Randrianandrasana *et al.*
Agricultural and Food Economics (2024) 12:48
https://doi.org/10.1186/s40100-024-00341-7

Agricultural and Food Economics

REVIEW Open Access

GIs, a promising innovation for the development of Africa's food systems? The decisive role of collective actions

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Abstract

The emergence of geographical indications (GIs) in the Global South, particularly in Africa, has sparked political interest due to their potential as a development tool. GIs are perceived as important innovations within food systems, which lead to changes in how actors coordinate within the sector and the territory. These new forms of coordination can generate positive economic impacts across various scales. Drawing on theories of change, the commons and collective action, this article seeks to highlight the importance of collective actions to these potential economic impacts, as collective action is notably necessary to manage the common resource that is the collective reputation of GIs. The analysis of economic impacts of GIs in in the Global South through literature reviews shows that the institutionalization of the collective reputation management through GIs does not guarantee economic impacts on the one hand, and on the other hand, that it generates mixed economic impacts within the production system, value chain, and territory. The in-depth analysis of the mechanism underlying these economic impacts of GIs, which resulted in modeling an impact pathway of GIs, shows that the success of collective actions (CAs) is fundamental to the realization of the expected impacts. This success is explained by numerous factors, analyzed in the article, that vary depending on the impacts they contribute to. In delving into GIs in in the Global South, various constraints such as the top-down approach in GI implementation that inadequately involves upstream stakeholders in the GI process, and the heterogeneity of actors shaping rules in terms of resources and power, hinder the success of these CAs and consequently the success of GIs.

Keywords: Geographical indication, Economic impact pathway, Collective actions, Global South, Africa

Introduction

The multiple challenges regarding food, economic and environmental dimensions facing the World have a strong resonance in the Global South. Strengthening the resilience of food systems in these countries seems to be a major concern in this changing context. Geographical indications (GIs) appear to be one of the keys that can contribute in this perspective. GIs are quality signs linked to origin that inform consumers about the

typicality of a product of reputed origin. They correct market dysfunctions in a context of asymmetric information, and this property enables them to prevent from usurpation (Marie-Vivien et al. 2016). Above their primitive role as tools for protecting a quality product linked to the origin, they are more perceived as a multifaceted agricultural innovation which is appropriate to face the current development issues.

Since the recognition of GIs as international property rights in 1994 by the WTO, a considerable increase in GI registrations in the Global South has been noted. It reflects not only the reality of origin-based products in these countries, but also the hope which is placed in this market instrument.

GIs are more than an instrument for intellectual property protection. They can be a driver of development in different ways. The ability of GIs to create value for products identified by their origin (Barjolle et al. 2007; Barjolle and Sylvander 2002) or to "decommodify" these products by allowing them access to remunerative markets (Galtier et al. 2013; Hughes 2010) may explain the effect of GIs on the profitability of production systems and the increase in producers' income. GIs could potentially lead to a fairer distribution of the added value created in the value chain (Zografos 2008). Moreover, as the GI approach is a process for enhancing the specific resources of a territory, the GI may generate various forms of economic impact for the territory, making this innovation a precursor of territorial development. Finally, GIs could generate positive impacts at a social level and are also capable of responding to environmental issues (Chabrol et al. 2017; Vandecandelaere et al. 2018).

All these potentialities for GIs contribute to explain the growing interest in GIs in the Global South. Africa is at its early stages regarding the use of this innovation; however, the steps it has taken to promote GIs across the continent are significant. The number of GIs being registered is progressively increasing, with 190 GI currently registered in Africa (Nam 2024). These GIs are mainly seen as a tool for economic development and market access in this region. This enthusiasm for GIs can be proved by the succession of programs and projects implemented by national and international stakeholders, notably donors, institutional, development and research stakeholders, in order to promote GIs (AfrIPI 2022). In addition, the ability of GIs to be consistent with national development policies and to have a multi-dimensional impact has convinced value chain stakeholders and national institutional actors to implement this innovation. At national and regional level, the gradual adoption of *sui generis* legislation for the protection of GIs also reflects this evolution. Currently, 37 African countries have a sui generis GI registration system (Nam 2024).

