

An analysis of wine geographical indications from the perspective of the theory of industrial organizations: what is the trade off?

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Abstract. From Porto and then through Bordeaux, Champagne and Bourgogne, wine geographical indications (GI) were the driving models for these forms of protection of distinctive signs for collective use. Many studies present the benefits of recognizing a GI for a region, the challenges of its implementation, as well as the possibilities of promoting territorial development. However, there are few pieces of research on negative spillovers of this form of protection. In this work the following question is: Could the system of GI, from the perspective of the theory of industrial organizations, promote negative spillovers to the market, consumers and territories? Based on a systematic literature review, the aim of this essay is to verify the trade off between the objectives that the literature presents for the recognition of IG and if there are negative spillovers, based on the theory of industrial organizations. As a result, the literature shows that GI protection could promote market concentration, establish barriers to entry and exit, institute lobbying and rent-seeking behaviour, create distortions in regional development and affect consumers expectations.

1. Introduction

Use collective distinctive signs is offend related whit territorial development policies. And normally it's sound like a inclusive matter, that aims support and benefit a large number of people. However, these same signs are used, at the end, to compete on the market. And this competition has been studied by the economic theory since the classical economy authors.

The neoclassical theory is based on the premise of perfect competition, where agents do not compete whit each other because the relations are regulated by market. On the other hand, the Theory of Industrial Organization (TIO) analyses imperfect competition relationships, where there are competition patterns that require changes in companies' strategies [1].

The evolution of industrial organization theories focuses on explaining the structure and conduct of firms in a market. The structure-conduct-performance (S-C-P) paradigm highlights the relationship between industry attributes, structure, conduct, and performance. The performance of companies depends on conduct, which is influenced by industry structure. In turn, the structure depends on basic conditions and entry barriers. Various theories, such as Bain's Limit-Price Theory, Baumol's Theory of Contestable Markets, Sutton's Theory of Endogenous Sunk Costs, and Williamson's Transaction

Cost Theory, analyse the relationship between structure and conduct, and despite their singularities, they have interlinkages with TIO [2]. These theories emphasize the long-term maximizing conduct based on potential competition. Additionally, these theories look for analyse the market failures that neoclassical theory leaves out. And the first question related to collective distinctive signs, that Geographical Indication (GI) is a type, is if there are market failures that frequently are not evaluated and how GI market could be affected by these.

In general GI identify that a good is originated from a territory, region or locality where a given quality, reputation or other characteristic of the good is attributable to its geographical origin, as defined by TRIPS Agreement. And generally, it could be consisted of two subcategories: appellations / denominations of origin and geographical indication. On this article we use GI instead the subcategories.

Most of the literature refers to GIs as a technological setting represented through signs on products from a given origin and quality characteristics, which differentiate and protect local expertise, cultural heritage and industry reputation in the agribusiness sector. At the same time GI provide consumers with relevant information such as traceability, quality assurance and authenticity of such products. This alternative approach has emerged due to factors such as declining prices on agricultural products,

shifting consumer choices, and escalated competition in commodity markets [3].

2. Objectives and theoretical framework

Considering the perspectives offered by various economic and management branches of study as interfaces to the Theory of Industrial Organization, our analysis seeks to understand the markets under GIs in the wine sector within such a framework. We aim to identify implications within contexts related to this approach, including market concentration (monopoly, oligopoly), entry barriers and market exit conditions, lobbying and rent-seeking activities, distortions to regional development, and potential consumer harm or negative impacts.

Additionally, we seek to address potential implications that bilateral trade agreements may have in this context. Figure 1 depicts the conceptual framework we propose, providing an overview of the topics and focus considered in the analysis.

