

Coffee Geographical Indications (GIs) in Brazil: an analysis through the perspective of meso-institutions

Indicações Geográficas (IGs) de café no Brasil: uma análise a partir da perspectiva das meso-instituições

Vitoria Cardoso¹ , Ana Elisa Bressan Smith Lourenzani² , Cristiane Hengler Corrêa Bernardo² 

¹Graduate Program on Sustainable Development Policy, Economics, and Governance (SDPEG), University of Vermont, Burlington (VT), United States. E-mail: vitoria.cardoso@uvm.edu

²Programa de Pós-graduação em Agronegócio e Desenvolvimento (PGAD), Universidade Estadual Paulista "Julio de Mesquita Filho" (Unesp), Tupã (SP), Brasil. E-mails: ana.lourenzani@unesp.br; cristiane.bernardo@unesp.br

How to cite: Cardoso, V., Lourenzani, A. E. B. S., & Bernardo, C. H. C. (2026). Coffee Geographical Indications (GIs) in Brazil: an analysis through the perspective of meso-institutions. *Revista de Economia e Sociologia Rural*, 64, e293197. <https://doi.org/10.1590/1806-9479.2026.293197>

Abstract: Geographical Indications (GIs) are recognized as a development strategy to help family farmers' access markets and increase product value. These farmers often face challenges such as limited capital, low production scales, and lack of information, which hinder their market access. GIs, through traditional knowledge and product origin recognition, can support farmers by promoting niche markets. However, the rules outlined in a GIs' Code of Practice (CoP) may be difficult for family farmers to meet. This paper analyses how GIs' meso-institutions translate, allocate, implement, monitor and incentivize compliance with their rules, as well as how this process affects the access of family farmers to GI. Interviews with farmers and supporting actors from Alta Mogiana and Região de Pinhal were conducted, and content analysis was used to interpret the findings. The concept of meso-institutions was employed to understand the relationship between farmers and the CoPs' implementation. Results reveal that, while the GI rules can be followed by family farmers, the CoPs in these regions face challenges across all meso-institutional dimensions. The findings suggest that more tailored GI policies are needed, ensuring a participatory approach in CoP development that accurately reflects regional characteristics and farmers' needs.

Keywords: rural development, family farmers, meso-institutions.

Resumo: As Indicações Geográficas (IGs) são uma estratégia de desenvolvimento que pode agregar valor aos produtos e ajudar agricultores familiares a acessar mercados. Esses agricultores enfrentam dificuldades como falta de acesso a informações e baixa escala de produção, o que limita seu acesso ao mercado. Nesse contexto, as IGs, ao reconhecerem o conhecimento tradicional e a origem dos produtos, podem ser fundamentais para o desenvolvimento dos agricultores, promovendo acesso a mercados de nicho. No entanto, as regras das IGs, descritas no Caderno de Especificações Técnicas (CET), podem ser difíceis de cumprir pelos agricultores familiares. Este estudo analisa como as meso-instituições das IGs (que incluem o CET e os agentes responsáveis por implantá-lo) traduzem, alocam, implementam, monitoram e incentivam regras e direitos, e como isso afeta o acesso dos pequenos agricultores familiares às IGs. Foram realizadas entrevistas com agricultores e apoiadores de duas regiões (Alta Mogiana e Região de Pinhal), e uma análise de conteúdo foi realizada para interpretar os dados. O conceito de meso-instituições foi usado para entender a relação entre os agricultores e a implementação dos CET. Os resultados mostram que, embora as regras das IGs possam ser seguidas pelos agricultores, os CET dessas regiões enfrentam problemas em várias dimensões meso-institucionais. Esses resultados indicam a necessidade de políticas de IG mais específicas e participativas.

Palavras-chave: desenvolvimento rural, agricultura familiar, meso-instituições.

1 Introduction

Around the world, supply chains are believed to favor buyers, while small farmers have been excluded or struggle to be part of the supply chain mainstream (Hanf, 2014; Hingley et al., 2006).



This problem has called the attention of policymakers who have been working on developing mechanisms to mitigate this issue. Among the strategies that have the potential to ameliorate this matter are Geographical Indications (GI). According to the Article 22 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), GIs are “[...] indications which identify a good as originating in the territory of a member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin” (World Trade Organization, 1994).

Some authors show that consumers can pay higher prices for a product with a GI label (Quiñones-Ruiz et al., 2017; Hoang et al., 2020; Ghosh, 2016; Quiñones-Ruiz et al., 2016; Mattas et al., 2019). By adding value to products, GI helps farmers to access niche markets, which allows them to hold a larger part of the value of their product. Thus, in many parts of the world, especially in Europe, GI are considered an important instrument for development. However, its benefits are not granted, since its effects can differ from one region to another. As pointed out by Török et al. (2020) in their review paper, GI’s outcomes can substantially vary depending on the region or product. In this sense, it is important to consider that while the importance of GI has long been consolidated in Europe, the potential outcomes of these labels are still uncertain for developing countries (Jena & Grote, 2012; López-Bayón et al., 2020).

In Brazil, one of the most important exporters of agricultural commodities, GI has been a potential strategy to facilitate smallholder family farmers’ access to markets. Smallholder family farmers were responsible for 23% of the country’s gross domestic product in 2017 (Instituto Brasileiro de Geografia e Estatística, 2017). In this paper, we adopt the concept of smallholder family farmers from Brazilian Law n. 11,326, which is used to classify these types of farmers in every government policy or institution. Therefore, this is the concept adopted by Brazilian institutions when addressing national GI (Brasil, 2006). This law defines family farming according to four main criteria: they do not hold an area larger than four fiscal modules (which vary according to the state); the predominantly form of labor used in their activities come from the family; most of their income comes from the agricultural activity and, finally, the farmer and their family are responsible for managing their farm (Brasil, 2006).

Due to their multi-dimensional nature, these smallholders are also key agents for sustainable development, as they promote food security and nutrition, as well as the preservation of natural resources and cultural heritage (Food and Agriculture Organization of the United Nations, 2019). Despite their importance, they face several difficulties that hinder their development. Even though family farms represent 77% of the 5 million Brazilian farms, they occupy only 80,9 million hectares, which represents 23% of Brazil’s agricultural land (Instituto Brasileiro de Geografia e Estatística, 2022). Moreover, these farmers deal with issues such as low access to land and energy, low incomes, and insufficient levels of education. Consequently, most of them have limited access both to technologies for their production process and to markets (Medina et al., 2015).

To overcome these problems, some mechanisms have been used to develop niche markets that value traditional products of smallholders despite their limitations. According to Niederle (2017), marketing channels fostered by GI can be viewed as an alternative to incorporating smallholders into the market. In Brazil, there are 142 GIs, of which 36% were registered in the last ten years (Instituto Nacional da Propriedade Industrial, 2024a, 2024b), which illustrates the support these labels have received from the Brazilian government.

Despite the benefits GI may bring to rural development, there are also problems related to the efficiency of its rules in representing the interests of diverse smallholders (Bowen, 2012; Galtier et al., 2013; Neilson et al., 2018, Matos & La Rovere, 2020). To be able to use the

GI label, farmers must follow a set of rules described in a document called Code of Practice (CoP). In Brazil, the CoPs establish the main characteristics of a product or service, in addition to explaining how it must be produced and the control mechanisms used to monitor the production and commercialization process. It also attributes to local actors the responsibilities of monitoring and implementing the rules. However, the literature shows that bringing together the different perspectives and productive capacities of local agents in this single document may be challenging (Locatelli and Carls, 2015), as well as developing governance systems that efficiently allow the implementation of those rules.

When the GI rules are not efficiently defined and implemented, they fail to protect and value the traditional quality of local products, what leads local traditional farmers to not have access to the highest value of their product, as extensively shown by the literature (Bowen, 2010, 2012; van der Merwe et al., 2019; Mancini, 2013; Tregear et al., 2007; Belletti et al., 2016; Galtier et al., 2013; Durand & Fournier, 2017; Belletti et al., 2017).

Since problems associated with CoP rules and their implementation may hinder the access of family farmers to GI benefits, which can compromise the potential of these labels to foster rural development, this paper analyses how GIs' meso-institutions translate, allocate, implement, monitor and incentivize compliance their rules, as well as how this process affects the access of family farmers to GI. To this end, it evaluates two GIs located in São Paulo, one of the most significant coffee-producing states in Brazil.