In view of this growing interest in GIs, and in order to harness GIs in a sustainable way as an innovation to support development, contributing in research into the economic impacts of GIs and their impact factors seems relevant. Further research remain necessary, as research into the impact of GIs in the Global South is still limited (Bramley 2011; Cardoso et al. 2022). Moreover, many of these studies have highlighted that the success of a GI depends on the collective actions (CA) that need to be mobilized throughout the GI process (Bramley and Biénabe 2013a; Chabrol et al. 2017; Fournier 2015; Vandecandelaere et al. 2009).

However, despite this central role of collective action in the success of GIs, research detailing the types of collective action expected in GI approach and the success factors

of these collective actions remains limited. The present article aims to deepen the link between collective action in the GI process and the economic impacts of GIs, supporting the thesis that the success of collective action is a condition for obtaining positive economic impacts from GIs but also by finely identifying collective action situations throughout the GI development process. The objective of this article is therefore to propose a new methodological approach to analyze the factors of economic impact of GIs through the lens of collective actions present in the GI process. This methodological approach, which highlights the central role of collective actions, is based on two theoretical positions: the conceptualization of the reputation of GIs as the essential common resource in a GI process and the theory of change of GIs.

This article begins with a more detailed presentation of the methodology (1). It will then present a review of the literature on the economic impacts of GIs in the Global South and notably in Africa (2). The impact pathway of GIs constructed on the basis of this literature review, and the identification of collective action situations within this impact pathway, will be the subject of the following Sect. (3). In the final section, we will highlight the elements presented in the literature on GIs in Africa and other Global South countries that represent a threat to actors' capacity for collective action (4). We conclude with a discussion of GIs as an innovation in food systems in in the Global South.

Methodology

The predominant methodology of this article is based on the theory of change. Indeed, Mayne (2017) and Patton (2008) explain the theory of change as a modeling approach that depicts how an intervention is supposed to work to achieve the intended objectives or impacts. It involves (i) delineating the causal links starting from interventions including activities and inputs up to impacts, through the construction of a chain of effects (Mayne 2017), also referred to as a logic model (Patton 2008), chain of causality (Belletti 2021) or an impact pathway (Barret et al. 2018; Blundo Canto et al. 2020; Douthwaite et al. 2007), and (ii) identifying the assumptions underlying these causal links.

Adapting this theory, the article proposes a modeling of a revised economic impact pathway of GIs aimed at explaining, through a causal pathway, how the institutionalization of collective reputation through GIs leads to the achievement of expected economic impacts. This impact pathway is developed *ex post* by integrating empirical literature on GIs in the Global South, including Africa, and theoretical literature on GI impacts. It represents a 'revisited' impact pathway as it highlights the intermediate effects and long-term impacts of Geographical Indications (GIs) compared to the initial objectives of GI registration. However, it provides fewer details regarding changes in practices and behaviors as proposed in other models.

This impact pathway then serves as a methodological tool engaged in identifying and analyzing collective actions within GIs, conceptualizing collective reputation of GIs as a common resource, and supporting the hypothesis that collective actions in GI initiatives are conditions determining the functioning of causal links within the impact pathway. Drawing on empirical literature reviews on collective actions in GIs in the Global South and theoretical literature on commons and collective actions, this approach