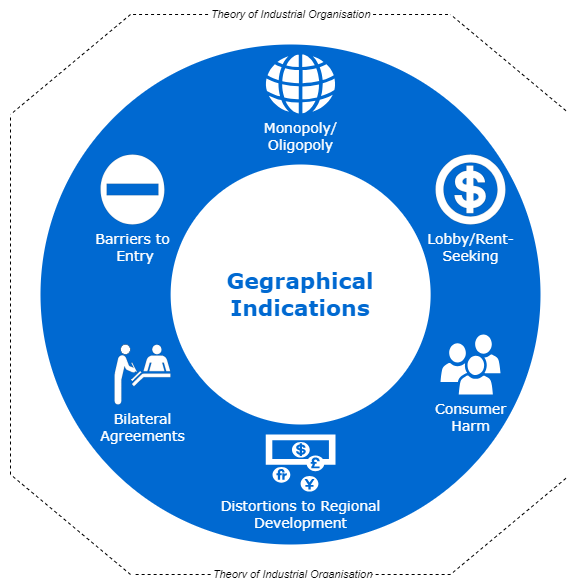


Figure 1. Conceptual framework: Geographical indications within the context of Industrial Organization Theory considered with its interfaces with other economic theories

Source: the authors (2024).

3. Methodology

We reviewed relevant literature to try to identify relevant encompassing themes related to the theory of industrial organization and geographical indications. These documents were subsequently uploaded to NVIVO software, which processed them using internal algorithms. This initial processing allowed us to generate a preliminary coding framework reflecting the content of these papers. Subsequently, we aggregated the codes into six subareas that we deemed relevant to the scope of our study.

We then analysed each paper based on its contribution to each of these subareas. Other than that, we included a few theoretical references from books and thesis on Industrial Organization its related theories. Based on the

findings from this analysis, we present a visual representation of the conceptual framework in Figure 1, and topics on the research linked to the focus we considered on our analysis in Table 1.

Table 1. Geographical Indications in the context of the Industrial Organization Theory – topics and focus considered in the analysis.

Topics considered	Focus
1. Market Concentration	Exclusionary territories, monopoly power
2. Barriers to Entry	“Club goods”
3. Lobby and Rent-seeking	Poor governance, Race to the bottom
4. Distortions to Regional Development	Inconsistencies in provenance, dominance of developed countries
5. Consumer Harm	Consumer Confusion and varying perception
6. Bilateral Agreements	Interconnectedness of challenges

Source: the authors (2024).

4. Results and discussion

The results and discussions are presented in six categories and highlight the key contributions of relevant research related to each topic.

4.1. Oligopoly and supply concentration

When a market is dominated by a small number of companies, there is a high degree of concentration and limited competition among the agents, resulting in a significant increase in the power of these companies in the market. Through monopolies and oligopolies, companies seek to gain control over the market, acquiring power and importance [4]. A greater level of concentration in a market can lead to the establishment of a monopoly and provide competitive advantages to the companies operating in that market [2].

GI, on the positive side, can be seen to reduce information uncertainty and transaction costs to enhance product quality [5]. On the other hand, although GI offer advantages to both producers and consumers, they can bring some inherent contradictions.

One major concern is normative weaknesses, which may result in producers not always having legal rights to utilize the natural resources on their occupied land. Additionally, the inclusion of both recent and traditional activities under the same GI label can potentially undermine its credibility. GI also have the potential to create exclusionary territories within their designated areas. Moreover, there is a risk of favouring specific groups in terms of technical and scientific investment. Lastly, the expected multifunctionality of GI is not always consistently achieved [6].

Market monopolies formed by GI are not solely determined by landscape and technical factors. The understanding and acceptance of GI within society can

also play a significant role in providing a protective buffer against uncertain market conditions [7]. The concept of "terroir" initially emerged either due to the desire to expand exports (such as Port and Chianti) or as a response to competition from imported products in Europe (like Champagne). Later, additional significant factors influenced market dynamics, such as shifts in political power, the rise of liberal and free market ideologies, and the cost reduction of export transactions because of infrastructure investments [8]. An illustration of this political and economic reasoning can be seen in the European Union's initiatives to regain control over formerly generic terms and assign them as indications of origin. This effort aims to expand the EU's monopoly profits in the agro-industrial sector [9].

