Tongji University, 10th floor office 1001, Zhonghe Building, Siping Road 1239, Shanghai 200092, People's Republic of China

shorter, and the examination procedure is more relaxed; thus, obtaining trademark rights is more feasible (Seip et al. 2018; Nasirov 2020). Moreover, patents can expire, while trademark rights can be extended indefinitely. Trademarks are also more likely to become high-value brands in long-term investments and promotions, linking a company's values and reputation to consumer sentiments. This can create relationships that are symbiotic, enduring, and even transnational (Saiz and Castro 2018). In this sense, trademarks can confer a relative monopoly over the market and create barriers to entry for newcomers. Thus, trademarks can not only measure innovation (Mendonca et al. 2004; Millot 2009; Gotsch and Hipp 2012; Block et al. 2014b, a; Flikkema et al. 2014; Flikkema et al. 2019; Ribeiro et al. 2022) but also represent market positioning (Giarratana and Torrisi, 2010; Li and Deng 2017; Denicolai et al. 2019) and provide a legal vehicle for brand investment (Zhang et al. 2021). As such, trademarks are essential strategic tools for all enterprise types.

Against the background of increasing digitalization and servitization, protecting brand equity through trademarks is becoming increasingly important because it dramatically affects enterprises' competitive advantage. Given such advantages, trademark squatting and malicious infringement lawsuits are common (Fink et al. 2018b; Ertekin et al. 2018), increasing the uncertainty and complexity surrounding enterprises' strategic trademark behaviors. Therefore, the precise understanding of trademark strategy represents an urgent and exciting challenge for management research, and a thorough understanding of the logic of trademark strategy would be of substantial guiding significance for enterprise development and high-quality economic transformation.

Economic research on trademarks originated from the Chicago School of Economics (Landes and Posner 1987; Saiz and Castro 2018). Its influence quickly extended into law studies and eventually into finance, marketing, and management. In general, law research in this area focuses on trademark system design, economics research focuses on the uses and effects of trademarks in different economic sectors, and management research typically examines how enterprises develop trademark strategies to enhance their competitiveness. Schautschick and Greenhalgh (2016), Nasirov (2018), and Castaldi (2020) summarized the trademark literature in the dimensions of economics and management, providing support for future research. However, relatively little is known regarding the process of strategic trademark decision-making and management, and a suitable theoretical framework has yet to be established.

Against this backdrop, this study aimed to provide insight into the following three questions: (1) What factors affect enterprises' strategic trademark management? (2) Which trademark strategy should enterprises choose? What decision-making factors should enterprises consider when a strategy is implemented? (3) How does strategic trademark management affect enterprises' performance? Investigating these questions will enrich the academic literature and offer guidance for enterprise practice. To this end, the systematic literature review (SLR), which plays an increasingly important role in theory development (Cropanzano 2009; Breslin and Gatrell 2020), should be considered a suitable method. This method is characterized by structure, transparency, and comprehensiveness and thus can provide a firm the theoretical foundation for this study.

This study contributes to the trademark management literature by categorizing and problematizing the literature and proposing a conceptual framework of strategic trademark management. Second, this study advances the corporate strategy literature by investigating how enterprises determine their trademark strategy. Third, the study offers a basis on which to integrate ideas from the brand and intellectual property literature, thus enriching the brand management and communication literature. Furthermore, the study provides practitioners with an overview of and insight into trademark strategy and management and subsequently offers guidance regarding how to form, choose, and implement trademark strategies.

The remainder of this study is organized as follows. The next section describes the methodology, including the sample selection process, the descriptive analysis, and the development of the guiding framework. Then a unified theoretical framework about strategic trademark management has been pinpointed in a conceptual model. Specifically, in section three, based on definitions of the domains of trademark activity, two core mechanisms, including the trademark strategy and strategic trademark management, are detailed, while the antecedents and outcomes of trademark strategy and its management are introduced in section four. Section five proposes future research directions. Section six concludes.

Methodology

Sample selection

To identify and assess research articles relating to strategic trademark management, a systematic literature review has been considered suitable (Cook 1997; Tranfield et al., 2003; Rousseau et al. 2008; Snyder et al. 2016; Hiebl 2021); based on reproducible steps, a systematic review is more structured, transparent and comprehensive, especially compared with traditional ones (Mingione 2015; Hiebl 2021). According to Tranfield et al. (2003) and Hiebl (2021), the most common SLR elements are identification, screening and reporting (disclosure). Therefore, simply following these procedures can create a firm, systematized theoretical

Table 1 The selection of articles for review

Search Filter	Search Terms	WOS	EBSCO	Selected Studies from WOS and EBSCO		
		Search Records	Potential Studies	Search Records	Potential Studies	
Search field(s):Title/Subject Terms; Source types: Academic Journals; Language: English	Trademark	502	60	231	49	39 (4 from WOS, 35 from EBSCO)
	Trademark Strategy	22	6	0	0	
	Trademark Management	12	3	0	0	
	Trademark Registration	19	0	4	0	
	Trademark Application	11	0	3	0	
	Trademark Filing	4	1	0	0	
	Trademark Licensing	19	1	0	0	
	Trademark Litigation	7	1	1	1	
	Trademark Infringement	43	2	9	2	
Snowballing	–	–	–	–	32	
Final Selected Studies	–	4	–	35	71	

foundation on which to advance and facilitate strategic trademark management (Snyder 2019).

The identification step ensures an unbiased and representative review sample from which to generalize the state of a particular research field (Wang and Chugh 2014). To obtain a significant sample of articles, all published peer-reviewed academic and practitioner articles that discuss trademark management from a theoretical perspective (with no time frame limitations) were searched in two databases: Web of Science and EBSCO's Business Source Complete. These two databases have been widely used to conduct literature reviews (Hiebl 2021), with the former indexing over 7,100 majors across 150 scientific disciplines and the latter including over 1,200 scholarly journals within the management fields (Mingione 2015). Then, the keywords "trademark", "trademark strategy", "trademark management", "trademark registration", "trademark application", "trademark filing", "trademark licensing", "trademark litigation", and "trademark infringement" were applied as search terms in the cited electronic databases. An initial sample of 126 articles was identified from the 887 search records (duplicates occur in the two databases). Table 1 shows the detailed search process and outcomes.

For these initial articles, deep examination (scanning) of their abstracts was performed to justify article relevance according to the following inclusion and exclusion criteria. All articles had to focus on enterprises, belong to the management field, and take trademarks as core research objects. In contrast, articles that only mention trademarks, that discuss trademark issues within the disciplines of law, economics, finance, marketing and history, that analyze trademarks from the macro, regional and industry level, that were not published in Social Science Citation Index (SSCI) journals, or that did not provide full-text versions were excluded. Combining essential criteria and reading every abstract provided 62 potentially relevant articles. (After removing duplicates, there were 52 from the WOS database and 10 from the EBSCO database.) Meanwhile, multiple approaches should be considered to offset the database-driven approach's limits, contributing to higher chances of not missing relevant research items (Hiebl 2021). Thus, the snowballing technique was adapted to capture research on trademarks not appearing in the previously described keyword search (Niesten and Jolink 2015; O'Mahoney 2016). Through scanning the references (forward citation in the articles' reference section and backwards citation in Google Scholar), the initial sample was supplemented with 32 potential articles. Finally, a total of 71 articles were identified (35 from the WOS database, 4 from the EBSCO database, and 32 from snowballing; see attachment for sample article list).

