

The Brazil in Digital Games: intellectual property and the growth of the gaming industry

O Brasil nos Jogos Digitais: propriedade intelectual e o crescimento da indústria de games

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Abstract

Brazil's digital games market, which generated BRL 12.1 billion in 2023 (Abragames, 2023b), has been growing as a key sector of the creative economy. This article aims to analyze the industry's formalization through the protection of intellectual property, focusing on trademark registrations in classes 9 and 42 of the Nice Classification (NCL) at the INPI, between 1994 and 2024. The research combines a bibliographic review and documentary analysis. A total of 1,540 companies were identified, with Nintendo (international) standing out. The data reveal the advancement of intellectual property as a competitive strategy. It is concluded that IP is a central pillar for the sector, but its effectiveness depends on coordinated public policies, such as registration subsidies, technology transfer hubs, and tax incentives. Brazil has the potential to lead the creative industry in Latin America, provided it fosters innovation, intellectual property, and technological capacity in an integrated manner.

Keywords: Digital Games; Creative Economy; Intellectual Property.

Resumo

O mercado brasileiro de jogos digitais, que movimentou R\$ 12,1 bilhões em 2023 (Abragames, 2023b), vem crescendo como setor-chave da economia criativa. Este artigo pretende analisar a formalização da indústria por meio da proteção da propriedade intelectual, com foco em registros de marcas nas classes 9 e 42 da Classificação Internacional de Nice (NCL), no INPI, entre 1994 e 2024. A pesquisa combina revisão bibliográfica e análise documental. Foram identificadas 1.540 empresas, com destaque para Nintendo (internacional). Os dados revelam o avanço da PI como estratégia competitiva. Conclui-se que a propriedade intelectual é um pilar central para o setor, mas sua efetividade depende de políticas públicas articuladas, como subsídios para registro, *hubs* de transferência de tecnologia e incentivos fiscais. O Brasil tem potencial para liderar a indústria criativa na América Latina, desde que promova inovação, PI e capacitação tecnológica de forma integrada.

Palavras-chave: Jogos Digitais; Economia Criativa; Propriedade Intelectual.

Technological Areas: Digital Games, Technological Innovation, and Intellectual Property.



1 Introduction

The digital games industry occupies a central position in the contemporary creative economy, combining technological innovation, cultural production, and the generation of intellectual property on a global scale. According to the United Nations Conference on Trade and Development (UNCTAD, 2023), digital games represent one of the most dynamic segments of the creative economy, generating significant impacts on employment, exports, and digital transformation. This perspective is reinforced by studies from the Organisation for Economic Co-operation and Development (OECD, 2022), which identify intellectual property as a strategic asset essential for the sustainable growth of emerging digital sectors, including games and software.

This phenomenon is part of a broader discussion regarding the role of intangible assets in the twenty-first-century economy, as anticipated by Florida (2002), who highlighted the rise of the “creative class,” and by Tiwana (2014), who demonstrated how digital platform ecosystems are structured around innovation governance and intellectual property architecture.

In Brazil, the digital games industry has experienced significant growth over the past decades, reflecting not only the expansion of the consumer market but also the strengthening of the sector as an important component of the creative economy. Brazil currently leads the Latin American gaming market, with a player base exceeding 100 million users and substantial revenues generated in both domestic and international markets. This growth has been driven by factors such as the democratization of access to digital technologies, the increasing number of game development studios, and the expansion of events and initiatives designed to promote the sector, according to the Brazilian Association of Digital Game Companies (Abragames, 2023b).

A key aspect of this development is the growth in the number of studios and companies operating within the industry. According to Abragames (2023a), there are more than 1,000 Brazilian game studios, of which 76% export games to international markets. Furthermore, the concentration of these studios in the Southeast and South regions highlights the importance of technological and cultural hubs in driving sectoral development. Initiatives such as Brazil Games, developed in partnership with Apex-Brasil, have played a fundamental role in the internationalization of Brazilian products, strengthening the country’s reputation as a creative hub (Abragames, 2023a). Based on these data and on an analysis of trademark registrations filed with the Brazilian National Institute of Industrial Property (INPI), this article investigates how intellectual property protection has contributed to the consolidation and competitiveness of the Brazilian digital games industry.

Another important factor in the consolidation of the industry is the role played by events such as the BIG Festival

and the Game Developers Conference (GDC), which connect Brazilian developers with publishers, investors, and international partners. These events not only enhance the global visibility of the sector but also strengthen collaborative networks that foster the growth and competitiveness of Brazilian studios (Abragames, 2023a).

Alongside the growth in the number of domestic studios and the increasing international presence of the Brazilian digital games industry, a process of sectoral formalization has also emerged, evidenced by the growing number of trademark registrations filed with INPI. This trend reflects the increasing adoption of intellectual property protection practices by Brazilian game studios. The protection of intangible assets, such as trademarks and copyrights, has become a fundamental strategy for studios seeking to establish themselves in a highly competitive global market (OECD, 2022).