To achieve the proposed objective, this has as its theoretical background in the New Institutional Economics (NIE), with an especial focus on meso-institutions, an emerging concept in the literature introduced by Claude Menard (Menard et al., 2024; Ménard, 2014, 2017, 2018). These institutions, which operate at an intermediate level between macro- and micro-institutions and are responsible for monitor, implement, and translate rules and rights. In the case of GIs, meso-institutions are formed by the CoPs and the organizations and actors responsible for implementing them. The same general rule or policy can be implemented by different models of meso-institutions since they are context based (Ménard et al., 2022), what makes it important to understand how the GI policy in Brazil is operationalized in different contexts.

At the beginning of 20th century, most of the coffee production of São Paulo state was destined for exportation, which made the state responsible for supporting the Brazilian economy (Perissinotto, 1996). The Mogiana region where the two GIs under analyzed in this article are located was, at that time, the world's largest coffee exporter. During this period, coffee was produced not only in big farms but also by local smallholders, showing that coffee production was suitable for all kinds of farmers (Colistete, 2015).

This paper is structured as follows: besides this introduction, the second section introduces the conceptual framework used for this research; the third section presents the research methods; the fourth section describes the research results and discussions; and finally, the main conclusions of the study and implications for future research.

2 Theoretical Foundation

The NIE can be understood as an interdisciplinary approach that aims to comprehend how social, political, and commercial institutions are formed (Klein, 1999). The NIE has three levels of analysis: micro-institutional, meso-institutional, and macro-institutional (Azevedo, 2000; Vinholis et al., 2021). The macro-institutional level is formed by the institutional environment (Davis & North, 1971). The institutions that form the institutional environment are formal and informal restrictions created to establish order and reduce transaction uncertainties (North,

1991). The micro-institutional level, on the other hand, is related to governance structures and transaction costs (Azevedo, 1997).

Between the macro-institutional and micro-institutional levels, there is an intermediate one called meso-institutional level. Meso-institutions were firstly described by Ménard (2014), who reported a gap in the knowledge of the NIE regarding a missing intermediate level between the macro and micro-institutional ones. Meso-institutions are responsible for ‘implementing the general rules of the game through their translation into rules specific to sectors and/or geographic areas, thus framing and delineating the domain of activities of actors (individuals as well as organizational arrangements) operating within these rules’ (Ménard, 2014, p. 578).

Meso-institutions are formed by mechanisms and devices responsible for translating, adapting, allocating, monitoring and incentivizing rules and rights. Mechanisms can be understood as the procedures through which coordination and monitoring are processed, while devices are the organizational modalities through which mechanism operates (Ménard, 2018, p. 8). Table 1 shows the institutional levels of GI schemes according to the supranational, national and local geographical levels.

Table 1 – GI institutional environment

Geographical Level	Macro-institutions	Meso-institutions	Micro- institutions
Supranational	<ul style="list-style-type: none"> - Trade-Related Aspects of Intellectual Property Rights (TRIPS) - Paris Convention for the Protection of Industrial Property - Protocol on Harmonization of Intellectual Property in MERCOSUR - Other international agreements 	-	- Hybrid forms of arrangement that shape the behavior of economic actors interested in the GI. (E.g. CoP developed for each regions assigns the main responsibilities related to the implementation of each GI in the specific context)
National	- Law n. 9.279	- INPI's resolutions and normative instructions	
Local	-	- Regulatory Council - CoP	

Source: prepared by the authors.

As shown in Table 1, at the macro-institutional level are the international agreements and laws that set the general rules of how a GI must work. Law no. 9.279 of 1996 regulates the rights and duties related to industrial property in Brazil, besides general concepts associated with Brazil's GIs. The meso-institutional level includes the INPI resolutions and normative instructions, which establish how the process related to Brazil's GIs should be carried out, including how to register a GI and the documents required to do so. A Regulatory Council and the CoP are also at meso-institutional level. Considering the concepts of mechanisms and devices previously presented, it is possible to state that the CoP is a mechanism, while the Regulatory Council, which is responsible for implementing the CoP rules, is a device. At the micro-institutional level are the hybrid arrangements¹ of governance that shape the GI transactions, which consequently influence the economic behavior of agents, including family farmers.

¹ To better understand the concept of hybrid arrangements, see Williamson (1991) and Ménard (2004).

Figure 1 shows the conceptual framework of this research.

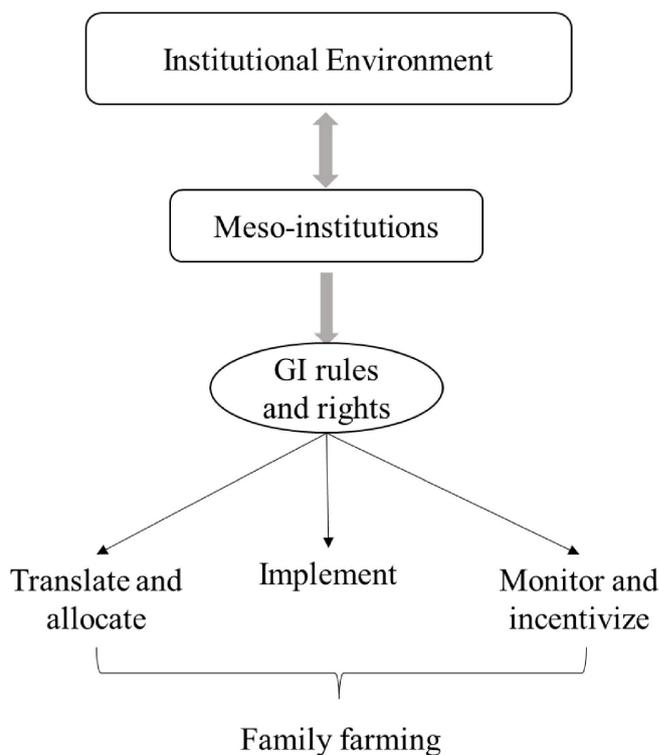


Figure 1 – Conceptual framework
Source: Prepared by the authors.

As observed in Figure 1, this research focuses on the meso-institutional level of GIs, more specifically on the CoP and its implementation.

3 Methodology

This research is a multiple case study with a qualitative approach. Before data collection, a bibliography review and documental analyses were carried out to understand the historical background of the two regions under analysis and their characteristics, as well as the concept of meso-institutions.

To gather the information required for this research, the CoPs of both regions were analyzed. To compare various perspectives on GIs, we interviewed family farmers and non-family farmers – those who do not meet the criteria of Law 11.326 – as well as actors and representatives of organizations considered meso-institutions of each GI. The main criteria for the selection of farmers were their geographical location, which should be part of the GI. For defining the sample size, we followed the recommended number of interviews suggested by the literature for qualitative and case studies. The recommended sample size to reach saturation in qualitative studies typically falls between 9 and 17 (Hennink & Kaiser, 2022). The sample size was expected to fall somewhere between these ranges for each case, and the final number was defined at the point when the interviews started to reach saturation.

For Alta Mogiana GI, 10 coffee farmers were interviewed, of which five are family farmers, six of them (three of them family farmers) have already used the GI label. The manager of

Alta Mogiana Specialty Coffee Association (AMSC), which is an association of coffee farmers responsible for Alta Mogiana GI, and an agent of the Brazilian Micro and Small Business Support Service (Sebrae) were also interviewed, since they are meso-institutions that help with the operationalization of the GI. For Região de Pinhal GI, 11 coffee farmers, a Sebrae agent, and a farmer who helped in the GI development and is a member of the Cooperative of Coffee Growers of Região de Pinhal (Coopinhal) and the Coffee Board of Mogiana de Pinhal (COCAMPI) were interviewed. The interviews occurred from July to late August of 2021. To preserve the farmers' identity, during the analysis they were identified as Farmer 1, Farmer 2, and so on.

Still, regarding the small sample size, it is important to remember that case studies do not aim at statistical generalizations, but theoretical ones, as explained by Yin (2018). The findings of a case study are used to, at a higher and conceptual level, promote corroboration, refinement, or modifications of theories or concepts. In this paper, the cases show the importance of considering meso-institutions when designing strategies for development such as GI.

Figure 2 shows where the two regions are located. The Alta Mogiana region is formed by 15 municipalities. This region has 1879 Arabica coffee farms, of which 53,96% are family farms. Região de Pinhal, on the other hand, is composed of eight municipalities and contains 830 Arabica coffee farms, from which 63% is formed by smallholder family farmers. It is worth noting that there are municipalities in Região de Pinhal that are not strong in coffee production, for instance, Estiva Gerbi, which has only one coffee farm (Instituto Brasileiro de Geografia e Estatística, 2022).