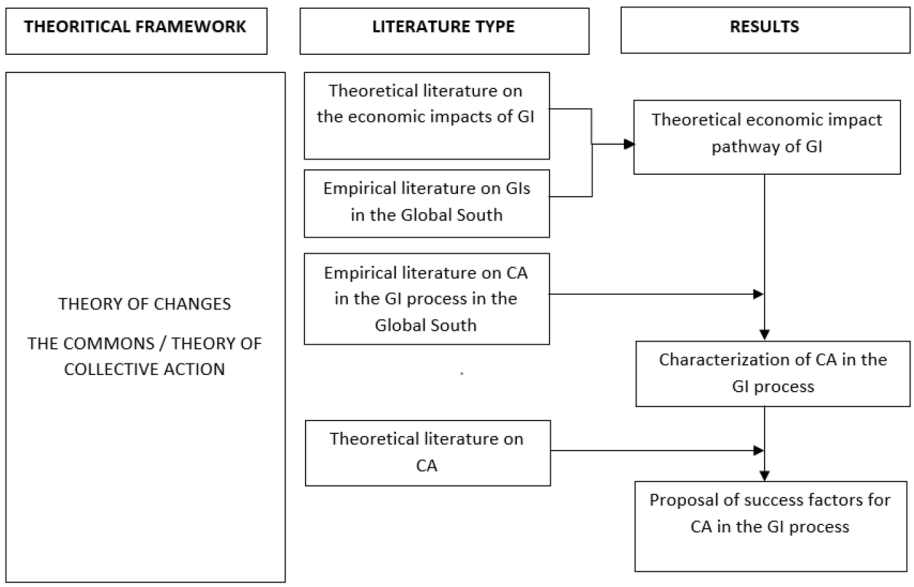

Fig. 1 Summary of the methodology

characterizes collective actions in GI initiatives and proposes success factors for these actions, which also prove to be impact factors for GIs.

Figure 1 illustrates the aforementioned analysis process and the contribution of each type of literature to the analysis.

Literature review: What development and economic impact for GIs in Africa and other Global South countries?

While GI has a long history in Europe, it remains a recent innovation in developing countries, particularly in Africa. The integration of GI into the WTO's TRIPS Agreement, which formalized its recognition as intellectual property rights, has propelled its internationalization (Bramley & Biénabe 2013b). The incorporation of minimum protection standards by member States is one of the obligations stemming from this agreement. As in all other non-European countries, the adoption of this innovation at the level of African countries has been gradual. However, despite this late entry, the progress made in developing systems supporting GIs at various levels, regional and national, and the existing dynamism around this label over the last decade, attest to promising enthusiasm for the future of GIs in Africa.

The actions taken toward the adoption of GIs demonstrate the efforts done at continental, regional, and national levels in a variety of ways. The early responses to the WTO's call focus mostly on legal frameworks. Reforms aimed at enhancing the protection of GIs have been pursued through African regional intellectual property offices (OAPI[1] and ARIPO[2]) and at the national level in certain countries. These offices are involved in both the registration and promotion of GIs. At the national level, African

[1] OAPI: Established through the Bangui Agreement in its Annex VI, it serves as the national registration service for GIs for its member countries.

[2] ARIPO: Authorized by the Banjul Protocol for the registration of GIs.

states' commitment to GIs is evident. The number of countries adopting *sui generis* schemes for GI protection continues to rise. For example, for member states of OAPI, national committees have been established to ensure the monitoring of GIs, and some have demonstrated their financial commitment to support the operation of these committees. They are also involved in projects and/or programs promoted by international actors focused on GIs, which have increased in recent years, such as the PAMPIG project, AfrIPI, or the Facilité IG program. African countries are not alone in driving this dynamic around GIs; they are supported in terms of technical assistance and financing by various international actors involved in GIs for a long time, such as WIPO, FAO, the EU, AFD, the Swiss government, and CIRAD (AfrIPI 2022).

The political interest shown by African states toward GIs is explained by the potential they see in this innovation, which they believe aligns with the challenges they face. Indeed, African countries have embraced GIs to protect origin products that have been victims of name registration, such as Rooibos (Biénabe & Marie-Vivien 2017) and Penja pepper (Belletti et al. 2016). However, beyond the role of GIs as a label for protecting origin products, the continental strategy for the development of GIs in Africa (2018–2023), established at the African Union level, positions GIs as an innovative tool to establish sustainable rural development and have an impact on food security. While territorial and cultural factors may motivate GI initiatives in Europe, the drivers of GI initiatives in African countries appear to be more related to GIs' ability to improve productivity and product marketing at both local and international levels, as well as capturing rents, for food and cash crops (Bramley & Biénabe 2013b; Filippi & Triboulet 2006).