Despite the expansion of the industry and the growing body of academic research on digital games, most studies continue to focus on cultural, economic, or technological aspects, while paying limited attention to the systematic analysis of sector formalization through intellectual property protection. Few studies examine trademark registrations as mechanisms for industry consolidation and competitiveness, and even fewer explore how the Nice Classification (NCL), adopted by INPI, is used to structure this process within the gaming sector. There is also a lack of longitudinal analyses connecting the evolution of the industry with the protection of intangible assets, limiting the understanding of the strategic role of intellectual property in the consolidation of the national market.

This study seeks to address this gap by analyzing the evolution of trademark registrations in Brazil, with a focus on Nice Classification categories associated with digital games and software development. Using data extracted from INPI as its primary source, the study aims to understand how trademark registrations have accompanied the growth of the gaming industry, providing an overview of the impact of intellectual property protection on the sector.

The remainder of this article is organized as follows. The next section presents a review of the relevant literature, addressing the role of intellectual property in the gaming industry and the use of the Nice Classification in the Brazilian context. This is followed by a description of the methodology adopted for data collection and analysis. The subsequent section presents and discusses the main findings in light of the transformations occurring within the sector. Finally, the concluding section highlights the implications of the results and offers recommendations for future research.

1.1 Importance of Intellectual Property

The protection of Intellectual Property (IP) is essential for the development and competitiveness of the digital

games industry, as it safeguards rights over original creations, including games and innovative technologies. In Brazil, trademark registration with the National Institute of Industrial Property (INPI) and the patenting of technological innovations play a vital role in combating piracy and promoting fair competition.

The Brazilian digital games market is experiencing rapid expansion, with millions of active players and developers, reinforcing the need for robust intellectual property protection to sustain the sector's growth and long-term viability (Abragames, 2023b). A registered trademark, for example, is not only a guarantee of identity but also a strategic asset that directly contributes to commercial success (Pereira & Bernardes, 2018), linking brand strength to consumer visibility and trust. Likewise, patents for technological innovations, such as game mechanics and algorithms, enhance firms' innovative capacity and strengthen their competitive position in the marketplace (Perucia, Balestrin, & Verschoore, 2010).

Within this context, intellectual property protection in the gaming sector also depends on the effective use of the Nice Classification (NCL), an international system that categorizes goods and services for trademark registration purposes. Adopted by INPI, this classification facilitates the trademark registration process in Brazil, particularly in key classes such as Classes 9 and 42. Class 9 encompasses products such as software and electronic games, whereas Class 42 covers technological services, including game development and digital platform services. The proper application of the NCL ensures that innovations in the sector, both in terms of products and services, receive adequate legal protection, thereby strengthening the position of companies in both domestic and international markets. Consequently, the NCL not only contributes to the systematic registration of trademarks but also helps sustain the competitiveness of the digital games industry (Perucia; Balestrin; Verschoore, 2010).

1.2 Digital Games Industry

The impact of intellectual property protection on the digital games industry is evident in the growing Brazilian market, which ranks thirteenth worldwide in revenue generation and includes more than 100 million active players (Abragames, 2023b). This growth reflects not only increasing domestic demand but also Brazil's expanding integration into the global gaming market. Intellectual property protection, through trademark registrations and patents, enables Brazilian companies to innovate and compete effectively, creating a favorable environment for the continued development of the sector.

The diversification of companies and the strengthening of digital infrastructure are important dimensions of this growth, which also enhances the country's competitiveness (INPI, 2020). In this context, intellectual property serves as

a fundamental pillar supporting the digital games market in Brazil, ensuring its continuity and expansion.

Furthermore, the Brazilian digital games industry is deeply connected to the creative economy, a sector that values technological innovation and the creation of immersive experiences. Game development involves emerging technologies such as artificial intelligence and advanced computer graphics, which are essential for creating new forms of player experiences. The digital games sector has become one of the main drivers of employment generation and innovation in Brazil, particularly through the growth of small and medium-sized enterprises, which stimulate local innovation ecosystems (Abragames, 2023a).

The dynamism of this industry reflects the concept of the creative economy, which views creative industries as fundamental drivers of economic development (Florida, 2002). By 2023, digital games had become not only a dominant form of entertainment but also a significant economic force, generating new modes of digital content creation and consumption (Abragames, 2023b). This evolution further underscores the importance of intellectual property protection in strengthening and consolidating the digital games market in Brazil and worldwide.

1.3 Global Landscape and Market Trends

Global revenues from the digital games market surpassed the USD 200 billion mark for the first time, with the United States overtaking China as the world's largest gaming market (Newzoo, 2022). The increasing digitalization of the global economy, combined with the widespread adoption of mobile devices and online platforms, has been a major driver of this growth. In 2024, the countries generating the highest revenues from digital games continued to dominate the industry with a substantial lead over other markets (Newzoo, 2024).

Although Brazil ranks thirteenth globally in terms of gaming revenue, it stands out because of its large player base and the dynamism of its domestic market. National studies, such as the Brazilian Gaming Survey (PGB, 2025) and the Brazilian Games Industry Report (Abragames, 2023b), highlight the consolidation of a robust gaming culture characterized by high levels of user engagement and increasingly diverse consumption patterns. These findings reinforce the country's competitive potential, particularly when considered alongside the sector's growth and growing international recognition (Brazil Games, 2025), underscoring the need for effective public policies that promote innovation and strengthen intellectual property protection.