Figure 2 – Data collection area

Source: Prepared by the authors based on Instituto Brasileiro de Geografia e Estatística (2022).

The data collected for this research was processed by content analysis, as proposed by Bardin (2011). The information gathered from each source of information was categorized as follows (Table 2).

It is worth mentioning that these categories were created based on the literature review. The categories used to analyze the CoPs were elaborated according to the Normative Instruction no. 095/2018 of the National Institute of Industrial Property (INPI), which defines all the necessary elements of a CoP in Brazil. NVivo software was used to conduct the content analysis.

Table 2 – Categories used for content analysis

Meso-institution functions	Source Code of Practice	Source Interview with farmers	Source Interview with support organizations
Monitoring and incentives to rules and rights	Subcategories – Description of monitoring and control over production - - – Description of control mechanisms over farmers and their production processes - - -	Subcategories – GI benefits – GI difficulties – GI as a tool to ensure and foster quality - – Support for specialty coffee production – Knowledge about the Regulatory Council -	Subcategories – GI benefits – GI as a tool to foster development - – Difficulties in supporting GI – How to support a GI – Choice of quality evaluation and monitoring model – Members of the Regulatory Council
Translation and allocation of rules and rights	Subcategories – Geographical delimitation of GI - – Description of production process - - - - -	Subcategories – Level of knowledge about rules - – Appropriation of value - – How the rules represent family farmers' interests - – Required changes in the production process to meet the GI rules - – Costs of producing a GI product – Participation in rulemaking process	Subcategories – The capacity of farmers to follow GI rules – Exclusionary nature of the rules - – Rulemaking process – Representativeness of family farmers' interests at GI rules - – Flexibility of the rules on production standards - -
Implementation of rules and rights	Subcategories – Conditions and prohibitions on the use of a GI – Sanctions for GI misuse – Duties of the Regulatory Council	Subcategories – Efficiency of the protection offered by a GI - -	Subcategories – Efficiency of the protection offered by a GI - -

Source: Prepared by the authors.

4 Results and Discussion

4.1 Alta Mogiana

In the context of historical importance of coffee production and increasing demand for specialty coffee, in 2013 the Alta Mogiana GI was registered. It protects the reputation of *coffea arabica* produced in the geographical delimitation formed by 15 municipalities from the state

of São Paulo, namely, Altinópolis, Batatais, Buritzal, Cajuru, Cristais Paulista, Franca, Itirapuã, Jeriquara, Nuporanga, Patrocínio Paulista, Pedregulho, Restinga, Ribeirão Corrente, Santo Antônio da Alegria and São José da Bela Vista (Brasil, 2011). In 2019, 146.358 tons of Arabica coffee was produced in the region, which highlights the importance of this product for local economy (Instituto Brasileiro de Geografia e Estatística, 2021).

Some years after the GI registration, farmers realized that some of the rules established in the original CoP did not precisely represent the region. It is worth noting that the original set of rules was drawn by large coffee farmers, without the effective participation of local smallholders. In 2016, the Alta Mogiana GI began to use an informal set of rules called Normative Instruction no. 001/2016, which replaced the original CoP. In 2018, after the Normative Instruction no. 095/2018 was released and made it possible to change some aspects of the GI registration, including its CoP, the AMSC required a change in the CoP of Alta Mogiana. During the period of data collection of this research in 2021, the new CoP was still under evaluation and was only approved in May of 2023. While the new CoP is not approved, the region keeps using the Normative Instruction no. 001/2016, which equals the new CoP, to regulate the Alta Mogiana GI.

As shown in Table 3, a substantial change in the geographical delimitation of Alta Mogiana GI was made.

According to the AMSC and Sebrae, when farmers established the original geographical delimitation of the GI, they did not know that a GI could encompass municipalities of different states, which justifies why they limited the GI geographical boundaries only to some municipalities of São Paulo state. However, after some years the GI registration, they realized that some coffee farmers capable of producing coffee with the same characteristics as the ones from Alta Mogiana were being excluded from the GI. In other words, since these farmers were located in municipalities of Minas Gerais state, they were not able to access the GI. Therefore, they were excluded from the right to use the GI due to an imprecise geographical delimitation.

Another significant problem is the quality standard originally set. According to the AMSC, the farmers who elaborated the original set of rules did not know that only coffees scoring 80 points or above on the Specialty Coffee Association of America (SCAA) scale could be considered a specialty coffee. In addition, since this score is currently being demanded by the high quality coffee market, the minimum score requirement was changed from 75 to 80 points in the new set of rules. According to the AMSC and Sebrae, about 60% of the coffee farmers in the region, including small farmers, are able to achieve this score. All interviewed farmers were able to produce coffee scoring 80 points or higher, which suggests that the current quality standard is not excluding local farmers from the right to use the GI.

Since GI works as a collective sign, its rules must be built by a group of local agents so that they can discuss and evaluate together the strategies related to the sign (Instituto Nacional da Propriedade Industrial, 2021; Brasil, 2010). Only three of the 10 farmers interviewed, of which only one is a family farmer, participated in the GI rulemaking process. Regarding the knowledge about these rules, only four farmers reported knowing the CoP and having already used the GI label. The other two farmers who have already used the label said that they know the rules but only superficially. The other four farmers who have not used the GI stated that they do not know the CoP. In addition, even though six of the 10 farmers interviewed reported having already had used the GI label, only two of them know the Regulatory Council.

According to the AMSC, the new set of rules was built by a heterogenic group formed by two farmers and professionals working with coffee quality and coffee market. After establishing the new rules, the AMSC presented the new document to the farmers to know if they agreed with the rules or not, and only after that, the new CoP was submitted for evaluation by the INPI.

Table 3 – Main changes in Alta Mogiana GI rules

Meso-institution functions	Original CoP	Normative Instruction no. 001/2016
Translation and allocation of rules and rights	<ul style="list-style-type: none"> – 15 municipalities - – Arabica coffee and its varieties – Description of production processes 	<ul style="list-style-type: none"> – 23 municipalities – Arabica coffee - -
Monitoring and incentives to rules and rights	<ul style="list-style-type: none"> – The Regulatory Council audits an agreement with a body or institution capable of carrying out analyses of the organoleptic properties of products through harvest samples - - – Coffee must score at least 75 points on the SCAA scale – The Regulatory Council must collect coffee samples for analysis - – The AMSC is responsible for monitoring the compliance with the CoP rules – The Regulatory Council is responsible for controlling the production process and auditing documents related to coffee production 	<ul style="list-style-type: none"> – Roast level according to Agtron Disk no. 45 to 75 from Agtron/SCAA System – Coffee must score at least 80 points on the SCAA scale – A Q-Grader is responsible for evaluating the coffee quality - – The AMSC may require at any moment coffee samples to recheck their quality level - – The AMSC may visit the production process at any moment to verify compliance with the rules - -
Implementation of rules and rights	<ul style="list-style-type: none"> – Description of the Regulatory Council's functions - – Adoption of production practices that mitigate environmental impacts - – Compliance with current social, environmental, and labor legislations - – Infractions: noncompliance with rules, not following GI principles, and commercialization of products that do not follow GI rules – Sanctions: writing warning, fee, or permanent suspension of the right to use the GI 	<ul style="list-style-type: none"> – Both the farm and farmers must be registered at the AMSC's database – Information about production must be registered in a form <ul style="list-style-type: none"> – The farmer must sign a sustainable responsibility form – The AMSC will use its right to apply sanctions, according to the current Law, to those who misuse the GI label – If farmers do not provide a sample of their products or information about the coffee lot that will use the GI, there will be a notice on the webpage that shows coffee information about the nonconformity; the website will be taken down -

Source: Prepared by the authors.

The main GI rules were explained to those who claimed not to know the CoP. Afterward, the farmers were asked if the current GI rules represented the interests of local coffee family farmers, of which 90% responded positively. Many of them explained that since family farmers are not able to produce on a large scale, the production of high-quality coffee can be a profitable opportunity. Table 4 shows the farmers' perceptions of the potential of GI rules to benefit family farmers.