The perceived prioritization of GI producers' interests over others within these systems poses a threat to trademark registrants and those who use geographical terms in a generic manner. Conflicting claims can arise when geographical signs are registered as individually owned trademarks, potentially overriding prior trademark rights. Critics also seek to maintain the freedom to use geographical terms in a generic way to describe a type of product regardless of its origin [10].

4.2. Barriers to entry

These legal instruments couldn't only be employed to establish and take advantage of cultural distinctions, simultaneously forming boundaries of community and identity within the realm of commerce, but also, they function as tools for marketing, facilitating the communication of production details and the economic significance of cultural reputation. GI is often described as "club goods" or limited common properties, conferring benefits upon specific actors within a particular territory [11].

A territory can be appropriated by a specific group of actors, resulting in an economic protection barrier that can be defined as a territorial exclusion monopoly. As an exclusionary process unfolds, the excluded producers may occupy the same geographic locus but are neither present in nor producing within the same territory that is protected by the GI. Obtaining the GI may contribute to legitimizing an already present process of exclusion rather than necessarily causing it [12].

The combination of tradition and innovation justifies the use of intellectual property rights to fuel economic growth. Market-driven strategies are commonly employed to capitalize on these rights, which are seen as valuable tools for protecting innovations, facilitating technology transfer, and accessing markets. Large companies with established brands and reputational goods associated with denominations of origin wield influence over governments through court cases and lobbying, shaping regulations and overcoming trade barriers, including the concept of reciprocal treatment at borders, an economic principle that regards territorial privileges as barriers to market entry [13].

4.3. Lobby and rent-seeking

Lobbying strength plays a significant role in the decision-making process of GI governance, particularly regarding the enlargement of areas. This decision is often driven by consumer-driven forces, where marketing aspects can influence the decision-making process. Increased profits are a key factor in determining the outcome of these decisions [14].

Another effect of malfunctioning governance is rights derived from a poorly drafted specification with lack of a strong foundation and an unclear scope [15]. This creates situations that allow individuals or even corporations to acquire production areas under a GI by market-driven motivations ('race to the bottom'), which can lead to a shift in conformity to external standards, catering to imported preferences, and the potential redefinition of product characteristics. In this process, local producers may find themselves caught in a system where they are not necessarily 'dispossessed' but rather 'misappropriated' of their cultural heritage [16].

Over time, the biases introduced by lobbying variables, such as the influence of previous landowners, connections with decision-makers, and collective actions, tend to diminish in their impact. This occurs as the transmission and improvement of informational content take place through the implementation of more balanced schemes [17].

4.4. Distortion to regional development

While local actors predominantly hold control over GI, it is important to acknowledge that these are embedded within broader regional, national, and international networks. The transition from local to extra-local markets introduces additional costs and benefits, along with new power dynamics within the supply chain [18].

The motivations for GI protection vary between developing and developed countries. Developing countries focus on preventing resource piracy and misappropriation rather than consumer concerns in the domestic market [19]. Developing countries encounter challenges in obtaining robust protection tools, adjusting to diverse export markets, and anticipating domestic market dynamics. Governments endeavour to establish commercial and legal mechanisms, promote relevant instruments, and implement supportive policies that align with market differentiation. The choices made concerning protection through trademarks and GIs entail considerations of governance structures, market sizes, and the types of instruments to be employed [20].

The consolidation of markets under the GI framework in developing countries can lead to a situation where developed countries end up dominating and benefiting from economic gains. This occurs as investments from developed countries flow into various production chains, including GI-related products like teas, chocolates, and coffees [9].

The permissiveness of certain practices within GI boundaries can also lead to relevant inconsistencies when provenance is at stake. The pressure to expand production and exports can lead, for instance, to producers sourcing input ingredients from abroad. Unfortunately, strict adherence to market-driven provenance can result in neglecting important aspects, such as fundamental agroecological practices [21].