1.4 Legal Framework for Games in Brazil

The establishment of the Legal Framework for Electronic Games in Brazil, consolidated in 2024, represents

a significant institutional advancement for the sector. The new legal framework provides a solid legal foundation for the sustainable development of the digital games industry by promoting greater legal certainty, encouraging innovation, and recognizing games as a strategic component of the creative economy (Santos, Lima, & Silva, 2024).

Furthermore, the legal framework creates a more stable regulatory environment that is expected to attract investment and strengthen the ecosystem of domestic game developers (Schmidt, Amaral, & Couto, 2024). The formalization of industry activities, combined with fiscal incentives and support policies, may particularly benefit small independent studios, which are currently responsible for a substantial share of innovation and creative diversity within the market.

These measures not only align Brazil with international trends that recognize the gaming industry as an important economic and cultural driver, but also expand the conditions necessary for the country to advance as a producer of technology and digital content.

1.5 Theoretical Framework for Data Analysis

To support the empirical analysis of this study, a theoretical framework is adopted that integrates innovation, intellectual property protection, and creative economy development. The consolidation of the gaming industry

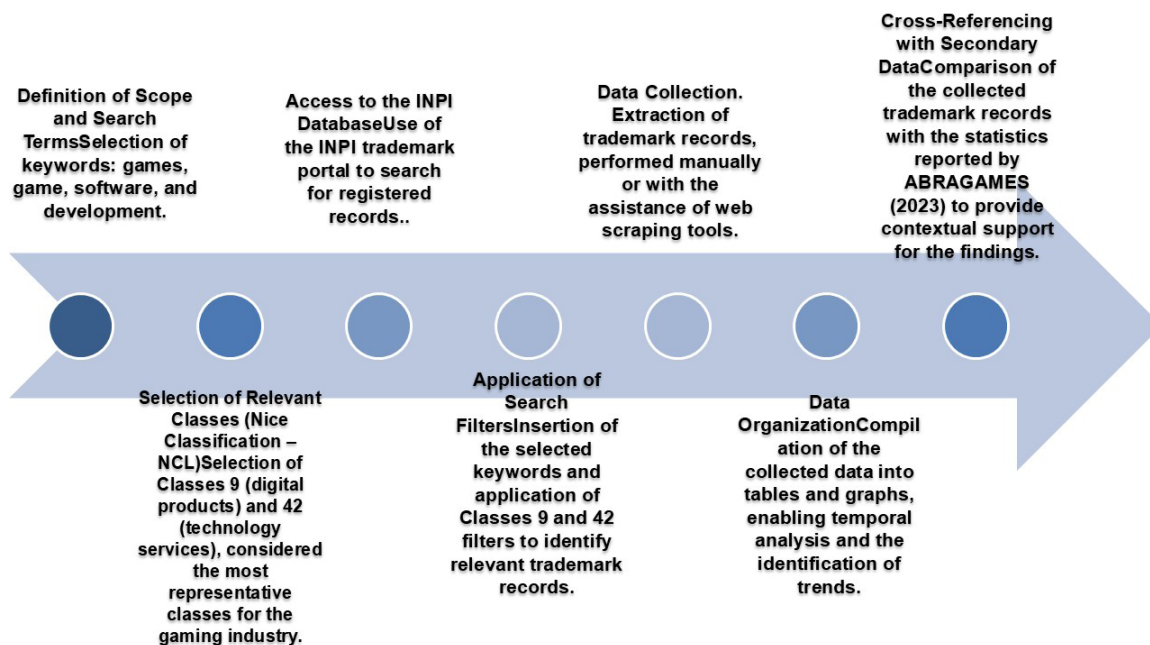
depends not only on the technical capabilities of developers but also on institutional mechanisms that encourage the formalization and protection of innovation (Perucia, Balestrin, & Verschoore, 2010).

The Nice Classification (NCL) is employed as an analytical tool, enabling a structured examination of how companies in the digital games sector register and protect their intellectual assets. Particular attention is given to Classes 9 and 42, as these categories encompass products such as software and electronic games, as well as technological services including game development and digital platform services.

The analytical framework adopted in this study guides the interpretation of data obtained from the Brazilian National Institute of Industrial Property (INPI), correlating them with indicators of sectoral growth identified by ABrGames (2023b). The analysis seeks to understand how trademark registrations may serve as indicators of the institutional maturation of the Brazilian gaming industry.

To illustrate the application of this theoretical framework, a flowchart was developed. Figure 1 visually presents the stages of the trademark registration process, the relationship between trademark registrations and industry growth, and the role of intellectual property protection. The flowchart serves as a tool for understanding the interconnections among INPI data, market trends, and the formalization of the digital games sector.

Figure 1 – Flowchart of intellectual property analysis in the digital games sector



Source: Prepared by the authors (2025)

1.6 Digital Platform Ecosystems

The digital games industry is deeply embedded within digital platform ecosystems, where multiple actors, including developers, publishers, infrastructure providers, users, and regulators, interact through networks of technological, economic, and symbolic interdependence. Platforms such as Steam, PlayStation Network, Xbox Live, the App Store, and Google Play not only distribute games but also regulate market access, impose technical and commercial standards, and shape the pathways available for innovation and monetization. Digital platforms operate as modular architectures that coordinate value co-creation among participants, creating an environment that is simultaneously highly competitive and deeply interconnected (Tiwana, 2014).