Table 4 - Farmers' perceptions of the potential of GI rules to benefit family farmers

Type of farming	Have already used the GI	Farmers' opinions
Family Farmers	Yes	GI gives a perspective of a more valued market. It is not a guarantee, but gives farmers a different perspective (FARMER 2).
	No	It is a good opportunity to add value to the product once the farmer is interested in doing so (FARMER 4).
	No	Small farmers cannot produce on a large scale; if they try to produce with high quality, they can access the markets. A little becomes a lot (FARMER 7).
	Yes	All the agents of the supply chain can benefit from the GI (FARMER 8).
	Yes	Small farmers can produce a better beverage than the big ones if they dedicate themselves (FARMER 10).
Non-family Farmers	Yes	Specialty coffee is a good opportunity for small farmers to compete with big farmers. The cost of being part of the farmer association is fair, the label is fair, the control process is fair (FARMER 1).
	Yes	There is a great chance of producing specialty coffee because the control is in the farmers' hands. The required investment is small. The investment is in knowledge (FARMER 5).
	No	Every farmer who has a certification is benefited; it does not matter if he/she is a big or small one. It is easier to identify the origin of products (FARMER 6).
	No	GI is the best strategy for small farmers. They can sell high-value coffee, and this can change their lives (FARMER 9).

Source: Prepared by the authors.

As shown in Table 4, the opinions of family and non-family farmers about the GI potential benefits for smallholders are quite similar. It is worth mentioning that only one farmer believes that GI is not a good strategy for family farmers, as shown below:

Family farmers have a different economic reality and a different way of thinking. They are not involved in quality issues. Cooperatives take advantage of this. The cooperatives also buy quality coffee as a commodity regardless of its quality. There is a lack of contact with other agents, and most small farmers are held hostage by large agents. The lack of technical assistance contributes to this. Small farmers are focused on producing; they have little contact

with agronomists and the municipality, and do not have time to understand it (the concept of coffee quality) (FARMER 3).

However, it is noteworthy that there are family farmers that do have access to the Alta Mogiana GI, such as those who participated in this research. Furthermore, the winner of the 17th Coffee Quality Contest of Alta Mogiana, which happened in 2020, is a family farmer. He works on his farm with the help of his father, and even with some limitations, his coffee scored 90 points on the SCAA scale. Therefore, the fact of being a farmer does not prevent them from having access to the GI. According to the AMSC, the current rules represent the interest of smallholders.

Table 5 shows the farmers' perceptions of the main potential benefits of a GI. It must be mentioned that of the 10 farmers interviewed, one said that he did not know the potential benefits of a GI, while another one claimed not finding any benefits during the period he was using the label. The points of view of the remaining eight farmers are presented in the table below.

Table 5 - Farmers' perception of the benefits of a GI

Type of farming	Have already used the GI	Farmers' opinions
Family farmers	Yes	The GI is vital for a characteristic region of coffee production. It shows that the coffee in the region was not produced somewhere else (FARMER 2).
	No	It adds value to the product and creates a stronger supply chain (FARMER 7).
	Yes	GI promotes our region and adds value to everyone. There are benefits for the entire region (FARMER 8).
	No	It helps with marketing and works as a quality certificate (FARMER 10).
Non-family farmers	Yes	GI generates credibility, the person knows that the coffee is coming from a specific farm. It is a way of ensuring that it has a single origin and we do not mix batches (FARMER 1).
	Yes	The greatest benefit is the financial compensation. The idea of a GI is to add value to the product (FARMER 3).
	No	It generates guarantees and greater scope in terms of commercialization. People look for certification, for a process that offers a guarantee. The sign guarantees this credibility, it proves where the product is from and guarantees its quality. It standardizes and guarantees a minimum quality standard (FARMER 6).
	No	GI presents the terroir to the market. Coffee becomes more competitive, and the GI creates value (FARMER 9).

Source: Prepared by the authors.

As shown in Table 5, there are no big differences among the opinions of different types of farmers about GI. To them, the potential benefits of a GI are closely linked to the idea of value aggregation and guarantee of origin. To 90% of the farmers interviewed, GI incentivizes the improvement of production quality. Curiously, both family and non-family farmers who have already used the GI label said that it does not lead to higher prices. According to them, what increases prices is the coffee score on the SCAA scale, thus making the GI unnecessary. Although the costs of using a GI are relatively low (the AMSC membership fee per hectare and the label cost per coffee bag are less than one dollar), those farmers who have already made use of a GI do not feel motivated to keep using the label since there is no demand for it.

In this sense, even though farmers organized themselves to access the GI, after obtaining it they realized that it was possible to access better coffee channels without the label. Therefore, GI can promote an improvement in the coffee production process and indirectly help farmers to access better market channels. In this regard, the AMSC and Sebrae explained that although GI does not lead to higher prices yet, this label is boosting the supply chain development, as it stimulates communication between agents. If before the GI the local actors were used to working without any collective planning process, now they work in a coordinated way due to GI.

Supporting organizations play a fundamental role in local development. The AMSC was mentioned by 70% of the farmers as the local institution that helps farmers during the specialty coffee production process. This association offers courses, shares information about specialty coffee production on social media and organizes coffee events to promote the GI. It is worth noting that even those farmers who have never had access to a GI mentioned the AMSC during the interviews, which shows that the actions of this organization can reach even those who are not completely familiar with GI benefits.

Table 6 shows the main difficulties encountered by farmers in accessing the GI.

Table 6 - Difficulties in accessing the GI label

Difficulties	% of farmers interviewed	% of family farmers	% of non-family farmers
Lack of knowledge and motivation	50%	20%	30%
Communication problems among actors	30%	20%	10%
The GI does not add value to coffee	40%	20%	20%
There are no difficulties	30%	-	30%

Source: Prepared by the authors.

According to Table 6, the main problem is the lack of information and motivation to access a GI. It is also possible to notice that there are no significant differences between the perceptions of family and non-family about the problems in accessing a GI. It is important to highlight that part of the farmers believe that there are no difficulties in accessing the food label. No farmer mentioned problems about compliance with rules. Furthermore, 90% of the farmers said that no changes or investments in their production are required to access the GI. According to them, they would only need to organize their production to be able to achieve the current quality standard required.

The information gathered also shows that the protection offered by the Alta Mogiana GI is not enough to avoid unfair competition. Six farmers (of which five have already used the GI label) believe that the current GI control mechanisms do not guarantee compliance with the rules, which gives room for opportunistic behaviors. According to the AMSC, it is difficult to

know if someone is using the GI sign without permission. Additionally, it is also too expensive to sue someone who is misusing the label. Cases of GI label misuse were reported by the AMSC and by some of the farmers.

4.2 Região de Pinhal

Although Região de Pinhal GI was registered in the same context of historical coffee production and increasing demand for specialty coffee as Alta Mogiana GI, it has a different history. This GI was registered in 2016, and since then it has never been used by local farmers until the moment of the interviews. Besides, many of the farmers and supporting agents interviewed referred to the local GI as 'something new' yet to be established. A few farmers participated in the GI rulemaking, and even though eight municipalities are part of this geographical delimitation, only a few farmers from Espírito Santo do Pinhal participated in the GI registration and rulemaking processes. Moreover, the rulemaking process was marked by difficulties in reaching a consensus about some of the CoP rules.

Of the 11 farmers interviewed, only three (of which two are family farmers) reported knowing the rules and the Regulatory Council. These three farmers participated in the rulemaking process and two of them are now helping in the reformulation process of the current CoP, since they realized that some of these rules do not represent the region. To those farmers who did not know the GI rules, it was explained in a simple way which requirements needed to be met in order to access the GI. Subsequently, the farmers were asked if they believed that the current rules could favor family farmers' interests.

Six of the 11 farmers interviewed believe that the current GI rules can favor smallholders' interests. Farmer 4 said that 'The small ones (family farmers) are not able to produce in a large scale, so (GI) is a way to add value to their coffee', while according to Farmer 8, 'It is not hard for them (family farmers) to meet the current quality requirements'. Farmer 10, on the other hand, explained that making changes to the farm to meet GI requirements is difficult and expensive, whereas another farmer said that the current quality pattern does not add value to the product.

In contrast, Coopinhal argued that family farmers participated in the rulemaking process and that the CoP does represent their interests. The other support agents interviewed stated that the region has a considerable number of family farmers that can be positively impacted by a GI. According to the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística, 2021*), there are 830 Arabica coffee farms in the eight municipalities, of which 63% are considered family farms.

As determined by the CoP of Região de Pinhal GI, only coffee that scores 75 on the SCAA scale or above can use the GI label. When the CoP was designed, there were different opinions regarding the minimum score. Some argued that 80 points should be the minimum score required, as this is the value demanded by the market, as cited before. However, with the intention to achieve as many farmers as possible, the final CoP set 75 points as the minimum score to access the GI. Nevertheless, according to the interviews, the current score does not represent the coffee produced in the region.

