



**FREE-RIDING EFFECT ON CONSUMER BRANDING  
RELATIONSHIPS DURING THE COVID-19 PANDEMIC: EVIDENCE FROM  
TRADEMARK REGISTRATIONS IN BRAZIL**

Edmilson Gomes  
[edmilsongomes@id.uff.br](mailto:edmilsongomes@id.uff.br)  
<https://orcid.org/0009-0001-4941-5317>

Gabriel Marcuzzo do Canto Cavalheiro  
[gabrielmarcuzzo@id.uff.br](mailto:gabrielmarcuzzo@id.uff.br)  
<https://orcid.org/0000-0001-5556-8582>



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## **Abstract**

The pandemic caused by the coronavirus, which is commonly referred to by the acronym COVID-19, has brought profound economic and social effects throughout the world. Despite the deep and widespread impact of the COVID-19 pandemic on the Brazilian society in terms of public health and economic activities, the word “covid” soon began to infiltrate the collective imagination. This study adopts an exploratory and qualitative approach, combining literature review with secondary data collection from INPI and other institutional sources. Trademark registrations containing the radical “Covid” were identified between January 2019 and July 2025. After screening, 87 relevant registrations were analyzed to assess patterns linked to the pandemic. In this way, this study attempted to identify patterns related to trademark registrations associated with high-profile events, such as the COVID-19 pandemic, at the Brazilian Institute of Industrial Property (INPI). We provide evidence that the COVID-19 pandemic motivated several Brazilian entrepreneurs to take a free-ride on such dramatic event to brand their new products and services.

**Keywords:** trademarks; intellectual property; free-riding; covid-19

## 1 INTRODUCTION

The COVID-19 pandemic brought profound economic and social consequences worldwide, leading to significant losses and pushing healthcare systems to the brink of collapse. In Brazil, as in many other countries, authorities recommended and, in some cases, imposed social isolation through lockdowns, which were regarded as the primary means of slowing the spread of the virus. Consequently, COVID-19 quickly became a central topic of conversation across all socio-economic groups, with its threatening reputation reinforced daily by television, radio, and social media coverage, which amplified public attention to any developments related to the disease.

Despite its wide-ranging impact, the pandemic disproportionately affected certain business sectors, including retail, fashion, tourism, food services (bars and restaurants), beauty, and education. As highlighted by Costa et al. (2021), the challenges faced by individuals, organizations, and society as a whole were countless and complex. Daily routines and organizational practices had to be transformed abruptly, often without adequate planning or preparation (Carneiro et al., 2024). Moreover, the crisis revealed deep social inequalities: while confirmed COVID-19 cases were more frequent among individuals with higher education levels, hospitalization rates were almost twice as high among Brazilians with lower educational attainment (Szwarcwald et al., 2024; Kohn et al., 2025).

The pandemic also strongly shaped public interests and information-seeking behavior. According to Google Trends (2021), “coronavirus” was the most searched term worldwide in 2020, while the top questions were “What is lockdown?”, “What is quarantine?”, and “What is a pandemic?”. Such widespread attention created not only social and health-related challenges but also entrepreneurial opportunities. Entrepreneurs often identify and exploit emerging interests and symbolic resources to develop new products and services (Ardichvili et al., 2003). In this context, the use of pandemic-related terminology in branding strategies may be seen as a form of free-riding behavior, in which individuals or firms benefit from positive externalities generated by third parties without incurring the corresponding costs (O’Neill, 2010; Dias, 2014).

At the same time, the growing importance of intellectual property (IP) has become a defining feature of contemporary business dynamics. Over the past few decades, intangible assets have increasingly replaced tangible resources as the primary drivers of value creation in innovative firms (Lall, 2003). Protecting intellectual property rights has thus become a critical strategic priority (Drahos, 2010). Trademarks, in particular, offer valuable insights into business and market trends, since public trademark databases provide rich evidence of entrepreneurial and innovation dynamics (Castaldi, 2020).

Although the COVID-19 pandemic was a disruptive global event with far-reaching consequences, its effects on intellectual property rights (IPRs), and particularly on trademark registration behavior, remain largely underexplored. The crisis simultaneously caused massive business closures and job losses, while also accelerating digitalization and fostering new entrepreneurial initiatives, thereby reinforcing the strategic importance of

brands and trademarks. Yet, little is known about how the pandemic shaped trademark activity, whether through the creation of new brands or the opportunistic use of high-profile terms such as “COVID-19.” This gap is significant, as examining such patterns is key to understanding how crises influence branding strategies, the appropriation of symbolic resources, and the risks of free-riding behavior (Mankiw, 2006).