The third and final stage of the SLR first reported descriptive characteristics regarding three aspects, including year of publication, journals, and authors, which provided a complete overview of trademark management research. Then, content-based analysis was conducted, and a conceptual framework for trademark strategy and its strategic management was proposed, which followed the pattern "antecedents–core mechanisms–outcomes" to illustrate how these articles contribute to the integrated framework.

Descriptive analysis

The 71 selected articles were manually categorized and then used to construct a literature database for preliminary

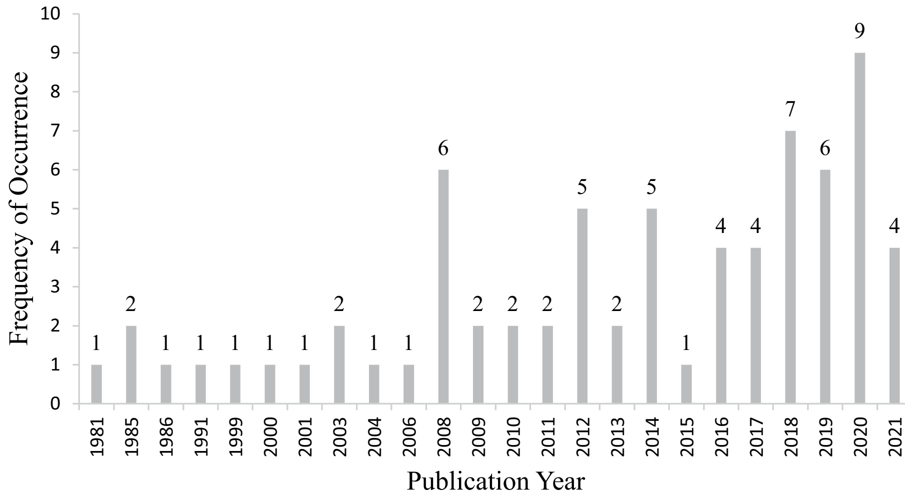
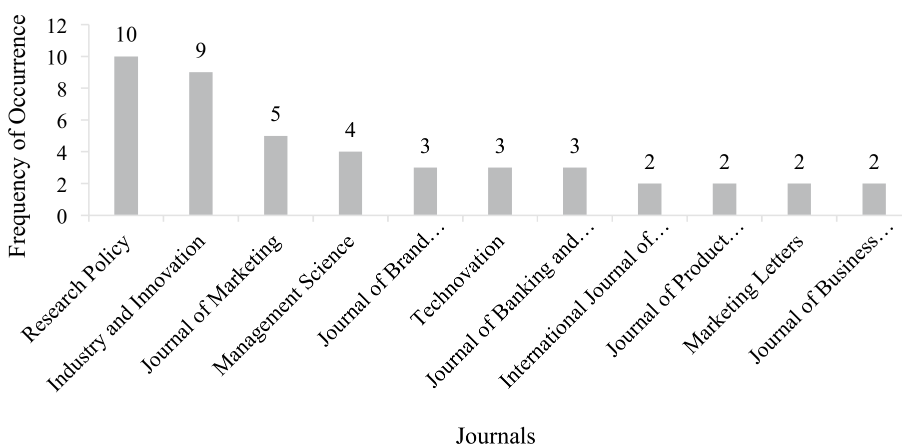


Fig. 1 Frequency of occurrence (n) of articles by publication year *Note*: To make more clear and intuitive, bar graph does not include below journals only publishing one relevant article. Australian Economic Review, Business History, Economics of Innovation and New Technology, Financial Management, Harvard Business Review, International Business Review, International Journal of Industrial Organization, International Marketing Review, Journal of Business Economics and Management, Journal of Business Venturing, Journal of Public Policy and Marketing, Journal of Retailing, Journal of Service Research, Journal of the Academy of Marketing Science, Knowledge Management Research and Practice, Organization Science, Oxford Bulletin of Economics and Statistics, Oxford Economic Papers, Research Evaluation, Review of Industrial Organization, Scottish Journal of Political Economy, Service Industries Journal, Strategic Management Journal, Strategic Organization, Technological Forecasting and Social Change, The Review of Financial Studies

Fig. 2 Frequency of occurrence (n) of articles by journals



descriptive analysis according to publication year, journals and authors. First, dynamic trends in the publication of the trademark management literature were analyzed and divided into three stages: 1981–2001, 2001–2011, and 2011–2021 (Fig. 1). Although management researchers began studying trademarks at the beginning of the 1980s, there was relatively little progress, with only one paper each year in the first stage (representing approximately 9.1% of all articles). Subsequently, the number of papers steadily increased, reaching a peak of 6 articles in 2008. In addition, 18 articles on trademark management were published, accounting for 22.5% of the total during the entire period from 2001 to 2011, which was twice the number of such papers published in the previous two decades. Finally, in the last 10 years, significant growth was observed: the number of publications reached a high of 9 articles in 2020, and this third stage, all told, accounted for 66.2% of published articles in the trademark management area.

In terms of source, a total of 37 peer-reviewed journals published articles on trademark management, with 11 journals issuing approximately 63.4% of all retrieved articles (Fig. 2). More specifically, Research Policy presented the highest number of publications (14.1%; n = 10). Innovation and Industry ranked second (12.7%; n = 9), an outcome possibly due to its 2020 special issue “Trademarks and Their Role in Innovation, Entrepreneurship and Industrial Organization,” followed by the Journal of Marketing (7%; n = 5), Management Science (5.6%; n = 4), the Journal of Brand

Table 2 Authors publishing (separately or conjointly) more than one paper

Authors	Numbers
Block, J. H	7
Castaldi, C	6
Giarratana, M. S	5
Flikkema, M	4
Duygun, M.; Sena, V	3
Cohen, D.; de Man, A. P.; Fosfuri, A.; Greenhalgh, C.; Lemper, T. A.; Nasirov, S.; Ross D. P.; Rogers, M.; Shaban, M	2

trademarks and published two articles focusing on trademark strategy in the Journal of Marketing, which provided the first insights into trademark management. Block, Castaldi, Flikkema and Giarratana may be regarded as authorities since they developed novel perspectives on and approaches to trademark-related phenomena, thus accelerating the development of this field.