Although Brazil does not host globally dominant platforms such as those operated by Sony, Microsoft, or Valve, the country is playing an increasingly relevant role within these ecosystems, particularly as a content producer. Brazilian studios have established themselves as developers of games distributed internationally, taking advantage of the creative and technological opportunities offered by these platforms. The growing presence of Brazilian companies on international platforms demonstrates that ownership of infrastructure is not a prerequisite for meaningful participation in the ecosystem. Instead, success depends on strategic alignment, innovation capacity, and creative production capabilities. According to the Brazilian Gaming Survey (PGB, 2025), 82.8% of Brazilians consume digital games, the highest level recorded in the survey's history, reinforcing the country's importance as one of the largest consumer and content-production markets in Latin America.

This integration is partly enabled by the open and scalable nature of digital platforms, which allow developers from different countries to reach global audiences, provided they comply with technical and legal requirements, including the formalization and protection of their intellectual property assets. In this context, intellectual property becomes an essential tool for enabling Brazilian companies to achieve visibility, protection, and competitiveness within ecosystems dominated by large international players. Competitive advantage in digital ecosystems depends less on ownership of core assets and more on the ability to generate value and innovation at the edges of the system (Parker, Van Alstyne, & Choudary, 2016).

Therefore, Brazil's participation in these ecosystems represents not merely a peripheral insertion but a strategic step toward consolidating the country as a creative and technological hub. Despite the absence of nationally owned global distribution platforms, Brazil has increasingly positioned itself as an exporter of talent, creativity, and innovation, occupying a relevant symbolic and economic role within the global digital economy. This process has

been supported, albeit still at an early stage, by public policies aimed at fostering the creative economy and promoting the internationalization of the sector, whose continued development will be essential for strengthening Brazil's presence in this evolving landscape.

2 Methodology

This study adopted a quantitative and exploratory approach, combining documentary analysis of data from the Brazilian National Institute of Industrial Property (INPI) with industry data provided by Atragames, in order to investigate the evolution of Intellectual Property (IP) protection within the Brazilian digital games industry. The methodology was structured into four stages.

2.1 Data Collection

Initially, trademark records filed under Classes 9 (hardware and software) and 42 (technological services) of the Brazilian National Institute of Industrial Property (INPI) were selected as the primary data source, using specific keywords such as *games*, *game*, *software*, and *development*. The selection of these keywords was based on their relevance to the digital games sector, emphasizing the importance of rigorous criteria when identifying key terms for investigating the context of different industries (Sá-Silva *et al.*, 2009). Data collection encompassed all records available in the INPI database between 1994 and 2024, covering three decades of sectoral evolution.

As a secondary source, the Atragames Report (2023b) was used. Although Atragames is not an academic institution, it is widely recognized nationally and internationally for its institutional role in mapping and promoting the Brazilian digital games industry. Its reports are frequently cited by companies, government agencies, and researchers. The report provided valuable contextual information regarding industry growth and enabled the cross-referencing of INPI data with economic indicators related to the digital games market.

2.2 Data Processing and Filtering

Data collection was conducted manually and, when appropriate, with the support of web-scraping tools, following methodological approaches commonly adopted in documentary data collection and analysis (Lüdke & André, 1986). To ensure the relevance of the records, trademark descriptions were examined with particular attention to the terms *games* and *software*, confirming their connection to the digital gaming sector. The collected data were subsequently cleaned and filtered to remove duplicate entries and generic records unrelated to the industry.

Only records associated with companies directly involved in the development or publishing of digital games, and whose descriptions demonstrated a clear connection to the sector, were considered valid for analysis. Although the study did not exclude international companies, the INPI registration system requires legal representation in Brazil, thereby ensuring the existence of an institutional link with the country, even in the case of foreign entities.

Subsequently, the resulting dataset was cross-referenced with information contained in the Atragames Report (2023a), which provides data on the growth of the Brazilian gaming industry, including the expansion in the number of companies and the impact of new game and software development activities. This cross-analysis was essential for understanding market trends and examining the relationship between the evolution of trademark registrations and the economic growth of the sector.

2.3 Quantitative Analysis

The variables were processed using Microsoft Excel, enabling the construction of indicators and graphical visualizations, including tables and charts that illustrated the annual evolution of trademark registrations, particularly in the areas of software and game development. Relating these data to gaming industry statistics provided a comprehensive view of sectoral trends, consistent with research practices in the fields of innovation and intellectual property (Perucia; Balestrin; Verschoore, 2010).