Many GIs have generated the anticipated economic impacts, positioning GI as a relevant tool for economic development, but the economic impact generated by GI-registered products remains mixed. Various cases of GIs show that the economic and developmental objectives expected from GIs are not always achieved. Moreover, these impacts cannot be generalized due to the limited empirical research on the economic impacts of GIs in the Global South (Cardoso et al. 2022), which does not allow for definitive statements.

The analysis of GIs registered in the Global South highlights three distinct scales where impacts can be observed: the production system, the value chain, and the territory. We will analyze these three levels before a last subsection concerning the trade-off between economic and environmental impacts of GIs.

Economic impacts on the production system

In some countries in the Global South, GIs have been integrated into policies related to agricultural development or international marketing of origin products. It is expected that GIs can reduce poverty by sustainably improving the income of producers and subsequently their living conditions, aiming to fight against poverty. This objective has been met by several GIs. For instance, Jasmine Rice GI has a notably favorable impact on well-being and the decrease of poverty (Ngokkuen and Grote 2012 cited by Török et al. 2020). A cause-and-effect analysis of income increase in the case of GIs has shown that (i) increasing prices of GIs, (ii) accessibility to costs related to GIs, (iii) improving market access for GIs, and (iv) increasing the volume of GI products sold contribute to creating value through GIs and improving producers' profits.

Price increase

While the ability of GIs to command a premium price is quite common in European GIs, research on numerous GIs in the Global South have shown that GIs from these regions, such as Darjeeling and Ceylon tea (Marsoof and Tan 2021 cited in Medeiros and Passador 2022), Talouine saffron, Colombian coffee, or Penja pepper (Vandecandelaere et al. 2018), also succeed in obtaining attractive prices. The premium price of GIs from the Global South is particularly evident in European markets (Réviron et al. 2009). This price increase is not solely explained by the valorization of the GI quality and the increase in consumer willingness to pay but also by the supply management resulting from the organization at the level of the value chain.

Adding value of product quality

Reputation is the collective resource of value creation in GIs (Vandecandelaere et al. 2009). Protecting the reputation through the GI process may corrects the information asymmetry between producers and consumers, as GIs provide information on the origin, characteristics, and production processes of the product. Thus, by promoting consumer trust, GIs increase market efficiency in the context of international trade, where it can be more challenging for customers to obtain product information (Kolady & Lesser 2010). A better understanding of the product's characteristics allows consumers to adjust their willingness to pay (Hoang et al. 2020) in accordance with what they expect to gain from consuming the product. Indeed, the price differential gained by GI products compared to conventional ones can be explained in various ways. Firstly, it may represent the compensation that consumers give for the quality commitments made by producers (Zografos 2008). In this case, the premium price is a quality rent. Tarn (2005, cited in Bramley 2011), studying 265 products, shows that consumers in the Global South are also careful about quality, and origin-linked quality reflects superior quality. GI products' valuation, however, can be connected to other aspects as well, such as social, cultural, environmental, and cultural (FAO 2012), territorial (Bramley 2011) or even attributed to the intellectual property engaged in the product. This price differential may also be due to the reduction in transaction costs incurred with consumers. Since GI attests to the origin and quality of the product, consumers save on transaction costs and can afford to pay a higher price for registered GI products. Finally, the price differential could also represent compensation for the product's reputation (Zografos 2008).

However, even though the qualification and differentiation process of GIs aim to enhance quality and reputation, obtaining a premium price is not guaranteed for all GIs, both in Northern and Southern countries. Research by Cei et al. (2018) asserts that willingness to pay, which determines the price differential compared to non-GI products, can be zero or even negative. For example, the coffee GIs Bajawa and Kintamani in Indonesia failed to capitalize on their territorial link (Neilson et al. 2018). The reasons for this failure include intrinsic quality of the GI product and consumer awareness of its origin, both of which influence the ability to command a premium price. Products with strong reputations are more likely to capture greater value than GI products still building their reputation. Additionally, GI products can also lose their quality premium. Various factors can contribute to this decrease in price differential, such as the existence of counterfeit products (Bashir 2020), deficiencies in quality control, and increased market production in the absence of coordination (Kolady & Lesser 2010).