Trademark strategy and management

To develop an integrated framework for strategic trademark

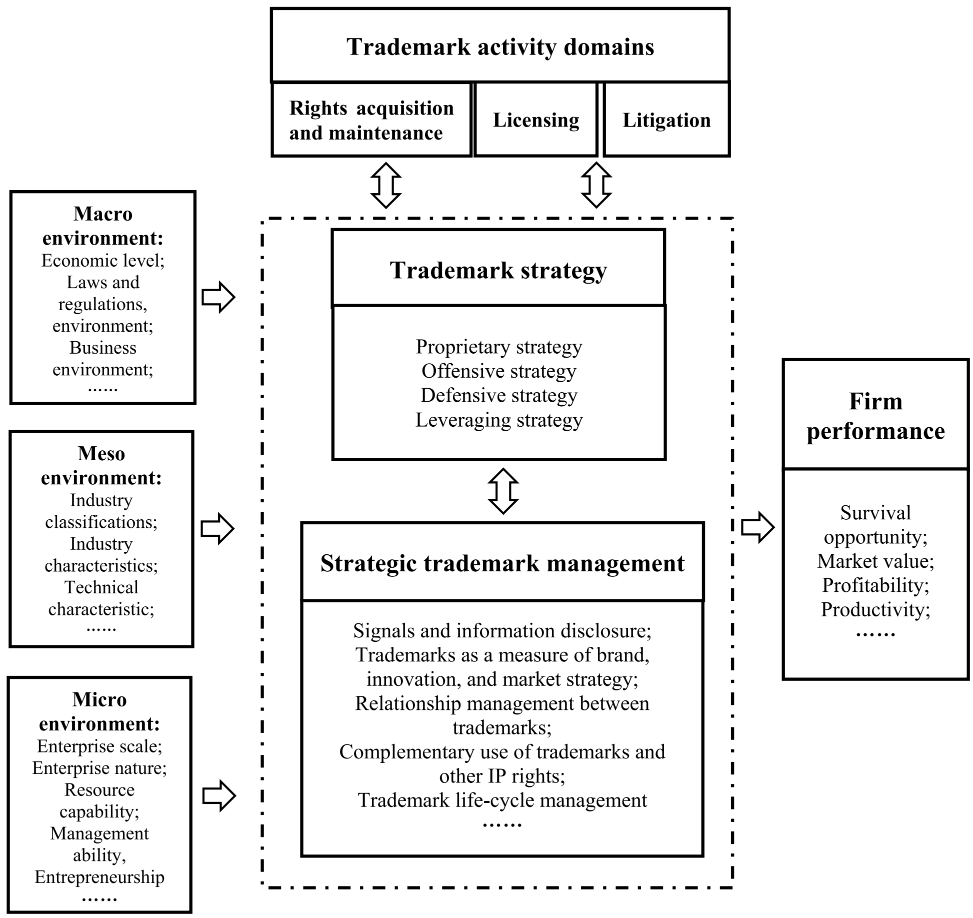


Fig. 3 Theoretical framework of strategic trademark management research

Management, Technovation and the Journal of Banking and Finance (4.2%; n = 3). What is noteworthy is that several articles were published in journals such as Research Policy, the Journal of Marketing, and Technovation, indicating that trademark management had found interest from leading academics and that the overall quality of trademark research was relatively high.

Furthermore, a total of 143 authors contributed to this field. More precisely, 16 authors published, conjointly or separately, more than one article (Table 2). According to the timeline, Cohen was the leader in strategic research on

management, after systematic study, speculation and sorting out, and referring to Somaya's framework in his patent strategy review (Somaya 2012), this study developed an appropriate framework comprising three dimensions—antecedents, core mechanisms, and outcomes (Fig. 3).

Before analyzing the core mechanisms, it is essential to define the domains of trademark activity, where trademark-related strategic actions (trademark strategy and strategic trademark management) are typically undertaken. Domains of trademark activity should be a unique attribute of intellectual property research. Somaya (2012) defined the domains of patent activity as rights, licensing and litigation. Therefore, this study specifically defined the domains of trademark activity as trademark rights, trademark licensing, and trademark litigation (hereafter, "rights, licensing, and litigation").

The core mechanisms include the trademark strategy and strategic management. Trademark strategy concerns how enterprises apply for, use, and protect trademarks. It can be divided into proprietary strategy, offensive strategy, defense strategy, and leveraging strategy. Strategic trademark management is mainly focused on issues involved in the implementation of the four trademark strategy types, such as signal and information disclosure strategies, nonmarket strategies, and complementary use with other intellectual property rights. This section elaborates the core mechanisms of the trademark management framework.

Trademark activity domains

Trademark strategy includes a set of fundamental "logics" for resource allocation decisions and trademark decisions, which mainly occur in three broad, interdependent domains of activity: rights, licensing, and litigation (Somaya 2012).

Rights acquisition and maintenance

"Rights" refers to all actions taken to acquire, renew, and maintain the right to a trademark, including purchasing another's trademark from the market. Generally, a trademark should be registered or renewed only when its expected value exceeds the costs of registration or maintenance (Economides 1988). However, different from a patent, a trademark is an essential means to identify and distinguish different business entities as well as a prerequisite for enterprise engagement in market activities (e.g., trademark licensing, franchising). Furthermore, it is relatively more convenient and economical to obtain a trademark than a patent. Therefore, the use of trademarks is not limited to innovative companies that face competitive pressure and must establish and consolidate their technological leadership (Graham et al. 2018). Nearly all types of organization, including businesses, governments, and nongovernmental organizations (NGOs), regardless of size, use trademarks to develop, support, promote, and consolidate the recognition and reputation of their brands.

Licensing

Licensing pertains to sharing rights to use trademarks. Usually, a licensed trademark has an excellent market reputation and consumer base, which can bring benefits and advantages to the trademark licensor and the licensee. Trademark licensing can provide trademark royalties for the licensor, presenting an opportunity to increase revenues (Meyer, 1985). For licensees, trademark licensing can help them avoid the time and effort required to develop a new brand and thus save costs; they can also use the excellent reputation of the licensor's trademark to enter new markets and accelerate the launch of new products (Frey et al. 2015). Trademark licensing is attracted increasing attention worldwide and has achieved good results (Ferrucci et al. 2020). At the same time, trademark licensors must control the quality of licensed products or services to avoid damaging their corporate brand (Cohen 1986; Tang 1995).

Litigation

Litigation involves protecting a brand by using, or threatening to use, legal action to prevent an infringer from using a trademark or registering a similar trademark. Well-known brands are frequently imitated, misused, or tampered with. Common trademark-infringement types include counterfeiting, grey market sales, brand misappropriation, brand imitation, false advertising, cross-industry brand misappropriation, and cross-industry imitation (Ertekin et al. 2018). Such infringements can have serious consequences, from unfavorable brand associations to brand erosion and revenue loss. Thus, companies typically monitor the market for potential infringements and take legal action once a threat is identified. Once a lawsuit is filed, companies may go to court, or they might settle with the other party, given the high cost of litigation.

In summary, enterprises' trademark behaviors can stem from their development needs or the life-cycle stages of trademarks. At the same time, enterprises can increase the viability of their trademarks by engaging in the above-mentioned activities in a coordinated manner. Specifically, carefully deployed trademark portfolios and franchise agreements can be practical strategic tools for enterprises. In addition, enterprises must be cautious about lawsuits, which can be costly and consume considerable time and energy for management teams (Somaya 2012).

Trademark strategy

"Trademark strategy" refers to the strategic arrangement of enterprises' trademark activities based on the trademark system, the given situation, and the allocation of resources to acquire, strengthen, and use trademark rights. Trademark strategy can be affected by many factors, such as the international or national macroenvironment, industry structure, and microcharacteristics of the enterprise (these factors will be further explained in Sect. 4.1), thus exhibiting heterogeneity. Accordingly, trademark strategy can be further divided into proprietary strategies, offensive strategy, defensive strategy,

Table 3 Research on trademark strategy in three areas of trademark strategy (rights, licensing, litigation)

Trademark domains	Trademark acquisition and maintenance	Trademark licensing	Trademark litigation
Strategy			
Proprietary strategy	Block et al. 2015; Castaldi 2018; Economides 1988; Fosfuri and Giarratana 2009; Graham and Somaya 2006; Landes and Posner 1987; Mendonca et al., 2004; Ramello and Silva 2006; Srinivasan et al. 2008	Lane 1988; Bei 2019	Ertekin et al. 2018
Offensive strategy	Appelt 2009; Barroso et al. 2019; Castaldi 2018; Lee and Lee 2017; Reitzig 2004; Sandner 2009; Semadeni 2006	Block et al. 2015; Jiang and Menguc 2012; Tang 1995	Ertekin et al. 2018; Schautschick and Greenhalgh 2016
Defensive Strategy	Block et al. 2014a; Fink et al. 2018b; Feng 2006; Wang 1998; Xiao 2007	Liang 2000	von Graevenitz 2009
Leveraging strategy	Block et al. 2015; Castaldi 2020; Fink et al. 2018b; Mendonca et al., 2004	Bei 2019; Mendonca et al., 2004	Ertekin et al. 2018; Lanjouw and Lerner 2001

and leveraging strategy. Each segmentation strategy can involve three domains of trademark activity (Table 3).