Against this backdrop, this study investigates trademark registrations filed at the Brazilian Institute of Industrial Property (INPI) to analyze the pandemic’s impact on brand development. By doing so, it contributes to the broader debate on the interplay between global crises and intellectual property dynamics.

The paper is structured as follows: Section 2 presents the literature review on intellectual property, innovation management, and free-riding theory. Section 3 outlines the research methodology. Section 4 discusses the findings in light of the literature. Finally, Section 5 presents the conclusions.

## **2 LITERATURE REVIEW**

### **2.1 Intellectual Property Management**

Intangible assets, including trademarks, patents, industrial designs, and copyrights, currently constitutes the most valuable resources for firms (Cañibano et al., 2000; Thomas and Murdick, 2020). According to Pereira (2011), intellectual property (IP) has reached its current importance as a result of the numerous and systematic evolutions in its concepts. Among the factors that have attributed greater value to intellectual property are: its political visibility, due to its great economic importance for countries; and the finding that intangible assets exceeded the traditional estimate given to material and immovable assets. It can therefore be seen that the intangible assets of an industry, in general, are more valuable than all of its material assets.

Thus, according to the concept presented, it is everything that can be invented through knowledge, as being the human ability to create things. Since the human ability to create things is important that the creation is protected for the inventor or extension, the owner of the rights to the invention, needs to be protected. And this protection is through intellectual property a guarantee that the invention will be legally protected for a certain period in the name of its inventor or right holder over the invention (ASSOCIAÇÃO BRASILEIRA DA PROPRIEDADE INTELECTUAL, 2021).

The brand, according to Teh, Kayo and Kimura (2008), is categorized as a customer relationship asset, which leverages competitive advantage, when well managed, and serves as a tool for the company to differentiate itself from competitors or win and retain customers. In this way, the brand enables the creation of value for companies through increased sales, consequently influencing the company's market value.

Some recent studies identify the motivation for filing patents. Cavalheiro et. Al (2014) demonstrated that the announcement of the discovery of pre-salt oil reserves by Petrobras

in 2007 led to a strong increase in the number of patent filings in subsequent years. Thomas and Murdick (2020), in turn, demonstrated that the great potential for applying artificial intelligence technology has generated an increase in the number of patents filed addressing such technologies. However, the literature still does not address high intensity standards in trademark registrations.

## **2.2 Innovation Management**

The research and development process can generate numerous patents, brands, innovative processes, know-how, etc. What Edvinsson and Malone (1998 apud TEH, KAYO and KIMURA) call innovation capital. Roos et al. (1997, p. 39 apud TEH, KAYO and KIMURA) consider that innovation is a human ability to, based on prior knowledge, generate new knowledge, fundamental for the renewal of the company and key to creating sustainable success.

According to Teh, Kayo and Kimura (2008), innovation capacity can be analyzed from two different perspectives: by process input values, such as expenses and number of employees in R&D, and by process output values, such as patents, formulas, brands, improvements in process efficiency, etc. Often, R&D expenditure is used as an indicator of innovation. However, R&D spending may not necessarily be a good indicator of the effectiveness of the innovation process, but rather of the company's willingness and strategic orientation to innovate. Thus, Cañibano et al. (2000) propose adopting the production and citations of patents as indicators of innovation, as they are results of innovation processes.

## **2.3 The Free-Rider Theory**

According to Tibúrcio (2007), the effect of free-riding is widely discussed in economics, especially in the area of public finance and market theory. For Demacio and Iwagase (2018), it is currently noted that the idea of the free-rider is more popular, albeit superficially. In routine situations, in the work or academic environment, it is possible to identify these agents, as well as in the environments that permeate organizations.

According to Mankiw (2006), free-riding is someone who receives the benefit of a good, but avoids paying for it. As pointed out by Gremaud (2003), free-riding, in addition to hitchhiking, is considered opportunistic. For instance, Ryu (2024) identified patterns of brand opportunism associated with CRM messages during periods of global crises, such as the COVID-19 pandemic.

More specifically, Albanese and Van Fleet (1985, p. 244) state that: “the term 'free-rider' refers to a member of a group who obtains benefits from group membership, but does not support a proportional sharing of the costs of provide such benefits.” Stigler (1974) adds that “cheap rider” is a more accurate term for a member of a group, as receiving benefits from membership typically involves some cost”.