Supply control

The conceptualization of GI as a "successful" innovation within a Localized Agri-Food System (LAFS) highlights the need for supply control to prevent GIs from losing the values they have gained (Fournier 2008, 2002; Boucher 2004). Indeed, a promising innovation is likely to generate excitement and attract a large number of producers. However, GI restricts competition and avoids overflow in its utilization because GI itself produces exclusions due to the limitations established by the specifications that restrict access to its use. Brazil's Vale dos Vinhedos wine, which was 78% less produced between 2012 and 2014, shortly after it was registered as a protected designation of origin (PDO), serves as an example of how stringent regulations might affect the evolution of wine production (Vandecandelaere et al. 2018). The restriction in the use of GI is an advantage compared to the phenomenon of product trivialization and loss of quality rent. This capacity of GI can sustain a LAFS (Fournier 2008).

Furthermore, even though GI itself tends to restrict supply, various collective strategies regarding supply control in the market can be developed to create and maintain a high price for the product by playing on volume. An organization in supply control can be developed to ensure the preservation of producers' power in the market (Vandecandelaere et al. 2018).

Although the valorization of GI quality and supply control contributes to obtaining premium prices for GI, this increase is not always assured. Various market-related factors can influence the capacity of GI.

Accessibility in terms of cost for GIs (investment cost and production cost)

Obtaining a minimum price is a significant effect generated by GIs. However, it does not always guarantee a positive economic impact if it fails to sufficiently cover costs (Cei et al. 2018). The cost consideration associated with adopting GIs remains a crucial parameter in enabling GIs to fully serve their role as tools for economic development for their users. Indeed, the process of establishing specifications aims to standardize practices and define what constitutes "the GI standard" corresponding to the quality conveyed by reputation. Depending on the desired quality requirements, prioritizing production methods and establishing rules compliance with GI specifications may necessitate implementing methods requiring investment costs and changes in production costs to comply with the specifications. In addition to these costs, there are inspection and certification costs, as well as administrative costs associated with GIs (Belletti 2021; Belletti et al. 2007), which are integral parts of the cost of adopting GIs. Therefore, analyses of the economic effects of GIs should focus on profitability (Belletti 2021; Belletti et al. 2007), which considers these costs, rather than solely on the premium price they may generate.

Furthermore, the importance of considering these costs also lies in their connection to the adoption rate of GIs. Indeed, if these costs are significant, GIs may not align with the economic interests of certain potential users who lack the capacity to afford them, thus appearing as an innovation that excludes some potential users. Examples such as the Mèo Vac mint honey GI from Vietnam and the Vale dos Vinhedos wine Protected Designation of Origin (Fournier et al. 2018), and the Penja Pepper GI (Belletti 2017) highlight this risk of exclusion due to the stringent requirements of specifications that demand

investments inaccessible to certain types of users (the vulnerable). This effect is particularly noticeable in GIs where the specifications diverge from traditional practices, as demonstrated by the aforementioned examples of GIs.

Enhancement of market access

GIs offer producers a way to improve their market access while addressing the challenges they confront in highly competitive standard markets (Cardoso et al. 2022). This role of GIs has been shown at the level of small-scale producers in the Global South (Belletti et al. 2016). The quality attributes linked to origin highlighted in the qualification process of GIs form the basis of differentiation in the market and their comparative advantage. Through differentiation, products can position themselves in a market segment, such as the niche market (Bramley 2011; Chabrol et al. 2017), that rewards the values of the GIs (Belletti et al. 2016). This market is protected from competition because only products complying with the rules of the specifications can bear the name of the GI. The legal prohibition of the name's use by those outside the GI collective places producers in a monopolistic position.