2.4 Innovative Analytical Approach

Finally, building upon the research methodologies referenced throughout this study, the investigation was developed through a proprietary theoretical lens specifically designed to analyze the evolution of intellectual property protection within the digital games sector. This innovative approach prioritizes the identification and in-depth examination of the Nice Classification (NCL) categories most relevant to the industry, particularly Classes 9 and 42, which encompass digital products (such as software and electronic games) and technological services (including game development and digital platforms), respectively. This analytical lens makes it possible not only to capture the dynamics of trademark registrations but also to understand how these registrations relate to the growth and formalization of the gaming industry, thereby providing a contextualized interpretation of the collected data.

This methodological approach, articulated through a dedicated theoretical framework and operationalized by means of a structured analytical flowchart, enables a comprehensive understanding of the evolution of intellectual property registrations and their impact on the

development of the gaming industry. By integrating primary data from INPI with secondary market information, the framework contributes to a contextualized assessment of the sector's formalization, competitiveness, and institutional development.

Nevertheless, certain limitations should be acknowledged. Because the analysis is restricted to publicly available INPI records, the data may not capture informal strategies or applications that are still under examination. Furthermore, the rapid pace of innovation within the gaming industry may not be fully reflected in the timelines associated with intellectual property registration and granting procedures. These factors should therefore be considered when interpreting the results and drawing conclusions from the study.

3 Results and Discussion

The evolution of the digital games industry in Brazil reveals a process of institutional and economic maturation, reflected in the significant increase in trademark registrations filed with the Brazilian National Institute of Industrial Property (INPI). These registrations serve as indicators of the sector's growing formalization and the increasing adoption of strategies aimed at protecting intangible assets. Throughout the period analyzed, the consolidation of intellectual property protection has been associated with important regulatory developments, particularly the enactment of the Legal Framework for Electronic Games, which strengthens legal certainty and signals a more favorable environment for innovation and investment within the sector (Santos, Lima, & Silva, 2024). Based on the collected data, this section presents a quantitative analysis of the temporal evolution of trademark registrations, focusing on Classes 9 and 42 of the Nice Classification. It also explores trends associated with the use of strategic keywords within the industry. In addition, the analysis examines the role of both domestic and international companies in protecting their trademarks, highlighting the impact of this process on strengthening the Brazilian digital games market. The main findings and their implications for sectoral development are presented and discussed below.

As illustrated in the analytical flowchart presented earlier, the methodology adopted for trademark registration analysis was divided into clearly defined stages, ranging from data collection to the interpretation of results. The flowchart provides a simplified visualization of the analytical process, facilitating the understanding of the interrelationships among the different phases of the research. This structure not only organizes the data but also highlights the principal connections between the evolution

of trademark registrations and the growth of the digital games industry in Brazil.

Graph 1 presents the evolution of the number of trademark registrations filed with INPI associated with specific keywords, namely *development*, *games*, *game*, and *software*, between 1994 and 2024. The term *software* exhibits the most pronounced growth beginning in 2017, surpassing the other keywords and indicating an increasing focus on digital technology development and the formalization of this segment. This pattern follows the global trend toward the digitalization of assets and the advancement of technologies associated with game development. The protection of technological and software-related elements in digital games, particularly computer programs and interactive systems, is essential for ensuring the competitiveness and economic value of these products within a highly innovative and dynamic market (Marques, 2016). The growing emphasis on software registrations in Brazil may therefore reflect increasing awareness among companies regarding the strategic importance of intellectual property as a mechanism for market positioning and legal protection.

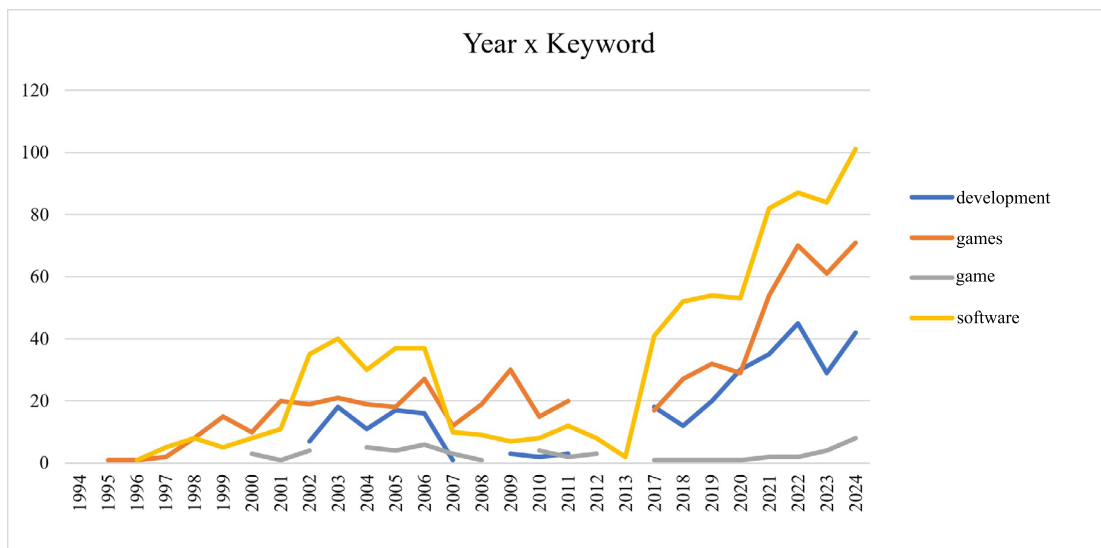
The term *games* also demonstrates sustained growth, particularly between 2000 and 2024, reflecting the consolidation of the Brazilian digital games industry as one of the most promising sectors within the creative economy. Data from Abragames (2023b) and INPI (2024) indicate that Brazil currently ranks thirteenth worldwide in gaming revenue and has a player base exceeding 100 million active users. In contrast, *development* displays fluctuations while maintaining a relatively stable pattern throughout the period from 2000 to 2024, suggesting that registrations associated