## **2.4 The Impact of COVID-19 PANDEMIC**

The devastating effect caused by COVID-19, the name given by the WHO - World Health Organization for the new coronavirus (SARS-CoV-2), already measures exorbitant data. According to Cancelli et al (2020), Ms (2020), SEBRAE (2020), IBEVAR (2020), SINDILOJAS (2020) apud Santos and Nassif (2021):

The WHO warns that viral diseases continue to emerge around the world and represent a serious problem for public health. In the last twenty years, several viral epidemics have been recorded, such as the severe acute respiratory syndrome (SARS-CoV) in 2002 to 2003 and the H1N1 flu in 2009. The officially declared COVID-19 pandemic in the world on 03/11/2020 brought serious consequences to Brazil from April 2020. Given the sanitary measures adopted at the governmental level of shutdown and social isolation restrictions, micro and small companies in the retail sector immediately felt a sudden reduction of around 89% in monthly sales. In the economic sphere, there are already more than six hundred thousand companies that have closed their activities and nine million people who have lost their jobs. This panorama already projects the biggest drop in retail sales in the country in history.

### **Hypotheses**

Based on the literature review above, it is possible to propose two hypotheses related to the free-riding effect of the COVID-19 pandemic on trademark registration in Brazil:

H1- Trademarks related to COVID-19 terminology will tend to increase.

H2 - Trademark registrations related to COVID-19 refer to healthcare products and services.

The article is structured as follows. After this introduction containing a literature review, the concept of intellectual property management is presented with the definitions of trademarks and patents, the latter just to contextualize the topic, the focus of this article will be on trademark registration, a brief presentation of the management topic of innovation, a section on the free-rider theory and finally a section on the impact of the COVID-19 pandemic. Next, the research method section describes the research method used. Next, the INPI website is presented as a secondary data collection tool. Later in the results and discussions section, the findings are presented and related to previous literature presenting the possible paths of the hypotheses presented in the research. And finally, in the conclusion and future perspectives section, the article concludes by presenting the lessons learned, the managerial and academic implications arising from this study and recommendations for future research.



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### 3 RESEARCH METHOD

To investigate the influence of the pandemic, specifically COVID-19, on the request for trademark registrations with the name COVID-19 or similar. In methodological terms, this article in terms of its purpose has an exploratory character, in which according to Gil (2019, p. 26) “exploratory research aims to provide better familiarity with the problem, with a view to making it more explicit or to construct hypotheses”. Essentially qualitative in nature. According to Oliveira (2011, p.24 apud TRIVIÑOS, 1987) “the qualitative approach works with data seeking its meaning, based on the perception of the phenomenon within its context”.

The research is also based on a literature review, synthesizing concepts found in seminal publications related to the topic. The bibliographical research was carried out in databases indexed with Scielo, E-papers, Anpad Spell, CAFE and Google Academics. The field research took place in organizations (websites), such as the websites of the Federal Government, Ministry of Economy, specifically the INPI website through the collection of secondary data available on the platform of the aforementioned body to confirm the records of opening processes for registration of brands.

Taking into account temporal data from January 1st, 2019 to July 31st, 2025. In total, 104 trademark registrations were identified using the radical “Covid” in different types of configurations. However, 17 records were removed because they included the radical “Covid” without presenting any semantic reference to the pandemic. Some examples of records taken from our sample include: GRUPO COVIDA, DOM BOSCO VIDROS, DISCOVIDEO, PSICOVIDAS and BRADESCO VIDA. After review, our sample comprises 87 trademark registrations.