A number of GIs in the Global South, including durian in Malaysia (Airriess 2020), have shown a notable growth in market share, demonstrating the usefulness of GIs in enhancing market access. GIs have been successful in accessing international markets and have managed to diversify the product's destinations. GI fruits and coffee from Thailand have been exported to the European market (Wongprawmas et al. 2012), and Darjeeling tea has seen an increase in the number of countries where the product is exported (10 export destinations between 2004 and 2005) (Vandecandelaere et al. 2018). Positive outcomes for the exportation of GIs are also demonstrated by the experience in Africa. According to *(*Besah-Adanu et al. 2019), Oku honey GI from Cameroon has not only seen a rise in sales and pricing but has also been able to penetrate the European market. The same is true for Talouine's saffron, which has seen success in terms of export value and number of destinations (Vandecandelaere et al. 2018).

GIs also represent an opportunity to decommodify origin products (Galtier et al. 2013). By highlighting the specific qualities of origin-based products on which their uniqueness is based, consumers are able to differentiate them from commodities. These qualities thus reduce the level of substitutability of GIs and consequently promote their positioning in a niche market. GIs are thus less dependent on international prices and are protected from price volatility (Blakeney 2012; El Benni and Reviron 2009).

Increase in demand

The increase in demand for the GI product is one of the intended outcomes of the approach. Efforts to strengthen and enhance the GI's reputation are designed to achieve consumer recognition and, consequently, stimulate demand. This growing demand subsequently encourages producers to increase production volumes. In this context, whether the GI allows for obtaining a premium price or not, this increase in sales volume alone can improve producers' incomes (Fournier & Durand 2012), even in cases where there is price stability. This increase in demand should be accompanied simultaneously by supply control to maintain the quality rent.

However, increased market access for GI products is not guaranteed solely by registering the GI. Marketing and awareness efforts are necessary for consumers to become familiar with and appreciate these products. Das' analysis of GIs in India (Das 2009) underscores this issue, confirming that lack of consumer recognition has hindered market access for these products. Moreover, the challenge for GIs to establish a foothold in lucrative markets affects their label utilization. The lower utilization of the GI label in Chile can be attributed to its failure to enhance exports and increase market share, which are the expected goals for producers (Bustamente 2019, cited in Török et al. 2020).

Value distribution along the value chain

The long-term expected impact of GIs at the value chain level is to build a sustainable and resilient GI sector. A key component of attaining this sustainability is the satisfaction of stakeholders involved in the value chain with respect to the revenue generated by the GI. However, the potential of GIs to improve the income of various actors in the sector is conditioned by their ability to equitably distribute the created value among these actors (Jena & Grote 2010; Zografos 2008). In the case of GIs, the reputation that ensures the achievement of added value lies in the hands of upstream actors. This should shift the balance of power among actors in favor of the latter by creating a relationship of dependence of value chain actors on them. The increased negotiating power gained by producers is a major factor influencing the more equitable distribution of added value (Cardoso et al. 2022; Réviron et al. 2009) in a GI value chain compared to conventional one. This change that the adoption of GIs could potentially bring about at the level of actor relations and coordination modes legitimizes the consideration of GIs as an innovation. Colombian coffee illustrates this effect of GIs by allowing producers to receive a 25% increase in the GI price share after its registration as a PGI (Vandecandelaere et al. 2018). However, achieving equitable value distribution requires effective collective organization and cohesion among operators (Barjolle et al. 2007). Ngokkuen and Grote (2012, cited in (Török et al. 2020) have shown that cooperation among Jasmine rice GI producers has enabled them to have greater bargaining power compared to the non-GI value chain.

The analysis of GI impacts in the Global South supports the findings of Réviron et al. (2009) and Jena et al. (2015) that negotiation power and economic power are the most significant factors limiting GIs' ability to benefit producers. These factors influence both the vertical and horizontal distribution of added value among actors. In the coffee sector, GIs demonstrate that it is downstream actors such as traders or distributors who monopolize the profits (Fitter and Kaplinksy 2001), and in the case of Darjeeling tea, among upstream actors, it is the landowners who receive the most significant profits (Kolady and Lesser 2010). This unequal distribution disadvantages producers. Réviron et al. (2009) support this, specifying that resource-poor producers with limited power are often the most disadvantaged in GIs.