with this term are linked to more specialized technological projects and services. The term *game* shows more modest growth, which may indicate a reduced emphasis on generic registrations and a greater prioritization of strategic keywords, consistent with technical approaches to the protection of intangible assets (Silva, 2019).

The increase in INPI trademark registrations associated with keywords such as *software* and *games* between 1994 and 2024 reflects the maturation of the Brazilian digital games industry. This trend accompanies broader global technological developments, with Brazil emerging as one of the largest gaming markets in Latin America. According to Newzoo (2024), the global gaming market generated more than USD 184 billion in revenue in 2023, contributing to a corresponding increase in intellectual property registrations worldwide. The significant growth in the use of *software* from 2017 onward highlights the expansion of technologies underlying game development, including game engines and content creation tools, while the consistent growth of *games* reinforces the importance of final products as both economic and cultural drivers.

These trends suggest that, although the gaming market remains relatively young, it is consolidating through increasing formalization and investment in innovation. The growing emphasis on *software* points to the digitalization of the industry and the rising value attributed to technological assets underlying game development, including development tools and digital platforms. This finding suggests that Brazil is positioning itself not only as a consumer market but also as a producer of technology within the global gaming industry.

Graph 1 – Year × Keyword



Source: Prepared by the author (2025)

Furthermore, the growth of *games* reinforces the competitiveness of the industry, consolidating its role as an economic and cultural driver. Conversely, the more modest growth associated with *game* may indicate that the industry is prioritizing higher value-added niches, such as technologically sophisticated products or games with strong cultural content aimed at international markets and innovation-oriented segments.

These trends underscore the need for public policies that encourage not only intellectual property protection but also technological innovation within the sector through investments in infrastructure, workforce development, and support for independent studios. Such policies may facilitate the transition of the industry toward a more mature stage in which Brazil not only consumes but also develops and exports games with substantial technological content.

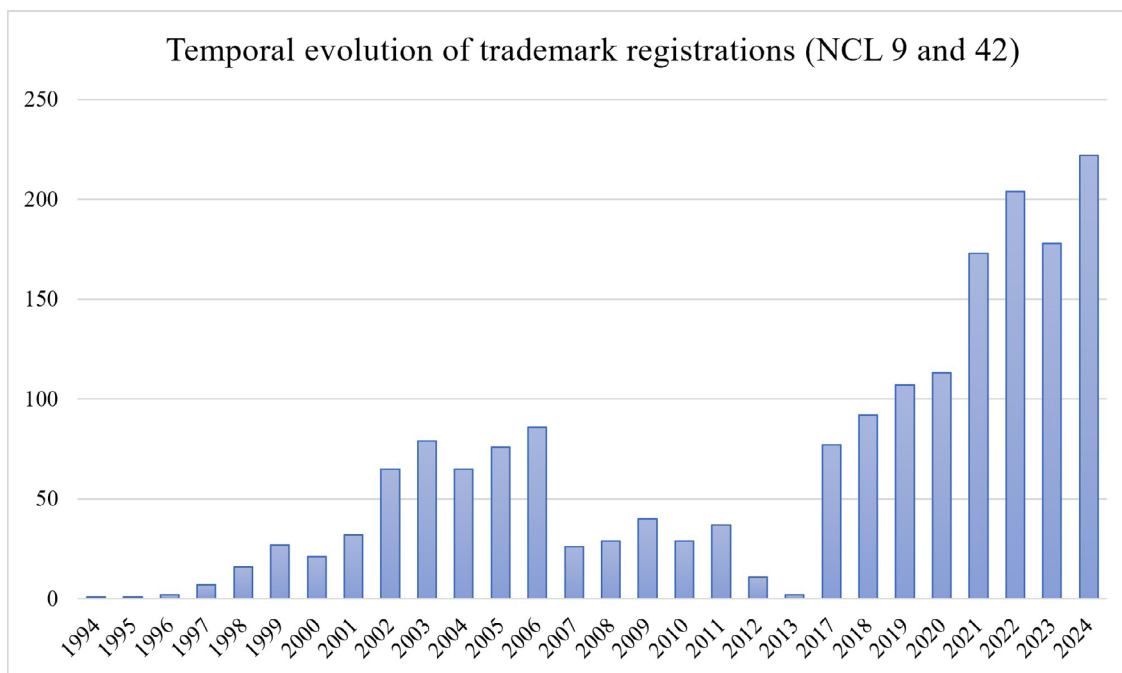
Within the context of the Brazilian digital games industry, effective public policies can play a critical role in promoting innovation and consolidating the sector. Countries such as Canada and the United Kingdom provide concrete examples of how fiscal incentives and support programs can accelerate the growth of creative industries. In Canada, the government established the Canada Media Fund (CMF), which provides grants to independent studios and game developers, encouraging the creation of innovative digital content and the export of cultural products. This model has proven highly effective, with a significant share of Canadian games being exported to international markets,

making the country one of the world’s leading exporters of interactive digital content (Canada Media Fund, 2023).