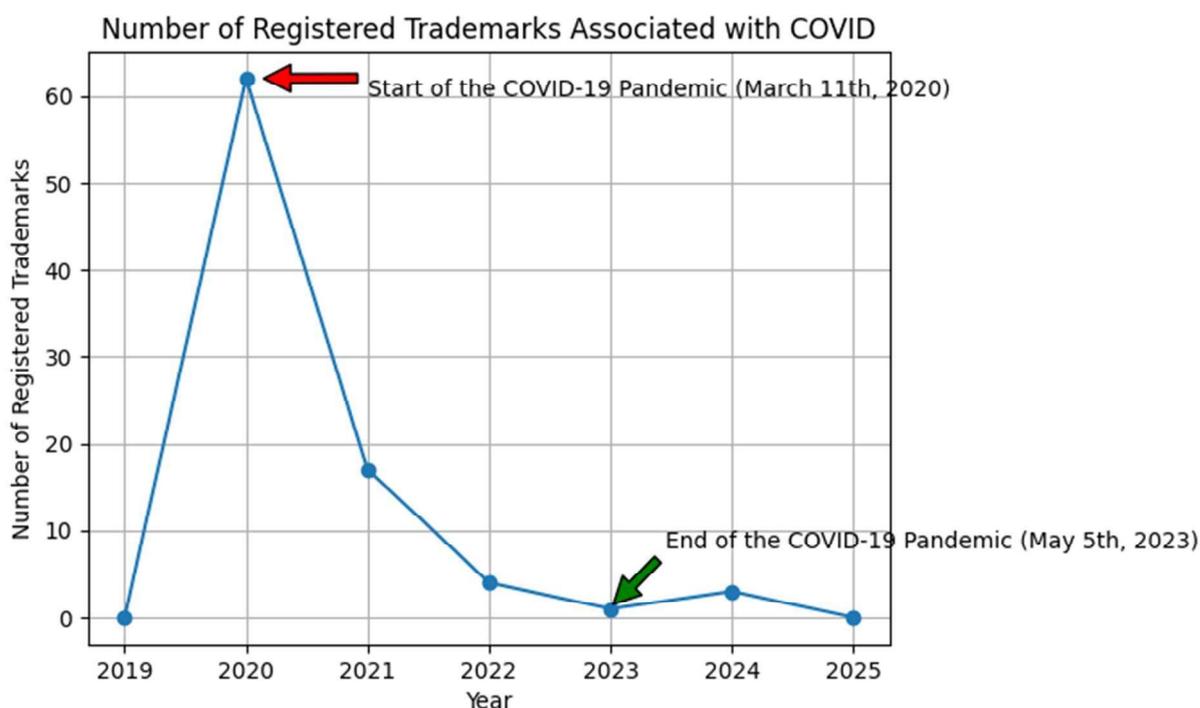
### 4 RESULTS

As for descriptive data, this research was carried out on the website of the National Institute of Industrial Property (INPI) taking into account temporal data from January 1st, 2019 to July 31st, 2025, which is the date of the last registration process with this name. COVID-19 brand. This time frame takes into account the emergence of the first cases of the virus here in Brazil, as well as a three year period following the end of the COVID-19 Pandemic. According to Cavalcante et al (2020), in Brazil, the first cases were confirmed in February, and several actions were implemented in order to contain and mitigate the spread of the disease. On February 3, 2020, the country declared a Public Health Emergency of National Importance (ESPIN), even before the first case was confirmed. As can be seen in table 1, in the number of registrations column, our initial search resulted in 104 trademark registrations with the nomenclature of COVID-19 or similar. This search was carried out using the term “covid” and selecting the search option by radical, thus covering trademark registrations, registered with the INPI, that could carry the nomenclature “COVID-19”. After checking the 104 records obtained, we found the need to exclude 17 records because

they included the radical “Covid” without presenting any semantic reference to the pandemic. Therefore, our final database now contains 87 records.

To understand relevant patterns associated with brands inspired by the COVID-19 nomenclature, it is necessary to explore the metadata of the records. Therefore, we chose to explore the Nice class, the type of registration holder, as well as the current status of the registration. To this end, figure 1 lists the proportion of records in terms of their Nice classifications, indicating the segment of activity.

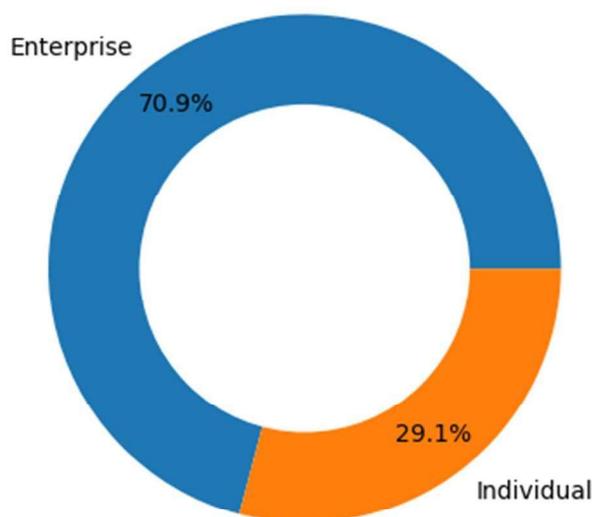
**Figura 1-** Number of Trademark Registrations Related to the Term COVID



Source: The Authors.