With the exception of one non-family farmer who has not evaluated his coffee yet, all farmers interviewed have already produced coffee that scored 80 points or more. According to the Q-Grader, who evaluates the coffee of local farmers, such individuals produce coffees that vary from 78 to 84 points. Coopinhal stated that at least 100 local farmers can produce specialty quality. This shows that the current quality requirement is not excluding local farmers, which includes family farmers. Currently, Coopinhal is analyzing the possibility of increasing

the minimum score requirement to 80 points. The following paragraphs present part of two interviews with family farmers who participated in the rulemaking process. According to them, the current GI requirements do not add value to coffee.

I believe that regarding price, quality adds more than the indication itself. It's no use having a geographical indication if you don't have a quality product. Today the market demands, you know, that you have some kind of certification, some kind of traceability. So, let's put it this way, whoever doesn't have something like that will end up being kind of excluded from the market, right? Yeah... but I believe that the issue of quality adds more value than the indication itself. You must have both to offer a more presentable product to your customer (FARMER 7).

If the minimum quality requirement doesn't increase, it won't be an incentive to improve quality. The requirement must be raised to 80 points. A small part of local farmers is not able to reach 80 points, but it is difficult to access information, they have difficulties in evaluating their coffee quality. Medium and large farmers have more access to assistance (FARMER 11).

The geographical delimitation set by the CoP is also imprecise. Both the Sebrae agent who works in the region and the Coopinhal agent explained that the geographical delimitation does not consider the local *terroir*, but the region's hydrographic basin. According to Sebrae, that is why municipalities such as Estiva Gerbi and Mogi Guaçu, which almost do not have coffee production, are considered part of the GI. Problems related to the implementation of the CoP rules were also identified. In the CoP, there is no description of sanctions and actions that must be taken in case of misuse of the GI label. According to Coopinhal, they are still determining how to ensure compliance with the CoP rules.

Regarding the monitoring process, Coopinhal stated that, when the GI starts to work, the farmer cooperative will offer them a limited number of coffee bags with the GI label, according to the amount of specialty coffee produced. Therefore, only those coffees which have their quality assessed will receive a GI bag. In this context, it is worth mentioning that for 66.11% of the farmers interviewed, of which 27.27% are family farmers, the GI rules are not enough to protect local farmers against unfair competition strategies like counterfeiting.

Despite these problems with the GI rules, local farmers have some expectations regarding the GI. Eight of the 11 farmers interviewed were able to describe these expectations (see Table 7).

Table 7 – Farmers' expectations about GI benefits

Type of farming	Farmers' opinion
Family farmer	<p>The ultimate (GI) goal is to add value through quality, it's to bring farmers together to make sales. So, the indication makes the recognition of quality, it is to make the farmer able to sell via cooperative, via commercialization through the value added to his/her product (FARMER 7).</p> <p>Farmers will produce carefully according to the rules. Buyers look for origin, and (GI) adds value to the product (FARMER 8).</p> <p>GI helps to reach consumers and makes it possible to buy coffee with an assurance of its origin because the coffee is audited and controlled (FARMER 11).</p>
Non-family farmer	<p>Pinhal Region is good in specialty coffee production, so a GI helps in the commercialization (FARMER 2).</p> <p>It adds value to the coffee and the region (FARMER 3).</p> <p>I imagine that the GI benefit is to generate valorization. It adds value to the product, which leads to a financial benefit (FARMER 4).</p> <p>It gives farmers an advantage, since it shows the origin of their product. It adds value to the product (FARMER 5).</p> <p>It adds value and organizes farmers (FARMER 9).</p>

Source: Prepared by the authors.

According to the farmers' perceptions (Table 7), the main benefit a GI can offer is to add value to a product. However, despite the expectations of adding value to local coffee production, it is worth remembering that these farmers have not yet used the GI label and are not able to know the real potential of the Região de Pinhal GI to add value and lead to higher prices, which can compromise the accuracy of their expectations.

For Coopinhal, GI is also capable of promoting local development, as it presents local coffee to the world, making the region's quality internationally recognized. In addition, from the cooperative's perspective, farmers also benefit from a correct environmental management as well as a better crop management, as they will receive support to improve their production, conduct soil analysis, and use fertilizers.

The Q-Grader stated that 'Usually there is no immediate financial return, but it adds to the process. GI has tools that require the production, economic and process organization'. For Sebrae, the two main benefits that a GI can offer to farmers are the addition of value to their product by meeting minimum quality standards and guaranteeing the coffee origin. However, still according to Sebrae, the current GI configuration does not contribute to local development, as there is no integration and coordination between local agents.

Farmers were also asked about the main difficulties they expect to face while trying to access a GI. Table 8 shows the main problems mentioned.

Table 8 – Farmer's frequency of expected difficulties in accessing a GI

Difficulties	% of farmers interviewed	% of family farmers	% of non-family farmers
Production costs	30	10	20
Lack of motivation to require a GI	10	10	-
Bureaucracy	10	-	10
Lack of technical assistance	30	20	10
There are no difficulties	30	10	20

Source: Prepared by the authors.

As seen in Table 8, the lack of technical assistance was the main problem mentioned by family farmers. According to the farmers interviewed, they do not receive any support to produce better-quality coffee. Sebrae, on the other hand, stated that it is difficult to offer support to farmers because they are not organized, which makes it is hard to prepare courses and other actions that can help them improve their production.

4.3 How meso-institutions affect the participation in the GI

After describing the two GIs, it was possible to identify similar problems in both regions. It was also possible to notice that the two CoPs present problems in every dimension of meso-institutions. As already mentioned, a CoP is responsible for guiding a GI. Therefore, it is necessary that its rules reflect the region and its characteristics in a proper way (Instituto Nacional da Propriedade Industrial, 2021). Many authors explain that when the rules of a CoP do not protect the traditional knowledge and the product quality of a territory, it is possible that the local farmers do not have access to the value that a GI would have the potential to offer (van der Merwe et al., 2019; Bowen, 2010; Mancini, 2013; Tregear et al., 2007; Belletti et al., 2016; Galtier et al., 2013; Durand & Fournier, 2017; Bowen, 2012; Belletti et al., 2017). Table 9 shows a summary of the main findings of this research.

There are similar problems related to the monitoring and incentives dimension. The two CoPs established coffee quality requirements that do not represent coffee production in the region, and a few farmers know about the existence of the Regulatory Council, a device from the perspective of meso-institutions. For Ménard (2017), the devices are responsible for implementing and controlling the proper use of the rights that the rules were designed to protect. The lack of knowledge about the Regulatory Council and GI rules suggests a distance between the device and those who hold the right to use the GI. These problems directly impact another challenge that is part of the implementation dimension: the lack of efficiency regarding the protection offered by the GI. As it can be seen in Table 9, farmers of both regions consider the protection offered by the GI ineffective against unfair competition.

Regarding the translation and allocation of rules and rights, the two CoPs failed to determine the geographical delimitation of the GIs. The original geographical delimitation of Alta Mogiana excludes farmers who meet the requirements of the GI, while the geographical delimitation of Região de Pinhal includes municipalities that are not strong in coffee production. In this sense, the allocation of rights based on the geographic delimitation did not precisely consider the characteristics that built the reputations of both regions. The quality requirement established by the original rules seem to be unsuitable for both regions. Due to these problems, the AMSC developed a new CoP, and Região de Pinhal has been discussing changes in its rules.

The new rules aim to correct the original CoPs so that they can more accurately allocate the rights to use the GI. These changes corroborate the idea of Ménard et al. (2020), who explain that, based on the feedback provided by agents at the micro-institutional level, meso-institutions undergo adjustments. To offer efficient guidelines, these institutions need to be recognized by the actors who are under their guidance. These actors have different mental maps, in addition to different abilities to monitor elements of the institutional arrangements around them, evidencing that meso-institutions should be flexible enough to go through changes when necessary (Ménard et al., 2020).

Finally, problems related to rule implementation were also identified. As pointed out by Vinholis et al. (2021), macro-institutions fail to achieve their purpose when their implementation, which occurs at the meso-institutional level, also fails. Problems with the implementation of meso-institutions were already reported by other studies, such as those conducted by Ménard et al. (2018, 2020).