GIs, an innovation catalyst for territorial development

The economic effects of GIs at the territorial level justify their role as a catalyst for territorial development innovation. Belletti et al. (2016) have asserted that GIs can form the basis of a territorial strategy. In Europe, GIs have been integrated into

policies as instruments contributing to economic development within marginalized regions whose economies are still lagging behind (Barjolle et al. 2007; Bramley 2011). GIs lead to territorial development by strengthening activities at the territorial level, either through the GI value chain itself or through the reputation of the GI transmitted to the territory through a spillover effect.

Territorial economic effects related to GI value chain activities

The establishment of a GI has the potential to lead to an expansion of activities along the value chain, both at the level of agricultural operations and in processing businesses. For instance, in the Vineyard Valley region of Brazil, the number of vineyards doubled following the registration of the GI (De Mattos Fagundes et al. 2012). As a result, various jobs were created around this wine. In the case of Darjeeling tea, since its production requires skilled workers, the implementation of GIs has led to job creation (Vandecandelaere et al. 2018).

Economic effects related to territorial reputation

The GI approach is a means of valorizing the resources of a territory. The reputation of GIs, which carries the name of the territory, strengthens the territory's reputation. The attractiveness of the territory resulting from its reputation offers economic opportunities in various forms, summarized as the development of a range of activities around the GI's reputation, led by local actors, referred to as a "basket of goods and services" (Hirczak et al. 2008). In this dynamic, benefit-sharing is reciprocal. On one hand, the territory's reputation becomes a resource from which other activities focused on different sectors benefit. On the other hand, promoting the GI mobilizes not only the actors involved in the GI value chain but also other territory actors benefiting from the reputation (Bramley 2011), thereby reinforcing the territorial anchoring of the GI. One of the most developed sectors in this basket of goods and services is tourism. Strategies are implemented by actors to promote both the GI and its territory of origin and its characteristics. The effect of Boseong green tea in South Korea on tourism demonstrates the relevance of this GI/tourism coupling, with the number of tourists visiting the GI region tripling in six years (Suh and Macpherson 2007). Colombian coffee (Vandecandelaere et al. 2018) also illustrates this dynamic, as the number of visitors to coffee plantations has increased significantly since the development of the GI, and a special train line is dedicated to plantation tours.

The gastronomy sector can also benefit from the opportunity offered by the GI and tourism development to showcase local cuisine using the GI, as seen with Talouine saffron (Vandecandelaere et al. 2018), which has promoted typical meals to boost tourism. In addition to tourism, other indirect economic effects of the GI are observed at the territorial level, such as increasing prices of substitute products and stimulating the emergence of other GIs in the territory or country (Vandecandelaere et al. 2018).

The evident economic advantages that GIs have brought to the region are explained by these activity opportunities. They contribute to job creation (Barjolle and Sylvander 2002; Fadina & Barjolle 2018) and maintaining the population in the territory (Zografos 2008).

Trade-off between economic and environmental impacts of GIs: a concern for GI sustainability

Analyzing the economic impact of GIs cannot be dissociated from sustainability concerns (Belletti 2021). The typicity of GIs refers to the physical (natural) resources of the territory from which they derive their uniqueness. This nature of GIs initially suggests that GIs are associated with the preservation and conservation of resources and biodiversity that confer their quality, and that the sustainability of GIs depends on the existence of these resources. It is true that these issues have been integrated into the establishment of certain GIs such as Rooibos, where the specifications consider good practices related to biodiversity (Biénabe et al. 2009). However, GIs that are solely oriented toward economic objectives are susceptible to generating negative effects on resources. Belletti et al. (2017) have asserted that the valorization of GI products can lead to negative effects in the case of over-consumption of resources. Although the Tequila GI has brought economic benefits in terms of job creation, it has encouraged increased use of chemical inputs (Bowen & Valenzuela Zapata 2008). These practices contribute to soil degradation, which is a crucial resource in obtaining the GI. Therefore, an arbitration between the environmental effects of GIs and economic objectives should be carried out in the design and valorization strategies of GIs.