Proprietary strategy

Trademark registration and maintenance constitute a solid legal basis for enterprises' brands. The practice is conducive to the identification of enterprises' products or services and to protecting their brands from the adverse effects of free riders and competitors (Srinivasan et al. 2008). It can help further secure market position by deterring both imitators and new market entrants (Appelt 2009; Fosfuri and Giarratana 2009).

Among trademark rights, the strategic advantages of exclusive trademark rights are mainly obtained through the two functions of signal transmission and product or service differentiation. Trademarks are influential symbols. Enterprises can send signals to the market through their packaging, advertising, or other marketing activities to convey information about their products or services and the company itself (Ramello and Silva 2006). Such signals can significantly reduce the search cost of consumers (Landes and Posner 1987), reduce consumers' purchase risk (Lane 1988), increase consumers' reconfiguration and recommendation behaviors, promote long-term trust relationships between enterprises and consumers, and attract new customers. In a homogeneous market, trademarks support product differentiation and help enterprises eliminate pure price competition to obtain a specific premium power (Schautschick and Greenhalgh 2016). More specifically, since small and medium-size enterprises (SMEs) are often unable to pursue cost-leadership strategies because of limited resources, they focus more on product differentiation or niche strategies through trademarks (Block et al. 2015). Trademark exclusivity is also used to extend the exclusivity of other IP rights, such as patents or copyrights (Mendonca et al. 2004; Graham and Somaya 2006).

Concerning trademark licensing, although it can increase revenues, when enterprises have high-value brands and relatively complete complementary assets, they are often reluctant to license their trademarks and pursue proprietary strategies (Teece 1986). In contrast, enterprises can license trademarks to business partners with complementary assets, thus promoting innovation ability through contractual relationships and enhancing market potential (Bei 2019). In trademark litigation, a proprietary strategy involves strengthening monitoring to detect and prevent infringement. When lawsuits are filed, companies pursuing proprietary strategies are less likely to settle with alleged infringers (Ertekin et al. 2018).

Offensive strategy

In an offensive trademark strategy, enterprises actively use the trademark system to establish and expand their trademark advantages, protect their products or services for long-term market occupation, and strive for better economic interests (Gao 1996). Generally, enterprises that enter the market early can use the differentiation function of trademarks to establish barriers to entry for newcomers (Appelt 2009). Manufacturing firms use trademarks to package the product space and prevent competitors from gaining a foothold in the market (Reitzig 2004). When retaining a particular brand name is critical to maintaining competitiveness, companies may adopt a strategic and preemptive approach to trademark registration (e.g., by filing several alternative trademark applications) (Sandner 2009; Castaldi 2018; Barroso et al. 2019). Enterprises may also investigate the technical characteristics of competitors and the market characteristics of their products and services to identify business opportunities (Lee and Lee 2017). They might also use information in trademark records to reconstruct competitive responses and imitation strategies (Semadeni 2006).

For SMEs, the degree of technology licensing may promote trademark registration, thus increasing enterprises' active trademark licensing (Jiang and Menguc 2012). This is because SMEs may lack the resources to commercialize their innovative achievements or sell their products independently (Block et al. 2015). Existing enterprises are more likely to become potential suppliers of SMEs wishing to enter new markets because of their superior brands, thus increasing the motivation of existing enterprises for trademark licensing (Tang 1995). This cooperation model is often observed in franchise or chain enterprises.

Increasing costs for competitors is often the strategic target of trademark litigation (Schautschick and Greenhalgh 2016). Companies with deep pockets often have departments or positions dedicated to monitoring the use or imitation of their trademarks for potential litigation, and they will initiate litigation once an infringement is established (Ertekin et al. 2018). When the other party is an SME, an enterprise with a strong trademark brand is more likely to succeed in litigation since SMEs are often resource-constrained (Block et al. 2015). Trademark litigation has also become an essential means for enterprises to deter new market entrants.

Defensive strategy

A defensive trademark strategy aims to establish a line of defense to avoid trademark preemption by others or to reduce a firm's losses without infringing on others' trademarks (Gao 1996). To this end, enterprises must develop feasible trademark strategies in trademark design and registration to defend against others' trademarks. This involves various trademark decisions, such as the selection of trademark elements, the territory of registration, the service or product scope of registration, and the combination strategy of trademark registration (Tang 1995; Feng 2006; Block et al. 2014a). The defensive trademark strategy, joint trademark strategy, and squatting strategy have been widely used in trademark applications.

In a defensive trademark strategy, an enterprise registers the same trademark on similar commodities to prevent other enterprises from using its trademark on commodities belonging to different categories (Wang 1998). A joint trademark strategy is when companies register several similar trademarks on the same goods, using only one and setting the others aside for later use. This can prevent competitors from using trademarks similar to the main trademarks on the same or similar commodities, thus forming a protective circle around the leading trademarks (Xiao 2007). Since it can prevent valuable trademarks from being occupied by competitors, the trademark squatting strategy can be considered an effective defensive strategy for enterprises (Fink et al. 2018b).

A defensive strategy can also be realized through trademark licensing. For example, a licensee introduces a product to a new consumer market or new regional market, which makes more consumers aware of the licensor's enterprise and expands or solidifies the licensor's corporate reputation, thereby indirectly increasing the protection of the trademark and reducing the risk of squatting (Liang 2000). In the use of trademarks, an existing enterprise can seek protection from similar trademark applications by other companies (followers) through the trademark registration opposition process. This procedure may cause significant delays and result in the rejection of a trademark application. Importantly, existing firms can develop a reputation for their strong opposition to trademark applications, which makes it easier to resolve subsequent trademark objection cases and reduces the cost of defending trademark portfolios (von Graevenitz 2009).

Leveraging strategy

The central logic of leveraging is that the bargaining advantages conferred by the exclusionary power of trademarks enable a firm to pursue direct and indirect profit opportunities (Somaya 2012). The most immediate opportunity comes from trademark licensing revenue (i.e., to apply only for licensing, not for use). Trademarks can serve as complementary assets to help companies adjust the economic rent of reputation through compelling brand, distribution, and franchise strategies (Teece 1986). For example, when an enterprise has a good brand but only operates within a limited region, its trademark can be licensed to other regions or foreign markets (Block et al. 2015). Indirect opportunities can include attracting external resources and increasing bargaining chips with external partners (Castaldi et al. 2020).

In trademark litigation, exclusive trademark rights lend enterprises bargaining power relative to defendants. The willingness of litigants to make concessions ultimately depends on their expectations of benefits and risks in trademark litigation. For example, in settlement negotiations, the brand reputation of a strong trademark can send a strong signal to other firms that the benefits they will obtain from litigation are not attractive (Ertekin et al. 2018). Another particularly effective leveraging tool is the use of preaction injunctions in litigation, which can threaten to ban all or the main business of the defendant firm (Lanjouw and Lerner 2001). The more expensive the prospect of litigation and the stronger a company's bargaining position relative to the opposing firm, the more attractive the negotiating terms it can obtain through its leveraging strategy.