Figure 3 summarizes the main findings of this study and its implication for the meso-institutions theory. As illustrated in Figure 3, the meso-institutions are formed by mechanisms and devices that represent, in the case of this study, the CoPs and the Regulatory Council, respectively. These mechanisms and devices are interconnected, since the Regulatory Council is responsible for implementing CoP rules and ensuring that farmers will follow them.

As already discussed, the two cases analyzed reveal problems in all meso-institution dimensions. These dimensions influence how GI works and the farmers' access to this label. Although the focus of this research was on the CoP, a certain distance between the Regulatory Council and the farmers was observed, besides some difficulties in implementing the rules. In this sense, this article demonstrates that the existence of devices that guarantee the compliance with rules is as important as their definition.

CoP rules are expected to shape the agents' behavior. However, the results show that in both regions the original rules are not followed and, during the data collection (2021) were being reformulated. To understand how agents interact with meso-institutions, it is also important to consider other elements that influence not only how rules are perceived by agents, but also how they are formulated and reformulated.

Table 9 – Summary of the main information gathered about the CoPs

Meso-institution dimension	Alta Mogiana	Região de Pinhal
Monitoring and incentives	<ul style="list-style-type: none"> – The original quality standard established was not representing the coffee of the region, which led to the reformulation of the minimum SCAA score required for accessing the GI – – CoP rules are only known by those who have already used the GI – Despite being recognized as an incentive to improve quality, farmers who have already used the GI explained that this label does not lead to higher coffee prices – Farmers lack knowledge and motivation to access the GI – The AMSC is responsible for sharing most of the GI information with farmers – – In addition to the AMSC assistance for the production of specialty coffees, entities such as CATI and Sebrae are also active in the region 	<ul style="list-style-type: none"> – The original quality standard established is representing the coffee of the region – CoP rules are only known by those who helped draw them – – Although farmers believe that a GI can encourage improvements in production quality and add value, they do not believe that the current quality pattern will lead to better prices – – – Lack of support and access to information about the GI –
Translation and allocation	<ul style="list-style-type: none"> – Original geographic delimitation excluded farmers capable of using the GI, which led to an expansion of the geographic area – Rules are not difficult to be met by family farmers – 	<ul style="list-style-type: none"> – Geographical delimitation does not consider characteristics of coffee production in the region, which makes the current geographical delimitation too broad – – Current rules can be easily followed by family farmers
Implementation	<ul style="list-style-type: none"> – Few farmers know the Regulatory Council – The process of guaranteeing compliance is difficult and too costly – – The protection offered by a GI is seen by farmers as insufficient – 	<ul style="list-style-type: none"> – A few farmers know the Regulatory Council – – Strategies for monitoring the GI not defined and still under development and implementation – – The protection offered by a GI is seen by farmers as insufficient

Source: Prepared by the authors.

Among these elements is the agents' access to information about the external environment, such as market trends, alternative strategies and certifications, and consumer demands. For instance, farmers explained that there is no domestic and international demand for Alta Mogiana GI and that buyers prioritize other elements such as coffee score. For this reason, farmers feel unmotivated to use the GI label.

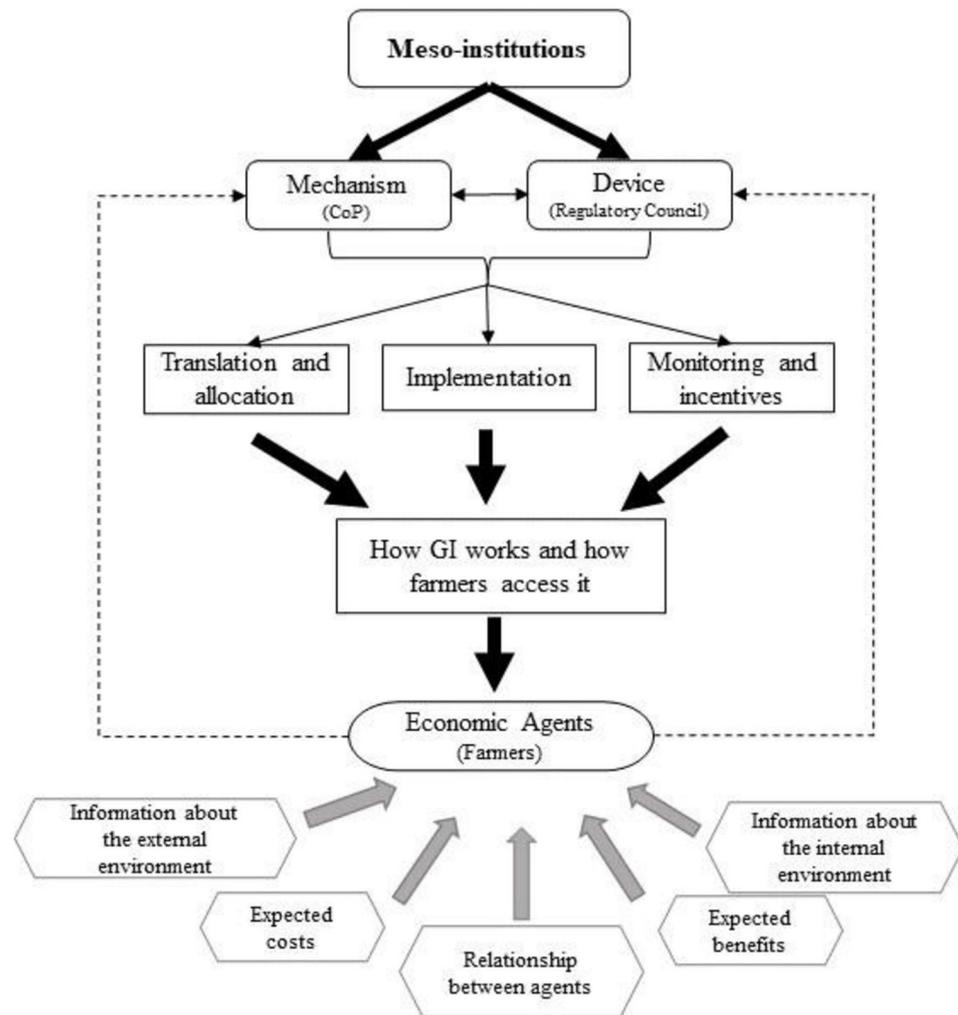


Figure 3 – Relationship between GI meso-institutions and farmers
Source: Prepared by the authors.

Information about the internal environment also influences farmers’ opinions about the rules. For example, their knowledge about the region and the quality of their coffee, as well as the GI and how it works, can make farmers see these rules as adequate or not. The expected costs and benefits also shape farmers’ behavior. There is a general expectation that differentiated products can help farmers access high-value market channels, which is mentioned by several authors, for example, Boaventura et al. (2018), Ghosh (2016), and Giesbrecht & Minas (2019). However, in the case of Alta Mogiana, although farmers have reported that it is not expensive to meet the established requirements for accessing the GI, those who have already used the GI explained that there is no demand for the label. Therefore, even though the costs of using a GI are low, farmers see no reason to use the label due to the low demand.

Another important factor is the relationship between farmers and other agents, such as Sebrae, Integral Technical Assistance Coordination (CATI), and other economic agents interested in the GI. When local agents have a collaborative behavior, chances are that the GI rules will be recognized by local actors. In the case of Região de Pinhal, as only a few agents participated in the rulemaking process, there are only a few agents in the region that know about the GI. The

relationship between agents is linked to the concept of governance, which is in turn related to the ability to coordinate complex supply chains (Zylbersztajn, 2014, p. 270).

Furthermore, farmers must receive technical assistance and information about the GI and specialty coffee production, which can be provided by support institutions. As explained by Pereira et al. (2018), technical assistance is essential for farmers to access a GI. In their article about the Norte Pioneiro do Paraná GI in Brazil, the authors explained that technical assistance along with support for production management is an element that influences coffee quality.

All of these elements have an impact not only on how farmers see these meso-institutions but also on the process of formulating and reformulating these rules. As pointed out by Williamson (1985), economic agents have limited rationality, which directly impacts their transactions. Therefore, since neither farmers nor other economic agents have access to all the information about the environment of which they are part, they are constantly learning more about their context. Furthermore, the territories are also dynamic. According to the AMSC, there are constant changes on factors like climate and production practices, which alters the products characteristics over time. Given the changes in the territories and the level of knowledge of local agents, GI rules must be flexible enough to be adapted to new contexts.