Similarly, the United Kingdom has adopted a proactive approach through the Film Tax Relief (FTR) framework, which extends benefits to the gaming industry by providing substantial tax incentives for local studios developing games and interactive content. Programs such as the UK Games Fund also provide direct support to emerging studios, fostering technological innovation and the development of independent games (UK Games Fund, 2024). These policies have strengthened the position of both countries as global leaders in the gaming industry, and Brazil could benefit from adopting similar practices to enhance its competitiveness in international markets.

O Graph 2 illustrates the evolution of the total number of trademark registrations filed with INPI under Classes 9 (hardware and software) and 42 (technological services). A significant increase in registrations can be observed beginning in the early 2000s, reaching notable peaks in 2005, 2018, and 2024. Following a period of relative stability between 2007 and 2013, registrations resumed a strong growth trajectory from 2017 onward. This trend may be associated with the increasing valuation of intangible assets within the sector, the consolidation of the gaming industry as a relevant economic driver, and the growing professionalization of Brazilian studios, which increasingly adopted formal intellectual property protection strategies.

Graph 2 – Temporal evolution of trademark registrations (NCL 9 and 42)



Source: Prepared by the author (2025)

The growth in trademark registrations within Classes 9 and 42 corresponds to key moments in the evolution of the digital games industry both in Brazil and internationally. The peak observed in 2005 may be linked to the consolidation of the console market, particularly with platforms such as the Xbox 360 and PlayStation 2, which gained momentum alongside the expansion of broadband internet access in Brazil and the increasing popularity of online gaming. These developments highlight the importance of technological convergence in driving demand for intellectual property protection during that period (Machado & Mello, 2024).

The increase observed in 2018 appears to have been driven by the rapid expansion of electronic sports (eSports) and the growing prominence of Brazilian independent game studios, which achieved international recognition through titles such as *Horizon Chase*. In addition, public policies supporting the creative industries and major events such as the Brazil Game Show contributed to consolidating Brazil’s position as a relevant gaming market.

By 2024, the record number of trademark registrations reflects the growing maturity of the national industry, characterized by the presence of major international players and the emergence of Brazilian studios in global markets. This development has been supported by technological advances, strategic partnerships, and increasing internationalization. Collectively, these peaks demonstrate the rising importance of intellectual property protection as a fundamental instrument for competitiveness, innovation, and long-term growth within the digital games sector.

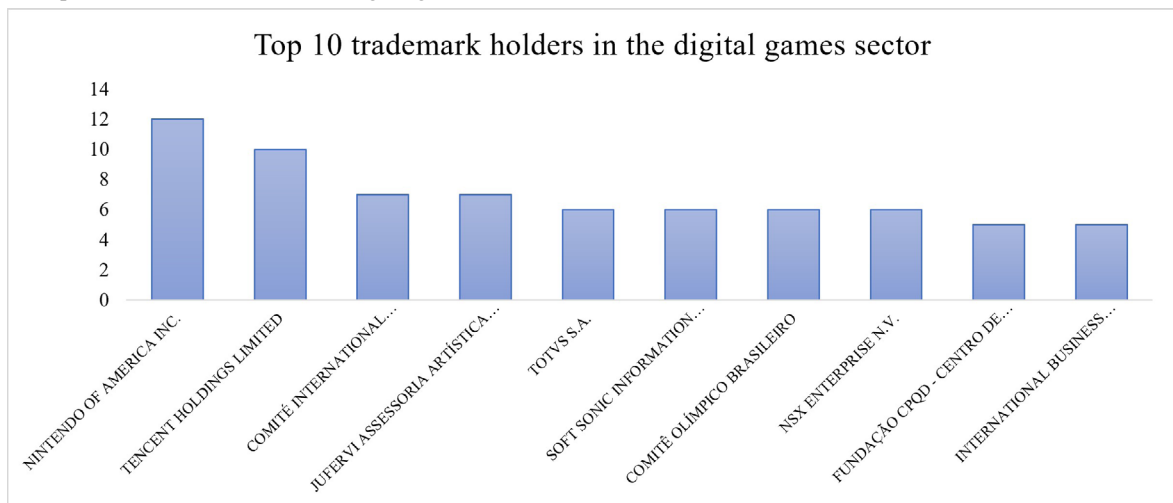
Graph 3 identifies the leading trademark holders in the digital games sector, highlighting companies such as Nintendo of America Inc., Tencent Holdings Limited, and other relevant market players. The prominence of

companies such as Nintendo and Tencent reflects the dominance of global industry leaders, while the presence of entities such as Jufervi Assessoria and TOYS S.A. suggests the participation of Brazilian or regional companies within the trademark landscape.