Similar to patent trolling, with increasing trademark value, there are increasing trademark squatters in the market. In trademark squatting, an enterprise or individual registers to protect the goods, services, or trade names of another enterprise. Usually, the latter enterprise has

Table 4 Research on strategic management in the three domains of trademark strategy (rights, licensing, and litigation)

Trademark domains	Trademark acquisition and maintenance	Trademark licensing	Trademark litigation
Strategic management			
Signal and Information Disclosure	Block et al. 2014a, 2014b; Castaldi 2020; Economides 1988; Feng et al. 2013; Lee and Lee 2017; Ramello and Silva 2006; Sandner and Block 2011; Srinivasan et al 2008; Yang and Yuan, 2021	Colucci et al. 2008; Ferrucci et al. 2020	Ertekin et al. 2018; Nasirov 2020
Trademarks as a measure of brand, innovation, and market strategy	Barroso et al. 2019; Block et al. 2014a, 2014b; Castaldi 2020; Castaldi and Giarratana 2018; Denicolai et al. 2019; Flikkema et al. 2014, 2019; Gotsch and Hipp 2012; Li and Deng 2017; Lee and Lee 2017; Mendonca et al., 2004; Millot, 2009; Sandner and Block 2011; Schmoch and Gauch 2009	Bei 2019; Ferrucci et al. 2020; Meyer et al. 1985; Stone and Trebbien 2019	
Relationship management between trademarks	Block et al. 2014a; Flikkema et al. 2019; Gelb et al. 2021; Reddy et al. 1994; Sandner 2009; Smith and Park 1992		Nasirov 2020
Complementary use of trademarks and other intellectual property rights	Amara et al. 2008; Flikkema et al. 2014, 2019; Graham and Somaya 2006; Llerena and Millot 2020; Reddy et al. 1994; Sandner and Block 2011; Thoma 2020; Zhou et al. 2016	Jiang and Menguc 2012	
Trademark life cycle management	Melnyk et al. 2014; Millot, 2009		Nasirov 2020

invested in brand identification and established a substantial reputation for a product, service, or trade name but has not registered a trademark (Fink et al. 2018b). Trademark squatting is made possible by the differing legal systems among different countries or regions. Typically, trademark squatters pursue this course of action to sell the trademark to the brand owner, to create barriers to market entry, or to obtain rent from the importer (Schautschick and Greenhalgh 2016).

Strategic trademark management

Strategic trademark management is based on trademark strategy. It involves understanding how enterprises manage their trademark-related choices and actions and other important considerations when implementing a trademark strategy. This section focuses on signal and information disclosure in trademark strategies, trademark as an indicator of brand, innovation and market strategies, relationship management between trademarks, the complementary use of trademarks and other IP rights, and trademark life-cycle management. Table 4 groups the literature in these fields into three areas of research.

Signal and information disclosure

An enterprise's motivation for trademark registration, licensing, and litigation is closely related to the signal function of trademarks, which can provide many significant advantages for different market participants (Castaldi et al. 2020). For consumers, a trademark is a unique mark that identifies the source of a product or service. Although creating and registering a trademark is a one-time event, building a brand involves long-term commitment and considerable investment in customer service, credit building, and delivering on promises (Schautschick and Greenhalgh 2016). Over time, companies establish bonds of familiarity and trust with consumers. Trademarks can reduce consumers' search and transaction costs by sending signals (Economides 1988; Ferrucci et al. 2020), thereby improving the turnover and market value of enterprises (Sandner and Block 2011; Feng et al. 2013). This link can continue to exist in later development stages, as in the brand-extension strategy, in which enterprises register trademarks for similar new products (Ramello and Silva 2006; Block et al. 2014a). When brand extension cannot be performed internally, an enterprise will seek brand licensing (Colucci et al. 2008) to release the reputation of the original trademark.

For external stakeholders, a start-up's trademarks send essential signals regarding quality and market orientation to potential customers and venture capitalists. Such trademarks can reflect a firm's readiness, its plans to engage in marketing activities, and its willingness to protect its marketing assets. In particular, early-stage enterprises are more dependent on trademark applications because they lack a solid customer base, a successful product record, and sufficient market recognition (Block et al. 2014b). Similarly, in establishing exchange relationships with external partners, trademarks can serve as quality signals to strengthen the negotiating position of enterprises (Srinivasan et al. 2008). The signal function can also be applied to trademark opposition and litigation. In this regard, a firm's reputation for aggressive litigation can deter infringement by competitors by sending a strong signal that it is willing to protect its brand reputation (Ertekin et al. 2018; Nasirov 2020).

Trademark as an indicator of brand, innovation, and market strategy

As a measure of brand equity, downstream capability, and market strategy, trademarks play a vital role in enterprise operations. First, trademarks represent an investment in intangible assets related to reputation, and companies can build valuable brands through advertising campaigns that complement trademarks (Fosfuri and Giarratana 2009; Feng et al. 2013). Trademarks can then be used to leverage the power of brand equity as a supplement to other assets (Sandner and Block 2011). In particular, mature firms can profit from brand equity, as in trademark licensing (Meyer 1985; Stone and Trebbien 2019). The brand-reputation assets of trademarks can have a positive effect on enterprise value (Block et al. 2014a; Sandner and Block 2011).

New trademarks can also signal an ability to develop new products or services (Castaldi et al. 2020). Thus, they are directly related to innovation ability and have been incorporated into indicator systems to measure innovation (Mendonca et al. 2004; Block et al. 2014a; Flikkema et al. 2019). Compared with common innovation indicators (e.g., R&D investment, patents, new product sales), trademarks have an absolute advantage and can measure a broader range of innovation, including innovation in low-tech industries (Mendonca et al. 2004), service industries (Schmoch and Gauch 2009; Gotsch and Hipp 2012), and SMEs (Flikkema et al. 2014), as well as late-stage innovations, nontechnical (marketing) innovations, and innovations that do not fully realize the "invention step" (incremental innovation) necessary to benefit from patent protection (Millot 2009).

Finally, trademarks are increasingly used to capture marketing strategies. The "for commercial use" requirement in trademark law means that a trademark is a signal for an enterprise to enter a particular market and that the validity or invalidity of the trademark depends on the enterprise's willingness to renew it (by paying a renewal fee) or to abandon it. When a trademark is renewed multiple times, it may indicate that the trademark plays a positive role in the related market. In the global market, since trademarks are geographically limited by national boundaries, when an enterprise applies for a trademark outside its country of origin, it signals international expansion (Li and Deng 2017; Denicolai et al. 2019). When an enterprise expands the Nice Classification[1] of its trademark, it signals diversification, indicating an aim to enter new markets related to its existing assets and abilities through trademarks (Lee and Lee 2017; Castaldi and Giarratana 2018).

Relationship management between trademarks

Enterprise trademarks can be classified as related trademark families. These trademark combinations are not loose but, rather, consist of complex structures intended to protect a company's brand and are likely to extend across multiple products, product categories, and services. When a company introduces a new brand, it faces two strategic choices: create a new brand or continue to develop an existing brand. The latter involves additional decisions, including whether to cover different aspects of the existing brand, update the existing brand to maintain differentiation potential, or utilize the information capital embodied in the existing brand (Sandner 2009).

The modernization of an existing brand can be regarded as an "innovation" of that brand. Enterprises use this strategy to constrain potential brand dilution or retain the brand and provide a platform for subsequent brand expansion. Typical motivations include the need to adjust the brand image to the changing environment or to change the trademark to avoid unnecessary associations (Block et al. 2014a). Brand extension is always beneficial, even considering the encroachment between the parent brand and the extended brand (Reddy et al. 1994). Through extension strategies, companies can seek spillover effects by transferring brands to other products or markets based on established brands. These spillovers lead consumers to pool their experiences with products of the same brand and have the potential to increase the product's market position and the success of new products (Smith and Park

[1] Notes.
According to World Intellectual Property Organization, the Nice Classification (NCL), established by the Nice Agreement (1957), is an international classification of goods and services applied for the registration of marks. Consisting of a list of 34 classes and an alphabetical list of goods, it was adopted under the Nice Agreement and later expanded to embrace eleven classes covering services and an alphabetical list of those services.