4 Conclusions

In conclusion, although the GI rules can be easily followed by family farmers, other factors can affect farmers' perception and willingness to follow these rules. This paper also offer insights into research gaps that should be covered in future studies. First, it is necessary to identify how GI rules change over time, since this research shows that modifications in CoP may be necessary. Second, understanding the translation process of *terroir* into specific rules is an important issue, as it directly impacts how the GI will work in the future. Finally, the role of governance and the support of other institutions seem to be fundamental for the maintenance of GIs over time, and this is certainly something that deserves to be further studied. In the case of Região de Pinhal, it was observed that farmers struggle to sustain the GI over time and need help from other institutions.

Authors' contributions

VC: Concept/idea, methodology, data analysis, writing. AEBSL: Fundraising, guidance, review. CHCB: guidance and review.

Financial support:

FAPESP

Conflicts of interest:

Nothing to declare

Ethics approval

Not applicable.

Data availability:

Research data is not available.

Acknowledgements

We would like to thank FAPESP for sponsoring this research, and the farmers and GIs' supporters of Alta Mogiana and Região de Pinhal for contributing to this research.

* Corresponding author:

Vitoria Aparecida Cardoso. vitoria.cardoso@uvm.edu

References

- Azevedo, P. F. (1997). Níveis analíticos. In E. M. M. Q. Farina, P. F. Azevedo & M. S. M. Saes (Eds.), *Competitividade: mercado, estado e organizações* (pp. 53-70). São Paulo: Singular.
- Azevedo, P. F. (2000). Nova economia institucional: referencial geral e aplicações para a agricultura. *Agricultura em São Paulo*, 47(1), 33-52.
- Bardin, L. (2011). *Análise de conteúdo*. São Paulo: Edições 70.
- Belletti, G., Chabrol, D., & Spinsanti, G. (2016). Échapper au piège "qualité-exclusion" dans les indications géographiques: réflexions sur le cas du poivre de Penja. *Agricultures*, 25(5), 1-9. <https://doi.org/10.1051/cagri/2016034>
- Belletti, G., Marescotti, A., & Touzard, J. (2017). Geographical indications, public goods, and sustainable development: the roles of actors' strategies and public policies. *World Development*, 98, 45-57. <https://doi.org/10.1016/j.worlddev.2015.05.004>
- Boaventura, P. S. M., Abdalla, C. C., Araújo, C. L., & Arakelian, J. S. (2018). Cocriação de valor na cadeia do café especial: o movimento da terceira onda do café. *Revista de Administração de Empresas*, 58(3), 254-266. <https://doi.org/10.1590/s0034-759020180306>
- Bowen, S. (2010). Development from within? The potential for geographical indications in the Global South. *The Journal of World Intellectual Property*, 13(1), 231-252. <https://doi.org/10.1111/j.1747-1796.2009.00361.x>
- Bowen, S. (2012). Geographical indications, globalization and development land: the case of Tequila. *Agroalimentaria*, 18(34), 91-103. Retrieved in 2022, July 12, from <http://www.saber.ula.ve/handle/123456789/35382>
- Brasil. (2006). Lei nº 11.326, de 24 de julho de 2006. Institui as diretrizes da Política Nacional da Agricultura Familiar e Empreendimentos Familiares Rurais. *Diário Oficial [da] República Federativa do Brasil*, Brasília, DF.
- Brasil. Ministério da Agricultura, Pecuária e Abastecimento – MAPA. (2010). *Curso de propriedade intelectual & inovação no agronegócio: módulo II, indicação geográfica*. 2. ed. Brasília: SEaD/UFSC/FAPEU.
- Brasil. Associação dos Produtores de Cafés Especiais da Alta Mogiana. (2011). *Regulamento da Indicação de Procedência Alta Mogiana*. Retrieved in 2020, April 17, from <https://www.gov.br/inpi/pt-br/assuntos/indicacoes-geograficas/arquivos/regulamento-de-uso/AltaMogiana.pdf>
- Colistete, R. P. (2015). Regiões e especialização na agricultura cafeeira: São Paulo no início do século XX. *Revista Brasileira de Economia*, 69(3), 331-354. <https://doi.org/10.5935/0034-7140.20150015>

- Davis, L. E., & North, D. C. (1971). *Institutional change and American economic growth*. New York: Cambridge University Press.. <https://doi.org/10.1017/CBO9780511561078>.
- Durand, C., & Fournier, S. (2017). Can geographical indications modernize Indonesian and Vietnamese agriculture? analyzing the role of national and local governments and producers' strategies. *World Development*, *98*, 93-104. <https://doi.org/10.1016/j.worlddev.2015.11.022>
- Food and Agriculture Organization of the United Nations – FAO. (2019). *Putting family farmers at the centre to achieve the SDGs*. Rome. Retrieved in 2022, July 13, from <https://www.fao.org/publications/card/en/c/CA4532EN/>
- Galtier, F., Belletti, G., & Marescotti, A. (2013). Factors constraining building effective and fair geographical indications for coffee: insights from a Dominican case study. *Development Policy Review*, *31*(5), 597-615. <https://doi.org/10.1111/dpr.12027>
- Ghosh, P. (2016). Geographical indications: a corner stone in poverty alleviation and empowerment in the Indian Himalayan region. *National Academy Science Letters*, *39*(4), 307-330. <https://doi.org/10.1007/s40009-016-0464-y>
- Giesbrecht, H. O., & Minas, R. B. A. (2019). Os pequenos negócios e as indicações geográficas brasileiras registradas: transformações percebidas e aprendizados. In A. C. P. Vieira, A. E. B. S. Lourenzani, K. L. Bruch, L. Locatelli & L. C. M. Gaspar (Eds.), *Indicações geográficas, signos coletivos e desenvolvimento local/regional* (pp. 119-137). Erechim: Deviant.
- Hanf, J. H. (2014). *Processor driven integration of small-scale farmers into value chains in Eastern Europe and Central Asia*. Rome: FAO.
- Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: a systematic review of empirical tests. *Social Science & Medicine*, *292*, 114523. <https://doi.org/10.1016/j.socscimed.2021.114523>
- Hingley, M. K., Lindgreen, A., & Casswell, B. (2006). Supplier-retailer relationships in the UK fresh produce supply chain. *Journal of International Food & Agribusiness Marketing*, *12*(1-2), 49-86. https://doi.org/10.1300/J047v18n01_04
- Hoang, G., Le, H. T. T., Nguyen, A. H., & Dao, Q. M. T. (2020). The impact of geographical indications on sustainable rural development: a case study of the Vietnamese Cao Phong orange. *Sustainability (Basel)*, *12*(11), 1-13. <https://doi.org/10.3390/su12114711>
- Instituto Brasileiro de Geografia e Estatística – IBGE. (2017). *Agricultura familiar: resultados definitivos*. Retrieved in 2021, November 12, from https://censoagro2017.ibge.gov.br/templates/censo_agro/resultadosagro/pdf/agricultura_familiar.pdf
- Instituto Brasileiro de Geografia e Estatística – IBGE. (2021). *Tabela 6956: produção, valor da produção, venda, valor da venda, colheita, área plantada e efetivos das plantações da lavoura permanente nos estabelecimentos agropecuários, por tipologia, produtos da lavoura permanente e grupos de área total*. Retrieved in 2021, November 12, from <https://sidra.ibge.gov.br/tabela/6956>
- Instituto Brasileiro de Geografia e Estatística – IBGE. (2022). *Produção Agropecuária Municipal. Tabela 5457: área plantada ou destinada à colheita, área colhida, quantidade produzida, rendimento médio e valor da produção das lavouras temporárias e permanentes*. Retrieved in 2022, January 1, from <https://sidra.ibge.gov.br/tabela/5457>
- Instituto Nacional da Propriedade Industrial – INPI. (2021). *Manual de indicações geográficas*. Brasília. Retrieved in 2022, July 13, from <http://manualdeig.inpi.gov.br/projects/manual-de-indicacoes-geograficas/wiki>