It is possible to observe that the majority of trademark registrations associated with COVID-19 terminology were requested by legal entities. Figure 2 shows the proportion of records made by individuals and legal entities, demonstrating a predominance of records made by legal entities. We observed 61 records made by enterprises and 26 by individuals. We can interpret this predominance of registrations carried out by legal entities as evidence of corporate interest in the visibility of the term COVID-19 and, with this, the possibility of positioning product and service offers with greater recognition among the general public, reducing the need for investment in marketing campaigns to promote the brand to its target audience (Mankiw, 2006).

**Figure 2** – Trademark Registrations per Category of Applicants (Individuals and Enterprises)



Source: The Authors

Regarding the trademark application segment, we analyzed the Nice classifications used in the selected trademark registrations. Table 1 lists the frequencies of the Nice classifications used, demonstrating a concentration of records in the areas of health and scientific dissemination, with 15 records in the NCL(11) 44 classification, 12 records in the NCL(11) 42 classification and 10 records in the NCL(11) 05 classification. We note that the COVID-19 pandemic can be considered a phenomenon of global proportions, which has been dominating the news on all continents. Therefore, even though it constitutes a technical term to identify a specific type of virus, the word COVID-19 quickly became known in the popular imagination, both in Brazil and the rest of the world. In this sense, when observing the trademark registrations carried out at the INPI, it was possible to identify that the three Nice classifications most frequently used in the registrations, address the area of research and scientific dissemination, demonstrating the existence of several business initiatives that sought to associate their activities as contributions to mitigate the problems generated by the pandemic. In this way, it becomes possible for the registration holder to obtain a benefit, in terms of attracting new customers and promoting the brand, without the need for extensive investment in marketing campaigns to promote and position the brand (O'Neill, 2010).

**Table 1** – Most Frequent Nice Classification Codes

| Nice Classification | Number | Description   | Type    |
|---------------------|--------|---|---------|
| NCL(11) 44          | 17     | Medical services; veterinary services; hygienic and beauty care for human beings or animals; agriculture, aquaculture, horticulture and forestry services.  | Service |
| NCL(11) 42          | 14     | Scientific and technological services and research and design relating thereto; industrial analysis, industrial research and industrial design services.  | Service |
| NCL(11) 05          | 12     | Pharmaceuticals, medical and veterinary preparations; sanitary preparations for medical purposes; dietetic food and substances adapted for medical or veterinary use, food for babies; dietary supplements for human beings and animals; plasters, materials for dressings; etc | Product |
| NCL(11) 41          | 8      | Education; providing of training; entertainment; sporting and cultural activities.  | Service |
| NCL(11) 35          | 7      | Advertising; business management, organization and administration; office functions.  | Service |
| NCL(11) 03          | 7      | Non-medicated cosmetics and toiletry preparations; non-medicated dentifrices; perfumery, essential oils; bleaching preparations and other substances for laundry use.   | Product |
| NCL(11) 09          | 6      | Scientific, research, navigation, surveying, photographic, cinematographic, audiovisual, optical, weighing, measuring, signalling, detecting, testing, inspecting, life-saving and teaching apparatus and instruments.  | Product |
| NCL(11) 45          | 4      | Legal services; security services for the physical protection of tangible property and individuals; dating services, online social networking services; funerary services; babysitting.   | Service |
| NCL(11) 10          | 4      | Surgical, medical, dental and veterinary apparatus and instruments; artificial limbs, eyes and teeth; orthopaedic articles; suture materials; therapeutic and assistive devices adapted for persons with disabilities.  | Product |
| NCL(11) 40          | 3      | Treatment of materials; recycling of waste and trash; air purification and treatment of water; printing services; food and drink preservation.  | Service |
| NCL(11) 24          | 2      | Textiles and substitutes for textiles; household linen; curtains of textile or plastic.   | Product |
| NCL(11) 19          | 1      | Materials, not of metal, for building and construction; rigid pipes, not of metal, for building; asphalt, pitch, tar and bitumen; transportable buildings, not of metal; monuments, not of metal.   | Product |
| NCL(11) 28          | 1      | Games, toys and playthings; video game apparatus; gymnastic and sporting articles; decorations for Christmas trees.   | Product |
| NCL(11) 32          | 1      | Beers; non-alcoholic beverages; mineral and aerated waters; fruit beverages and fruit juices; syrups and other preparations for making non-alcoholic beverages.   | Product |

Source: The Authors.