1992). However, a company that extends its brand might not be able to legally use its own trademark unless it can demonstrate that the brand extension is a "natural expansion" (Gelb et al. 2021). Finally, if an enterprise wants to enter a new market and has no suitable brand to expand, it may need to create a new brand. Trademark applications corresponding to brand creation strategies are more related to product innovation (Flikkema et al. 2019).

Complementary use of trademarks and other IP rights

Trademarks can also be used in a complementary way with other types of IP, primarily by transferring advantages from technology- or performance-based customer benefits (initially retained in patents or copyrights) to trademarks. The most common form is complementarity between trademarks and patents (Zhou et al. 2016; Llerena and Millot 2020). In the early stages of innovation, patents provide a wealth of information about how firms position themselves in the technology trajectory. However, less is known regarding the later (commercialization) stages of the innovation value chain. At this point, innovative enterprises can turn to trademarks, which mark the entry of their innovations into the market, and they can receive returns from those innovations through related brands (Sandner and Block 2011; Flikkema et al. 2014, 2019). Trademarks can also help companies extend a dominant market position in the industry after their patents expire (Reitzig 2004). The relationship between trademarks and patents depends on industry characteristics. For example, patents and trademarks complement one another in the chemical and pharmaceutical fields while acting as substitutes in high-tech business fields. The joint use of the two is mainly attributable to advertising factors, where high advertising premiums and low advertising depreciation rates lead to the complementary use of trademarks and patents (Llerena and Millot 2020). This complementary relationship also exists between trademarks and copyrights (Graham and Somaya 2006).

Companies have become increasingly ingenious at blending trademarks (formal protection) with informal protection mechanisms. Amara et al. (2008) investigated eight formal and informal types of IP protection in Canadian innovation service agencies, including patents, design pattern registration, trademarks, copyrights, nondisclosure agreements, confidentiality, design complexity, and lead time. They found that trademarks are complementary to patents, copyrights, and nondisclosure agreements. Decision-makers aim to use the synergies brought about by different protection methods to ensure innovation output. The choice of strategy depends on firm capability since large firms, especially asset-intensive ones, are able to cope with the accompanying legal complexity (Amara et al. 2008).

Trademark life-cycle management

Each trademark has its own life cycle, which is largely dependent on trademark law. Generally, the complete life cycle of a trademark includes the stages of application, disclosure and opposition, registration and publication, maintenance, renewal, and abandonment. A trademark's life cycle does not always begin with application or registration, given the different requirements in different countries. Even if a trademark is successfully registered, it occasionally cannot be renewed because of "for commercial use" requirements (Millot 2009).

The trademark life cycle is also influenced by factors such as enterprise characteristics and trademark characteristics. Melnyk et al. (2014) studied the influence of trademark characteristics, enterprise characteristics, and national culture on trademark extension. They found that the service life of the trademark, the number of product categories associated with it, and the service life of the company all increase the likelihood of trademark extension. Enterprises with a strong innovative spirit tend to terminate their trademarks earlier, while older enterprises are more likely to extend their trademarks (Melnyk et al. 2014). Nasirov (2020) studied factors affecting trademark value, including trademark law features (e.g., the usability requirement, received objections, acquired distinctiveness, acquired indisputability) and other trademark features (e.g., age, combination, width, type). Trademark age, width (parent–child trademark, trademark extension), and type (enterprise trademark), as well as acquired indisputability, were all found to increase trademark value (i.e., extend the life cycle).

Antecedents and outcomes of trademark strategy and management

This section includes two parts. An analysis of antecedents identifies how trademark strategy and its management (core mechanisms) are affected by different factors, while an investigation of outcomes summarizes the impact of trademark strategy and its management on enterprises' performance.

Antecedents to trademark strategy and management

Strategy formation and implementation should closely fit with the environment in which enterprises operate. Trademarks, which are among the most dominant and widely used intellectual property rights, are subject to a different business environment, such as legal systems, industry practices and corporate characteristics. Therefore, enterprises' trademark strategy and management must take these factors into consideration.

Macrolevel factors

Economic level represents the degree of national or regional development. Countries or regions with high economic levels also have relatively extensive tertiary service industries, which determines the richness of trademark activities (Amara et al. 2008; Gotsch and Hipp 2012; DeGrazia et al. 2020). Iversen and Herstad (2022) used trademark data to depict the dynamics of regional diversification and found that enterprises in the capital region of Oslo file trademarks at more than twice the rate of equivalent enterprises in rural mid-sized towns. Moreover, enterprises in developed economies tend to be more proficient at arbitraging from the law, typically selectively choosing jurisdictions that tend to favor corporate actors when initiating a lawsuit (Rao et al. 2011; Sytch and Kim 2021).

In addition, differences in the trademark legal system (disclosure requirements) pose both opportunities and challenges to enterprises. For example, enterprises can enforce their defensive strategy with submarine trademark registration (Fink et al. 2018a; Deng 2020), while squatters may use this to squat trademarks maliciously (Fink et al. 2018b).

Meso-level factors

Industry classifications are a critical factor in determining enterprises' trademark strategy and management. The growing theoretical and empirical literature on trademark strategy reveals that trademark is a novel innovation indicator for low-tech industries (Mendonca et al., 2004), service industries (Schmoch and Gauch 2009; Gotsch and Hipp 2012; Ribeiro et al. 2022), knowledge-intensive industries (Schmoch and Gauch 2009; Gotsch and Hipp 2012), and creative and cultural industries (Castaldi 2018), prompting trademark strategy to be a common and vital part of corporate strategy in these industries. Castaldi (2018) noted that firms in creative and cultural industries are bound to become more aware of proprietary strategies because of the increasing importance of well-chosen brands worldwide.

Another relevant factor is industry characteristics. Scholars have emphasized complexity, munificence, and dynamism as characteristics with which to define an industry environment (Dess and Beard 1984). Mishra et al. (2018) found that industry munificence plays a positive role in nontraditional trademark registrations (NTT), which allow firms to register a relatively new class of trademarks to signal their innovative positioning among consumers. However, competitive intensity and industry dynamism lower the number of NTT registrations.

Microlevel factors

Enterprise-level factors, such as resource capabilities and management characteristics, directly affect corporate trademark strategy and management. Resource abundance determines which trademark strategies an enterprise can adopt. For example, compared with patent filing, SMEs are more prone to employ trademarks with limited physical and human resources (Block et al. 2015; Agostini et al. 2016). Moreover, because of a lack of observed track records, startups or SMEs must rely on trademark applications and stock to indicate their potential to obtain (higher) venture capital valuation (Block et al. 2014b, a). Enterprise age (young) and market share are also considered necessary factors (Mamede et al. 2011; Mishra et al. 2018; Lyalkov et al. 2020).

Management characteristics, including team educational background and managerial style, influence the enforcement of trademark strategies. Mamede et al. (2011) revealed that having at least one academic degree holder on the management team increases the probability of trademarking by 2/3. Nasirov et al. (2021) investigated how CEO characteristics (generalist vs. specialist) play a catalytic role in the technology conversion process (measured with trademarks). Loundes and Rogers (2003) examined the relationship between management style and trademark activities and found weak evidence that organizations that tend towards an intuitive management style (compared with a bold management style) have fewer trademark stocks.