4.5. Consumer harm

The conflicting interests and perspectives between GI-producing countries and GI-consuming countries can result in consumer misunderstandings, contrary to the principles of good faith [22]. The simultaneous presence, or conflict, between trademarks and GIs, such as the case of conflicts in homonymous indications [23], can give rise to certain challenges, particularly in countries or regions where the regulatory framework allows for labelling inconsistencies. In the wine industry, for example, factors such as type designations, wine bottling states, company addresses, or vineyard names can potentially cause confusion among consumers [24].

The increasing demand for emerging products poses a risk as producers may shift from traditional methods to more automated techniques, potentially altering the inherent quality of the product. Furthermore, consumer perception varies across countries, and the way this perception is interpreted by national courts also differs [25].

However, there is a tension between tradition and innovation in the context of GIs which can lead to consumer confusion, particularly in non-concentrated markets. Consumers are often attracted to innovative products, but the presence of diverse offerings can make it challenging for them to compare prices and quality. Product differentiation further complicates the decision-making process for consumers [26].

4.6. Bilateral Agreements

While the TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights) offer comprehensive standards and widespread participation, some countries contend that there are still limitations impeding sufficient international protection for GIs. Despite the existence of these agreements, certain concerns remain regarding the effectiveness of GI protection on a global scale [25].

The EU's approach of extending absolute protection to all goods is considered too strict and may impose excessive costs on developing nations, potentially hindering their regional economic growth [27]. The EU has successfully expanded international protection for its GIs through trade agreements, despite opposition from the US. This highlights the EU's commitment to protecting GIs and suggests potential challenges in future trade agreements with other countries [28]. While it is crucial to value tradition and locality, it is important to acknowledge that the world is becoming more interconnected and uniform [29].

On the other hand, the US approach is deemed too lenient, causing confusion and uncertainty regarding the nature of GIs and how to protect GI products [27]. The US has successfully implemented its own criteria for determining the genericness of GIs in China, which differs from the criteria used in the EU. This disregards the behaviour of the GI owners, potentially leading to the expropriation of their rights without considering their actions or consent. This approach contrasts with the EU's regime for GIs and trademarks [30].

In addition, bilateral and multilateral agreements are key arenas where conflicts arise over the risk of geographical terms, whether from GIs or trademarks, becoming generic, even though recent bilateral agreements have introduced changes to the criteria used for determining the genericness of such terms [31]. The EU, US, and China are prominent players in this ongoing dispute [32]. EU GIs are facing challenges from the US, and the US-China Agreement is one example of this ongoing conflict [30].

5. Conclusion

Geographical Indications (GIs) have significant implications within the field of industrial organization. One aspect to consider is the concentration of power and limited competition that can arise when a market is dominated by a small number of companies. They may bring inherent contradictions, such as normative weaknesses that may hinder producers' legal rights to utilize natural resources and the potential inclusion of recent and traditional activities under the same GI label, which can undermine its credibility. Additionally, GIs have the potential to create exclusionary territories and may favour specific groups in terms of technical and scientific investment.

Another key aspect to consider is the barriers to entry into the GI system. GIs can establish boundaries of community and identity within commerce and serve as tools for marketing and communication. However, the appropriation of a territory by specific groups can result in an economic protection barrier, excluding other producers from the same geographic location protected by the GI. This process may legitimize existing exclusionary practices rather than causing them. The presence of tradition and innovation justifies the use of intellectual property rights to fuel economic growth, and market-driven strategies are commonly employed to capitalize on these rights. However, there is a risk that market-driven motivations and poorly drafted specifications can lead to a shift in conformity to external standards and potentially redefine product characteristics, jeopardizing the cultural heritage of local producers.

The EU's strict GI protection approach is criticized for potentially hindering developing nations' economic growth, but the EU has still expanded GI protection through trade agreements. In contrast, the US has a more lenient approach, leading to confusion and concerns about expropriation. EU GIs are expected to encounter challenges in the context of US-China agreements.

As limitations to the work, it is noted that research on the negative spillovers of geographical indications is still in its early stages. Furthermore, additional studies are suggested, particularly case studies regarding from the perspective of the theory of industrial organization.