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## 5 DISCUSSION

The COVID-19 pandemic generated profound economic and social disruptions in Brazil and worldwide, creating an environment in which new market behaviors emerged. In line with our first hypothesis (H1), which anticipated an increase in trademark applications containing references to COVID-19, the data revealed a significant rise in such filings during the pandemic period in Brazil (see Table 1). This pattern provides empirical support for H1 and illustrates the so-called free rider effect, whereby entrepreneurs attempt to capture economic benefits from an external event without bearing its associated costs (Dias, 2014; O'Neill, 2010). The absence of any trademark registrations containing the radical "Covid" prior to 2020, followed by 87 filings from the onset of the pandemic, constitutes robust evidence of this opportunistic behavior in the Brazilian context.

When analyzing the second hypothesis - H2 - Trademark registrations related to COVID-19 probably refer to health products and services. The Nice product and service classification (NCL) was used here. According to the National Institute of Industrial Property (2021), when you file your trademark application, it is necessary to indicate which products or services your trademark aims to protect. The INPI adopts the Nice International Classification of Products and Services, which has a list of 45 classes with information about the different types of products and services and what belongs to each class. The classification system is divided between products, listed in classes 1 to 34, and services, listed in classes 35 to 45. It is important to know that the classes and lists are not exhaustive, that is, they do not include all types of products and services that exists. To complement the original lists of the Nice International Classification, the INPI created the Auxiliary Lists.

Therefore, regarding this second hypothesis, we can conclude that 60 of the 87 cases in the records collected are within the group of healthcare products and services. Thus, we can conclude that the hypothesis may be true because they are linked to products and services aimed at the health sector according to the product/service descriptions of each record. However, it is also necessary to highlight that trademark registrations were found in areas not related to health or research. For example, 8 brands focused on education services (NCL(11) 41), 7 brands focused on advertising and business management (NCL(11)35), 4 brands for legal services (NCL(11) 45) were registered. , 1 brand for games (NCL(11) 28) and 1 brand for drinks (NCL(11) 32). These records demonstrate opportunistic behavior on the part of holders, seeking to gain visibility for products and services in other areas.

## 6 CONCLUSION

Analyzing the literature covered in this research and subsequently the data obtained through the website of the National Institute of Industrial Property (INPI) regarding trademark registrations during the COVID-19 pandemic period, a demand was observed to open processes to register brand names. having the radical "Covid" in its structure. This fact makes it possible to investigate that an event such as a pandemic can lead to social and



mainly marketing changes in a country, affecting all segments and consequently influencing them to end their activities or to the emergence of new companies, thus developing new products or services.

Thus, it was possible to identify that some entrepreneurs recognized the interest in the new terminology widely adopted during the pandemic as a market opportunity. Such taking advantage of an opportunity, at no cost to the entrepreneur, can be characterized as a “free-riding” effect. Despite this great increase in the visibility of terms related to the pandemic, it is not possible to find works in the literature that evaluate the relationship between terminology associated with the pandemic and its consequences in terms of intellectual property registrations.

However, this investigation provides us with the impacts that the pandemic, particularly COVID-19, brought to companies and the market, in which at the same time, which caused the closure of many companies, it was also responsible for creating an innovative environment for recording brands with the name COVID-19 or similar brands here in Brazil. These brands are linked to products and services for the health sector, with a predominance for the registration of brands operating in the services sector. Additionally, following the end of the COVID-19 pandemic, the number of new trademark registrations containing the term declined sharply and rapidly.

It is believed that the present study will make important contributions capable of guiding companies that operate in the Brazilian management and marketing area, especially in the intellectual property management segment, so that they can redefine and better direct their strategies in the market. In addition to contributing to academia in future studies involving the topic.

The limitation of this study refers to the difficulty in obtaining secondary data offered by the INPI’s website. Data such as the depositor's municipality and the website of the company responsible could contribute to in-depth analysis.

As future research, we suggest a more far-reaching research technique not only on the aforementioned website, but also on other websites of public or private bodies in Brazil and other countries that work in the management of intellectual property, and can use the radical “Corona” in different types of configurations to search for secondary data, in order to better reflect and deepen the predictive capacity for the researched topic and the possibility of analyzing this phenomenon in other countries and sectors.

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Artigo submetido em: 12/05/2025

Avaliação (cega) 1ª rodada concluída em: 07/07/2025

Avaliação (cega) 2ª rodada concluída em: 13/01/2025