Performance of trademark strategy and management

The ultimate goal of strategic trademark management is to transform the competitive advantage conferred by trademark rights into enterprise performance. This effort is mainly reflected in the effect on an enterprise's chances of survival, market value, profitability, and productivity.

Increase the enterprise's chances of survival

For start-ups, trademark applications can help them obtain more venture capital investment to enter and engage in market operations (Block et al. 2014a; Zhou et al. 2016). Regardless whether a firm is new or established, when it has a high-value brand, trademark licensing can help it acquire the complementary external assets it requires to enter a new market (e.g., realizing external innovation commercialization) (Bei 2019). Another way to increase the chances of survival is to diversify the product portfolio through trademark applications, which can hedge the risk of demand shocks in specific markets and provide benefits from economies of scale in marketing activities (Castaldi and Giarratana 2018). In addition, trademarks can delay a firm's exit from the market or increase its acquisition expectations. When a diversified product portfolio contains a large number of trademarks, the company's exit trend through dissolution is delayed, and its exit trend through acquisition is accelerated. The latter effect may indicate that competitors view such companies as ideal targets for acquisition (Srinivasan et al. 2008). This is because well-known trademarks,[2] as high-quality intangible assets, can help an acquirer realize acquisition goals, such as economies of scale, market-share expansion, and risk reduction (Liu and Xing 2017).

Enhance the market value of the enterprise

Trademark-related indicators, such as number, width, composition, type, and number of oppositions, contain information about an enterprise's future fundamentals. Thus, a trademark can communicate a valuable signal to potential investors, especially under high uncertainty and information asymmetry. As a measure of start-up quality, trademarks are strong contributors to the market value of an enterprise. Firms with more trademarks and a more extensive trademark portfolio, as well as those that more actively defend their trademark assets, generally receive higher financial valuations (Sandner and Block 2011; Block et al. 2014b; Ertekin et al. 2018). At the same time, the financial market only pays attention to brand strategies related to brand development, but brand modernization and brand extension strategies can improve the value of a company (Block et al. 2014a; Flikkema et al. 2019). In addition, exclusive trademark rights also encourage enterprises to invest in quality and reputation to enhance their market value through advertising effects (Fosfuri and Giarratana 2009; Feng et al. 2013).

Enhancing enterprise profitability

Enterprises' trademark activities can enhance their profitability in three ways. First, by distinguishing products from competitors' products, enterprises can improve brand loyalty and charge customers a premium price for their products or services under certain conditions (Landes and Posner 1987). For example, a brand-association trademark positively affects an enterprise's cash flow, Tobin's q value, and stock return while also helping to reduce variability in the enterprise's future cash flow. Thus, improving consumers' brand recognition can enhance the future cash flow generated by brand-association trademarks (Krasnikov et al. 2009). Second, trademark activities may affect competitive mechanisms in the market; namely, trademark activities are often used to create barriers to entry, resulting in higher industry concentration. In industries with higher concentration, established firms will persist in collusion, the most obvious manifestation of which is price collusion and abnormal profits (Schautschick and Greenhalgh 2016). Finally, regarding the assumed connection between trademarks and new product development, if this connection holds, trademarks can be used to measure the effect of Schumpeterian competition on a firm's cost and profit efficiency. This is because it is widely believed that such a competitive system is beneficial to the continuous revision of production methods, which will improve the overall performance of enterprises (Greenhalgh and Rogers 2012).

Increase enterprise productivity

Another economic return of strategic trademark management is the improvement of enterprise factor productivity. The logic of linking trademarks and total factor productivity is mainly based on the ability of trademarks to stimulate consumer demand (Jensen and Webster, 2010). That is, enterprises promote the growth of total factor productivity through different ways of responding to demand growth, including choosing to consume part of the surplus capacity and thereby improving operational efficiency. Enterprises might also decide to increase input, which is likely to increase the production scale and have a corresponding effect on the return to scale. It is also possible to adopt different production techniques to enable a firm to produce more products for the same (or a lower) level of input (Duygun et al. 2013, 2014, 2016). Trademarks have been proven to be valuable indicators of innovation. Trademark intensity has a positive effect on the net output of a company (Greenhalgh and Longland 2005) and can bring higher total-factor productivity to innovative enterprises (Greenhalgh and Rogers 2012).

Future research opportunities

Based on a review of the literature on trademark management, this study constructed a conceptual framework for enterprises' strategic trademark management. The framework incorporates three dimensions: antecedents–core mechanisms–outcomes. The core mechanisms are focused on two critical aspects of trademark strategy and strategic trademark management, thus identifying four types of trademark strategy and five decision-making factors in trademark management. Both of these trademark activities were placed in three domains: rights, licensing and litigation. The study

[2] According to the World Intellectual Property Organization Joint Recommendation, a well-known trademark is one that is considered reputable and that the general public (i.e., consumers, manufacturers, and all those involved in the sale and production of trademarked goods) commonly knows about. Because of this notoriety, well-known trademarks are easy to recognize and protect regardless whether they are registered.

also explained the influencing factors and performance of enterprises' strategic trademark activities.

Although trademarks have drawn increasing attention from management researchers and significant results have been obtained, many problems remain. Therefore, according to the framework (i.e., the combination of Fig. 3 and Tables 3, 4), additional under-researched topics and promising topics are noted, representing areas in which enriched trademark management is required, as outlined below.

From the trademark activity domains

Research on the trademark strategy and strategic trademark management is highly concentrated in the field of trademark rights (Nasirov 2018; Castaldi 2020; Castaldi et al. 2020; Castaldi and Mendonça, 2022). However, there are ample opportunities to study the logic of trademark strategy in the context of trademark licensing and litigation. For example, Bei (2019) found that high-value trademarks could serve as important complementary assets for enterprises and affect the ability to obtain external innovations and commercialize them through licensing. Therefore, it will be valuable to study trademarks in the field of licensing and litigation. Future research can focus on which trademarks are more likely to be used for licensing in enterprises' trademark portfolios and how this licensing affects corporate performance. Similarly, in the field of litigation, future research should investigate trademark lawsuits to refine the key characteristics that are vulnerable to infringement and consider how managers respond to malicious litigation (e.g., delaying entry into the market, preventing enterprise trading publicly, and obtaining rent).

From the trademark strategy

There are two areas of interest. First, most articles on trademark strategies can be divided into four types, including proprietary strategy (Block et al. 2015; Castaldi 2018), offensive strategy (Appelt 2009; Lee and Lee 2017; Castaldi 2018; Barroso et al. 2019), defensive strategy, (Wang 1998; Feng 2006; Block et al. 2014a; Fink et al. 2018b) and leveraging strategy (Block et al. 2015; Fink et al. 2018b; Castaldi 2020). However, these classifications seem too rough and there is room for further research on the differences between different trademark strategies. For example, as market competition intensifies, trademarks have gradually become a strategic resource for companies to obtain competitive advantages. Future research can further analyze the types and effects of trademarks used in offensive and defensive strategies.

Second, most articles focus on developed countries in Europe and the United States (Cohen 1986, 1991; Nasirov 2018; Castaldi 2020; Castaldi et al. 2020; Castaldi and Mendonça, 2022), ignoring the investigation of enterprise trademark strategies in emerging economies. However, emerging economies, such as China and India, account for a significant proportion of the global trademark market; there are bound to be many interesting trademark strategy problems in such economies that would reward investigation. For example, what is the status of trademark activity (application, licensing and litigation)? What trademark strategies do enterprises in emerging economies hold, and why? Furthermore, what factors are considered when carrying out strategic management? Future research can consider how issues affect the motivation of enterprises, especially SMEs, to use trademarks.