6. Acknowledgment

This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) - Finance Code 001 and by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq).

7. References

1. OLIVEIRA, Carlos Alberto Oliveira de. A dinâmica da estrutura da indústria da carne de frango no Brasil. Porto Alegre: Universidade Federal do Rio Grande do Sul, 2011.
2. MALUF, Luiz Augusto Finger França. A evolução das teorias de organização industrial e seus determinantes na configuração da estrutura da indústria e conduta das firmas. 2002. 109 f. - Universidade Federal de Santa Catarina, A evolução das teorias de organização industrial e seus determinantes na configuração da estrutura da indústria e conduta das firmas, 2002.
3. BRAMLEY, C; KIRSTEN, J. F. Exploring the economic rationale for protecting geographical indicators in agriculture. *Agrekon*, [s. l.], v. 46, n. 1, p. 47–71, 2007.
4. BITENCOURT, Thiago. Alternância entre concorrência e monopólio em Marx, Schumpeter e na escola austriaca. Florianópolis: Universidade Federal de Santa Catarina, 2008.
5. MEIRELLES, Franklin De Souza; GIRALDI, Janaina De Moura Engracia; CAMPOS, Rodolfo Paião De. Transaction costs economics and geographical indications : a systematic analysis of the literature. *Revista de Economia e Sociologia Rural*, [s. l.], v. 61, n. 4, p. e264494, 2023.
6. REIS, Livia Liberato de Matos. Indicação Geográfica no Brasil: determinantes, limites e possibilidades. 2015. 2017 f. - Universidade Federal da Bahia, Indicação Geográfica no Brasil: determinantes, limites e possibilidades, 2015. Disponível em: Indicação Geográfica no Brasil : determinantes, limites e possibilidades.
7. RAFTERY, David. Producing value from Australia's vineyards: An ethnographic approach to "the quality turn" in the Australian wine industry. *Journal of Political Ecology*, [s. l.], v. 24, n. 1, p. 342–367, 2017.
8. MELONI, Giulia; SWINNEN, Johan. Trade and terroir. The political economy of the world's first geographical indications. *Food Policy*, [s. l.], v. 81, p. 1–20, 2018.
9. HUGHES, Justin. Champagne, feta, and bourbon: The spirited debate about geographical indications. *Hastings Law Journal*, [s. l.], v. 58, n. 2, p. 299–386, 2006.
10. GANGJEE, Dev. The Appellation of Origin in France. Em: *RELOCATING THE LAW OF GEOGRAPHICAL INDICATIONS*. [S. l.: s. n.], 2012. p. 77–126.
11. COOMBE, Rosemary J.; AYLWIN, Nicole. Bordering diversity and desire: Using intellectual property to mark place-based products. *Environment and Planning A*, [s. l.], v. 43, n. 9, p. 2027–2042, 2011.
12. HORA, Givaldo Bezerra da. "Os Dois Lados da Mesma Moeda": inclusão e exclusão territorial de vitivinicultores no contexto da Indicação Geográfica Vales da Uva Goethe/SC. [S. l.: s. n.], 2019.
13. ILBERT, Hélène. Products with Denominations of Origin and Intellectual Property Rights — the International Bargaining Process. Em: *GEOGRAPHICAL INDICATIONS AND INTERNATIONAL AGRICULTURAL TRADE*. [S. l.: s. n.], 2012. p. 91–116.
14. LANDI, Chiara; STEFANI, Gianluca. Rent Seeking and Political Economy of Geographical Indication Foods: RENT SEEKING AND POLITICAL ECONOMY OF GEOGRAPHICAL INDICATION FOODS. *Agribusiness*, [s. l.], v. 31, n. 4, p. 543–563, 2015.
15. BHOOSHAN, N; DUTTA, R; SINGH, S. "Malihabadi Dashehari" mango geographical indication - A case study. Em: , 2015. *Acta Horticulturae*. [S. l.: s. n.], 2015. p. 219–226.
16. BRAUNER, A June. Landed value grabbing in the terroir of post-socialist specialty wine. *Globalizations*, [s. l.], v. 18, n. 3, p. 390–408, 2021.
17. AY, Jean Sauveur. The Informational Content of Geographical Indications. *American Journal of Agricultural Economics*, [s. l.], v. 103, n. 2, p. 523–542, 2021.
18. BOWEN, Sarah. Embedding local places in global spaces: Geographical indications as a territorial development strategy. *Rural Sociology*, [s. l.], v. 75, n. 2, p. 209–243, 2010.
19. BRAMLEY, Cerka; BIÉNABE, Estelle; KIRSTEN, Johann. The Economics of Geographical Indications: Towards a conceptual framework for geographical indication research in developing countries. Em: *THE ECONOMICS OF INTELLECTUAL PROPERTY*. [S. l.: s. n.], 2013.
20. ILBERT, Hélène; PETIT, Michel. Are geographical indications a valid property right?