This balance between domestic and international brands is consistent with the scenario described by Silva (2019), who characterizes the electronic games industry as a field shaped by the coexistence of large international conglomerates and local initiatives. The author emphasizes the central role of intellectual property in structuring this hybrid market. The increasing presence of Brazilian trademarks further reinforces the role of intellectual property as a competitiveness instrument for independent studios and small development companies. Trademark registration has become a fundamental strategic step for integrating Brazilian companies into the global gaming value chain, particularly in the period following the enactment of the Legal Framework for Electronic Games (Santos, Lima, & Silva, 2024).

The combined analysis of the three graphs reinforces the conclusion that the Brazilian digital games market is undergoing a process of rapid expansion and formalization, characterized by the growing importance of intellectual property protection. The data reveal a consistent increase in official trademark and intangible asset registrations filed with INPI, indicating that an increasing number of companies are seeking legal protection for their creations, strengthening their institutional presence, and aligning themselves with the regulatory requirements of the sector. The temporal evolution of registrations, together with the participation of both major global corporations and domestic companies, suggests that the gaming industry is

Graph 3 – Top 10 trademark holders in the digital games sector



Source: Prepared by the author (2025)

consolidating itself as one of the pillars of Brazil's creative economy. This development creates opportunities not only for established firms but also for new entrants seeking to compete in an increasingly dynamic and innovation-driven market.

4 Final Considerations

The data presented throughout this study highlight the rapid growth of the digital games industry in Brazil, driven by factors such as the widespread adoption of the internet, the expansion of independent game studios, and increased access to game development technologies. The evolution of trademark registrations points to a continuous process of formalization and increasing valuation of intangible assets, indicating that the sector has entered an advanced phase of expansion, with clear signs of progression toward a more consolidated stage of development. The findings also reveal a balance between major international players and domestic companies seeking to establish competitive positions within the market. This dynamic reflects an industry in transformation, characterized by the convergence of creativity, innovation, institutional maturation, and an increasing emphasis on formalization.

Nevertheless, significant challenges remain. The Brazilian gaming industry continues to face obstacles such as the lack of consistent fiscal incentives, limited access to financing for small studios, and substantial dependence on foreign technologies and digital platforms. The analysis reinforces the need for greater investment in technological infrastructure, workforce development, and support programs designed to strengthen domestic companies and enhance their competitiveness.

When compared with more mature markets, such as those of the United States and South Korea, Brazil can be characterized as occupying an intermediate stage of development, albeit with substantial growth potential. The rise of Brazilian companies in recent years demonstrates that the country has emerged as a growing creative hub capable of exporting unique cultural products. However, greater recognition of local talent and deeper integration into global markets remain essential for consolidating this position.

As a policy implication, closer collaboration between the public and private sectors is essential for building an ecosystem that fosters innovation, ranging from incentives for research and development to support mechanisms for small companies seeking expansion opportunities. Targeted public policies, acceleration programs, and international partnerships represent promising pathways for strengthening Brazil's position within the global digital games industry. Universities also play a strategic role within this ecosystem, both through the education of specialized

professionals and through the promotion of applied research and knowledge transfer to industry. Furthermore, expanding research on the effects of the transition from cybercafés to personal consoles and computers may contribute to a deeper understanding of shifts in consumer behavior and market dynamics.

The digital games sector in Brazil represents a compelling example of creativity, resilience, and growth potential. With well-structured strategies and sustained attention to evolving market demands, the country has the opportunity to strengthen its position within the global creative and digital economy. The sector remains vibrant and full of opportunities, reflecting not only technological advancement but also Brazil's capacity for innovation and cultural transformation.

This study examined the evolution of intellectual property protection within the digital games sector, focusing on trademark registrations and the growing formalization of the domestic market. In doing so, it identified key drivers of this process, including the increase in registrations within specific Nice Classification categories and the strategic use of industry-related keywords. The primary theoretical contribution of the study lies in the development of an analytical lens for examining intellectual property, capable of revealing how industry formalization is linked to the economic and institutional development of the gaming sector. By applying this approach to an empirical database that remains relatively underexplored, the article also advances understanding of the relationships among innovation, competitiveness, and legal protection within the context of Brazil's creative economy.

5 Future Perspectives

Despite the relevance of this quantitative analysis based on INPI trademark registration data, the study presents certain limitations. The analysis focused exclusively on trademark registrations, without addressing other important forms of intellectual property protection, such as patents and copyrights. In addition, the INPI data were examined in an aggregated manner, without a more detailed regional breakdown or the identification of the size and profile of applicants.

Future research could expand this analysis by investigating the geographical concentration of registrations, the characteristics of applicants (such as small enterprises, large corporations, and independent developers), and the strategic partnerships established among companies. Such investigations may provide deeper insights into how this ecosystem supports innovation, competitiveness, and the strengthening of Brazil's position as a hub within the creative and digital economy.

Furthermore, the adoption of more specific methodologies to measure the impact of public policies on the sector, combined with a more comprehensive analysis of the global market, could contribute to a broader understanding of the dynamics shaping the digital games industry in Brazil. These approaches would enable a more robust assessment of the factors influencing sectoral growth, international competitiveness, intellectual property protection strategies, and the long-term development of the national gaming ecosystem.

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