From strategic trademark management

Few articles have focused on internal factors and decision-makers (Loundes and Rogers 2003; Nasirov 2018, 2021). When considering the trademark strategy, most papers have focused on macro factors or industry- and company-specific aspects (Cohen 1986, 1991; Block et al. 2015; Castaldi 2018; Bei 2019). However, internal enterprise factors have a significant effect on the development, protection, and deployment of trademarks. Although Nasirov (2021) proposed that a CEO's concerns can affect the life cycle of trademarks, several engaging and important questions remain unaddressed and warrant further discussion. For example, what theories or principles do managers use to guide their trademark strategy? How do managers' characteristics affect such theories or principles? Therefore, future researchers are advised to use qualitative methods, such as the case study and grounded theory, to conduct a longitudinal research, which will enable them to track and portray the trademark strategy decision-making process so as to understand the key factors related to managers. Other internal factors (e.g., corporate structure and culture) of enterprise trademark behavior should also be studied.

From the enterprise performance of trademark management

Many articles have used empirical methods to explore the impact of strategic trademark management on enterprise's performance, from increasing the survival rate to obtaining the long-term advantage (Greenhalgh and Longland 2005; Srinivasan et al. 2008; Greenhalgh and Rogers 2012; Zhou et al. 2016). However, some researchers point out that the index and measurement of trademarks should be improved (Nasirov 2018; Castaldi 2020; Castaldi et al. 2020; Castaldi and Mendonça, 2022). First, trademarks can be divided into many types based on application motivations, such as defensive trademarks and hoarding trademarks (the latter phenomenon is common in emerging economies). The value of trademarks differs from enterprise to enterprise. The literature on the relationship between trademarks and enterprise performance does not yet included a sufficiently detailed classification study (Nasirov 2018; Castaldi et al. 2020; Castaldi and Mendonça, 2022). Therefore, future research should distinguish between different trademark types, such as defensive trademarks and hoarding trademarks, and analyze their impact on corporate performance.

Second, trademarks are mainly applied for new products or services. However, previous studies have concentrated more on investigating the role of trademarks at the enterprise level (Ertekin et al. 2018; Bei 2019; Denicolai et al. 2019). Therefore, future research can increase our understanding of the contribution of trademarks to enterprises by collecting trademark information at the product level and matching it with product sales data and other intellectual property data, such as patent data (Castaldi et al. 2020; Castaldi and Mendonça, 2022). Moreover, in research related to the measurement of a particular structure or purpose, the trademark application or stock is occasionally used as an indicator of product differentiation (Schautschick and Greenhalgh 2016), innovation (Mendonca et al., 2004; Gotsch and Hipp 2012; Block et al. 2014b, a; Flikkema et al. 2014; Flikkema et al. 2019; Ribeiro et al. 2022), or corporate diversification (Castaldi and Giarratana 2018; Iversen and Herstad 2022). Therefore, when, where and how trademarks can be used in different performance indicator systems must be clarified. This task requires future research to focus on the construction of trademark structural systems, distinguish trademarks and determine their role in strategic decision-making by enterprises (new-market, diversification, differentiation, internationalization, and innovation processes).

Conclusion

The goal of this study has been to reorganize and conceptualize the research on trademark management, which has emerged from diverse roots in economics, law and management. Based on the domains of trademark activity—rights, licensing, and litigation—the study focuses on two important topics in trademark management—trademark strategy and strategic considerations of trademark management. The study classifies trademark strategy into four types (e.g., proprietary strategy, offensive strategy, defensive strategy, and leverage strategy) and discusses five strategic considerations in the implementation of these trademark strategies. In addition, it reviews the antecedents and outcomes of trademark strategy and management. Subsequently, the study constructs a theoretical framework for enterprise strategic trademark management based on the described dimensions (antecedents–core mechanisms–outcomes). The framework reveals the areas of focus the relevant literature and emerging topics for study and can help stimulate and guide future research in this vital field.

This study makes three theoretical contributions. First, as Breslin and Gatrell (2020) concluded, a literature review can develop theory by organizing and categorizing as well as problematizing the literature. Based on this view, the literature on trademarks was categorized, and an integrated conceptual framework of strategic trademark management was established, providing a clearer picture of trademark research progress through a strategy lens that reveals core research topics and important but underresearched areas in which additional scholarship is needed (Snyder 2019).

Second, the review's findings provided novel perspectives and insight into the corporate intellectual property strategy literature by investigating how enterprises determine their trademark strategy. Prior studies on why and how enterprises use intellectual property rights have mainly focused on patents (Cohen et al. 2000; Blind et al. 2006; de Rassenfosse 2012; Gassmann et al. 2021). However, trademarks may also play a crucial part in the appropriation of innovation rents (Mendonca et al. 2004; Flikkema et al. 2014), a high-priority topic that deserves further research. This study not only responds to Castaldi's (2020) call for combining trademark data to shape an overall corporate intellectual property strategy but also may inspire future researchers to pay more attention to trademark strategy.

The third contribution is related to the brand management and communication literature. Traditionally, studies on brand management and communication literature center on how brands help achieve a competitive edge by adding value to products and services (Sheth and Sinha 2015; Gomes et al. 2016; Lin and Siu 2020) and usually view trademarks as legal shields that protect the economic rights of a brand's owner through, for example, trademark registration of the brand's name and logo (Ribeiro and Eram 2021; Zhang et al. 2021). Therefore, brands and trademarks typically investigated separately in the literature (e.g., in terms of marketing or innovation). However, trademarks and brands essentially form a continuum and are mutually beneficial. Given the increasing awareness of the value of intellectual property protection in enterprises, introducing trademarks to brand research (or vice versa) will help enterprises obtain double advantages—market power and legal rights (Flikkema et al. 2019; Ribeiro and Eram 2021). Therefore, this study offers a means to integrate ideas from brand literature and intellectual property literature into strategic trademark management.

Empirically, this study provides a comprehensive framework for comprehending enterprise trademark strategy and management, which can help managers understand the essence of different trademark strategies, identify key strategic factors, and then assess the trade-offs in pursuing or implementing a strategy. According to the framework, for example, targeting direct revenue or adopting a leveraging strategy may be suitable for enterprises with high-value trademarks. Alternatively, when trying to attract venture capital, start-ups/SMEs can combine trademark registration with patent applications to signal future development prospects. The framework also reveals a positive relationship between strategic trademark management and enterprise performance, thus encouraging managers to keep a close eye on enterprise trademark strategy and management to enhance sustainable competitive advantages.

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Declarations

Conflict of interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Yougen Cao He is a Ph.D. candidate at Shanghai International College of Intellectual Property, Tongji University. He obtained his M.B.A in Enterprise Management from Shanghai Maritime University. His main research interests include intellectual property management and innovation, particularly focusing on patent litigation, trademark management, and innovation cooperation Network. His latest research has concentrated on how patent litigation influence the enterprises' innovation.

Shengce Ren He is a professor at Shanghai International College of Intellectual Property, Tongji University. He received his B.B.A. in Maths from Anhui Normal University, M.B.A in Management Science from University of Science and Technology of China and Ph.D. in Business Administration from Shanghai Jiaotong University. He has published several articles and books in patent, innovation and intellectual property management. His research interest includes innovation, entrepreneurship and intellectual property management.

Mei Du She is a Ph.D. candidate at Shanghai International College of Intellectual Property, Tongji University. She graduated with M.B.A. in Management Science and Engineering from Shanghai University. Her main research field is innovation, knowledge management, and intellectual property management.