- Global trends and challenges. *Development Policy Review*, [s. l.], v. 27, n. 5, p. 503–528, 2009.
- Intellectual Property and Competition Law, [s. l.], v. 52, n. 4, p. 444–467, 2021.
21. REISMAN, Emily. Protecting provenance, abandoning agriculture? Heritage products, industrial ideals and the uprooting of a Spanish turrón. *Journal of Rural Studies*, [s. l.], v. 89, p. 45–53, 2022.
 22. ALMEIDA, Alberto Ribeiro. Os interesses causantes do Regime Jurídico da Denominação de Origem. Douro. *Estudos & Documentos*, [s. l.], v. 4, n. 7, p. 61–81, 1999.
 23. MITCHELL, Jerry T.; TERRY, William C. Contesting pisco: Chile, Peru, and the politics of trade. *Geographical Review*, [s. l.], v. 101, n. 4, p. 518–535, 2011.
 24. MAHER, Michael. On Vino Veritas? Clarifying the use of geographic references on American wine labels. *California Law Review*, [s. l.], v. 89, n. 6, p. 1881–1882, 2001.
 25. ADDOR, Felix; GRAZIOLI, Alexandra. Geographical Indications beyond Wines and Spirits. *The Journal of World Intellectual Property*, [s. l.], v. 5, n. 6, p. 865–897, 2005.
 26. HASSAN, Daniel; MONIER-DILHAN, Sylvette; OROZCO, Valrie. Measuring consumers' attachment to geographical indications. *Journal of Agricultural and Food Industrial Organization*, [s. l.], v. 9, n. 1, 2011.
 27. BICEN, Pelin. Shelby D. Hunt's legacy, the R-A theory of competition, and its perspective on the geographical indications (GIs) debate. *Journal of Global Scholars of Marketing Science*, [s. l.], v. 31, n. 2, p. 213–233, 2021.
 28. HUYSMANS, Martijn. Exporting protection: EU trade agreements, geographical indications, and gastronomic nationalism. *Review of International Political Economy*, [s. l.], v. 29, n. 3, p. 979–1005, 2022.
 29. RAUSTIALA, Kal; MUNZER, Stephen R. The global struggle over geographic indications. *European Journal of International Law*, [s. l.], v. 18, n. 2, p. 337–365, 2007.
 30. ALMEIDA, Alberto Ribeiro. Geographical Indications Versus Trade Marks and Generic Terms: The US–China Agreement. *IIC International Review of Intellectual Property and Competition Law*, [s. l.], v. 51, n. 3, p. 277–281, 2020.
 31. BRUCH, Kelly Lissandra. Signos distintivos de origem: entre o velho e novo mundo vitivinícola. *Passo Fundo: Editora IMED*, 2013, p.320.
 32. ALMEIDA, Alberto Ribeiro; CARLS, Suelen. The Criteria to Qualify a Geographical Term as Generic: Are We Moving from a European to a US Perspective?. *IIC International Review of*