- Instituto Nacional da Propriedade Industrial – INPI. (2024a). *Indicações geográficas: indicações de procedência reconhecidas*. Brasília. Retrieved in 2024, December 3, from <https://www.gov.br/inpi/pt-br/servicos/indicacoes-geograficas/arquivos/status-pedidos/LISTACOMASINDICAESDEPROCEDNCIARECONHECIDAS.At26Nov2024.pdf>
- Instituto Nacional da Propriedade Industrial – INPI. (2024b). *Indicações geográficas: denominações de origem reconhecidas*. Brasília. Retrieved in 2024, December 3, from <https://www.gov.br/inpi/pt-br/servicos/indicacoes-geograficas/arquivos/status-pedidos/LISTACOMASDENOMINAESDEORIGEMRECONHECIDAS.At15Out2024.pdf>
- Jena, P. R., & Grote, U. (2012). Impact evaluation of traditional basmati rice cultivation in Uttarakhand state of Northern India: what implications does it hold for geographical indications? *World Development*, *40*(9), 1895-1907. <https://doi.org/10.1016/j.worlddev.2012.04.004>
- Klein, P. G. (1999). Institutional economics. *Handbook on the History of Economic Analysis*, *3*, 316-328.
- Locatelli, L., & Carls, S. (2015). Indicações geográficas: o regulamento de uso e as indicações de procedência. *Revista Direito e Justiça: Reflexões Sociojurídicas*, *14*(23), 243-256.
- López-Bayón, S., Fernández-Barcala, M., & González-Díaz, M. (2020). In search of agri-food quality for wine: Is it enough to join a geographical indication? *Agribusiness*, *36*(4), 568-590. <https://doi.org/10.1002/agr.21665>
- Mancini, M. C. (2013). Geographical Indications in Latin America Value Chains: a “branding from below” strategy or a mechanism excluding the poorest? *Journal of Rural Studies*, *32*, 295-306. <https://doi.org/10.1016/j.jrurstud.2013.07.008>
- Matos, L. A. I., & La Rovere, R. L. (2020). Tipos de conhecimento regional protegidos pelas instituições na indicação de procedência Canastra (MG). *Revista de Economia e Sociologia Rural*, *58*(2), e188623. <https://doi.org/10.1590/1806-9479.2020.188623>
- Mattas, K., Baourakis, G., Tsakiridou, E., Hedoui, M. A., & Hosni, H. (2019). PDO Olive Oil Products: a powerful tool for farmers and rural areas. *Journal of International Food & Agribusiness Marketing*, *32*(4), 313-336. <https://doi.org/10.1080/08974438.2019.1599763>
- Medina, G., Almeida, C., Novaes, E., Godar, J., & Pokorny, B. (2015). Development conditions for family farming: lessons from Brazil. *World Development*, *74*, 386-396. <https://doi.org/10.1016/j.worlddev.2015.05.023>
- Ménard, C. (2004). 'The economics of hybrid organizations'. *Journal of Institutional and Theoretical Economics*, *3*(160), 345-376. <https://doi.org/10.1628/0932456041960605>
- Ménard, C. (2014). Embedding organizational arrangements: Towards a general model. *Journal of Institutional Economics*, *10*(4), 567-589. <https://doi.org/10.1017/S1744137414000228>
- Ménard, C. (2017). Meso-institutions: the variety of regulatory arrangements in the water sector. *Utilities Policy*, *49*, 6-19. <https://doi.org/10.1016/j.jup.2017.05.001>
- Ménard, C. (2018). 'Research frontiers of new institutional economics. *RAUSP Management Journal*, *53*(1), 3-10. <https://doi.org/10.1016/j.rauspm.2017.12.002>
- Ménard, C., Jimenez, A., & Tropp, H. (2018). Addressing the policy-implementation gaps in water services: the key role of meso-institutions. *Water International*, *43*(1), 13-33. <https://doi.org/10.1080/02508060.2017.1405696>
- Ménard, C., Kurdin, A., & Shastitko, A. (2020). Out by the door, in through the window: politics and natural gas regulation in Russia. *Utilities Policy*, *64*, 101051. <https://doi.org/10.1016/j.jup.2020.101051>

- Ménard, C., Martino, G., de Oliveira, G. M., Royer, A., Saes, M. S. M., & Schnaider, P. S. B. (2022). Governing food safety through meso-institutions: A cross-country analysis of the dairy sector. *Applied Economic Perspectives and Policy*, 44(4), 1722-1741. <https://doi.org/10.1002/aapp.13278>
- Menard, C., Martino, G., Oliveira, G. M., Royer, A., Schnaider, P. S. B., & Saes, M. S. M. (2024). How is food safety regulation implemented? The key role of meso-institutions assessed through a cross-country comparison. *Food Security*, 16(4), 1045-1058. <https://doi.org/10.1007/s12571-024-01461-0>
- Neilson, J., Wright, J., & Aklimawati, L. (2018). Geographical indications and value capture in the Indonesia coffee sector. *Journal of Rural Studies*, 59, 35-48. <https://doi.org/10.1016/j.jrurstud.2018.01.003>
- Niederle, P. A. (2017). 'Afinal, que inclusão produtiva? A construção dos novos mercados de alimentos. In G. C. Delgado & S. M. P. P. Bergamasco (Eds.), *Agricultura familiar brasileira: desafios e perspectivas de futuro* (pp. 166-194). Brasília: Ministério do Desenvolvimento Agrário.
- North, D. C. (1991). Institutions. *The Journal of Economic Perspectives*, 5(1), 97-112. <https://doi.org/10.1257/jep.5.1.97>
- Pereira, M. E. B. de G., Lourenzani, A. E. B. S., & Watanabe, K. (2018). Indicações Geográficas como estratégia de desenvolvimento: o caso do Norte Pioneiro do Paraná. *Interações*, 19(3), 515-528. <https://doi.org/10.20435/inter.v19i3.1654>
- Perissinotto, R. M. (1996). Hegemonia cafeeira e "regime político oligárquico. *Revista de Sociologia e Política*, 06-07, 187-199.
- Quiñones-Ruiz, X. F., Penker, M., Belletti, G., Marescotti, A., Scaramuzzi, S., Barzini, E., Pircher, M., Leitgeb, F., & Samper-Gartner, L. F. (2016). Insights into the black box of collective efforts for the registration of Geographical Indications. *Land Use Policy*, 57, 103-116. <https://doi.org/10.1016/j.landusepol.2016.05.021>
- Quiñones-Ruiz, X. F., Penker, M., Belletti, G., Marescotti, A., & Scaramuzzi, S. (2017). Why early collective action pays off: evidence from setting Protected Geographical Indications. *Renewable Agriculture and Food Systems*, 32(2), 179-192. <https://doi.org/10.1017/S1742170516000168>
- Török, Á., Jantyk, L., Maró, Z. M., & Moir, H. V. J. (2020). Understanding the real-world impact of geographical indications: a critical review of the empirical economic literature. *Sustainability*, 12(22), 9434. <https://doi.org/10.3390/su12229434>
- Tregear, A., Arfini, F., Belletti, G., & Marescotti, A. (2007). Regional foods and rural development: the role of product qualification. *Journal of Rural Studies*, 23(1), 12-22. <https://doi.org/10.1016/j.jrurstud.2006.09.010>
- van der Merwe, M., Kirsten, J. F., & Trienekens, J. H. (2019). Enforcement mechanisms and governance structures to protect a region of origin lamb product. *Supply Chain Management*, 24(5), 561-573. <https://doi.org/10.1108/SCM-01-2019-0026>
- Vinholis, M. M. B., Saes, M. S. M., Carrer, M. J., & Souza Filho, H. M. (2021). The effect of meso-institutions on adoption of sustainable agricultural technology: a case study of the Brazilian Low Carbon Agriculture Plan. *Journal of Cleaner Production*, 280, 1-11. <https://doi.org/10.1016/j.jclepro.2020.124334>
- Williamson, O. E. (1985). *The economic institutions of capitalism: firms, markets, relational contracting*. New York: The Free Press.

- Williamson, O. E. (1991). Comparative economic organization: the analysis of discrete structural alternatives. *Administrative Science Quarterly*, 36(2), 269-296. <https://doi.org/10.2307/2393356>
- World Trade Organization – WTO. (1994). *Marrakesh agreement establishing the world trade organization: agreement on trade-related aspects of intellectual property rights*. Retrieved in 2022, July 13, from https://www.wto.org/english/docs_e/legal_e/27-trips_01_e.htm
- Yin, R. K. (2018). *Case study research: design and methods* (6th ed.). Thousand Oaks: Sage.
- Zylbersztajn, D. (2014). Coordenação e governança de sistemas agroindustriais. In A. M. Buainain, E. Alves, J. M. Silveira & Z. Navarro (Eds.). *O mundo rural no Brasil do século 21* (pp. 267-294). Brasília: Embrapa.

Received: January 20, 2025

Accepted: October 14, 2025

JEL Classification: R2

Associate Editor: Ana Louise De Carvalho Fiuza