Revisiting the impact of GIs in the light of stakeholder coordination: building an impact pathway and analyzing collective action situations

GI: A process of governing the collective reputation as a common resource

A GI is a quality indicator associated with origin that denotes the typicality of a product from a specific terroir. This product's distinctiveness arises from both the physical and anthropic resources of the territory (know-how and social capital) mobilized in the production and commercialization processes of GIs (Barham and Sylvander 2011; Belletti et al. 2012), as well as their modes of production (Barjolle and Sylvander 2002). In order to use this quality label, the establishment of specifications and its registration to the dedicated intellectual property authorities are required.

However, the significance of reputation in the process of achieving economic impacts of GIs tends to assert that the GI approach is a matter of that reputation. As it provides information about the typical quality of the GI product at the consumer level, reputation is the resource that drives the consumers' valorization. The recognition of this uniqueness by consumers subsequently enables them to attribute value to GIs.

Placing reputation at the center of the GI approach validates that the GI approach creates rules through the qualifying process that serve as the foundation for the reputation of GIs. These rules align with the production methods, quality standards, and prerequisites that actors aiming to use the GI must meet (Vandecandelaere et al. 2009). In other words, these rules explicitly and clearly define the conditions regarding access to and utilization of reputation (Biénabe et al. 2013). Preserving the integrity of the GI's reputation is the aim of these rules.

In terms of reputation, Belletti et al. (1999) strengthen this view by noting that the GI approach institutionalizes reputation by relying on legal tools for reputation preservation, which enhances its role in signaling quality to consumers and addressing information asymmetry. Other researches have shown that the GI approach consists of

either reputation protection aimed at preserving the quality rents that GIs have already acquired, or reputation construction for a product deemed "typical" to enable it to gain market value while protecting this newly reinforced reputation (Arfini et al. 2011; Chabrol et al. 2017; Fournier 2015). Vandecandelaere et al. (2018) identify these two approaches as defensive and offensive.

In the context of GIs, reputation is not only related to the product and production method but also to the producers (or actors) who are behind the product (Torre 2002, 2006). In this sense, reputation is transformed into a collective reputation (Biénabe et al. 2013; Zago 2015), which is upheld by the organization that encompasses the reputation users. The "collective" nature of reputation enhances its susceptibility to being exposed to opportunistic behaviors of certain actors, known as "free riders," who exploit the GI's reputation without complying to the specifications of the production standards. However, practices that undermine standards can harm collective reputation and lead to consumer trust erosion and a decrease in their willingness to pay. This loss of GI value then disadvantages all actors, even those who remained in compliance with the established rules. The interdependence of actors around a single resource, which is collective reputation, resembles "a common resource" (as defined by Samuelson's (1954) typology of goods (Ostrom and Ostrom 1977)), thus requiring collective action and coordination in the use, enhancement, and protection of the resource (Fournier et al. 2018).

Proposing a pathway for theoretical positive impact

The cross-examination of the theoretical expected functioning of GIs and the practical experiences with GIs in the Global South has led to identifying an economic impact pathway which positions the collective reputation of GIs as the resource behind their economic impacts (Fig. 2). Figure 2 illustrates how GIs can contribute to the economic development of these users and the territory in which they operate and reveals conditions that explain the causal links between the GI process and the expected effects and impacts.

The GI process institutionally protects the reputation of origin-linked products. For this purpose, the rules ensuring the maintenance and enhancement of the product's typicality, which contributes to its reputation, are crucial. However, the characteristics of these rules largely depend on the implementation process. The valorization of this resource is only possible if potential users have access to its use and find it beneficial. The utilization of GI depends on the accessibility of the costs required for compliance with specifications. Regarding the interest in its use, users gauge this based on the profit it yields them.

The GI's ability to ensure authenticity and compliance with its reputation is conditioned by the GI organization's capability to enforce these specifications. This contributes to reputation enhancement and protection. Reputation itself can lead to obtaining a premium price by increasing consumer willingness to pay. Additionally, the valorization of this reputation may also depend on the actions of GI users grouped within the GI organization, regarding their commitment to controlling supply, engaging in communication and marketing efforts, and positioning the GI product in lucrative markets.

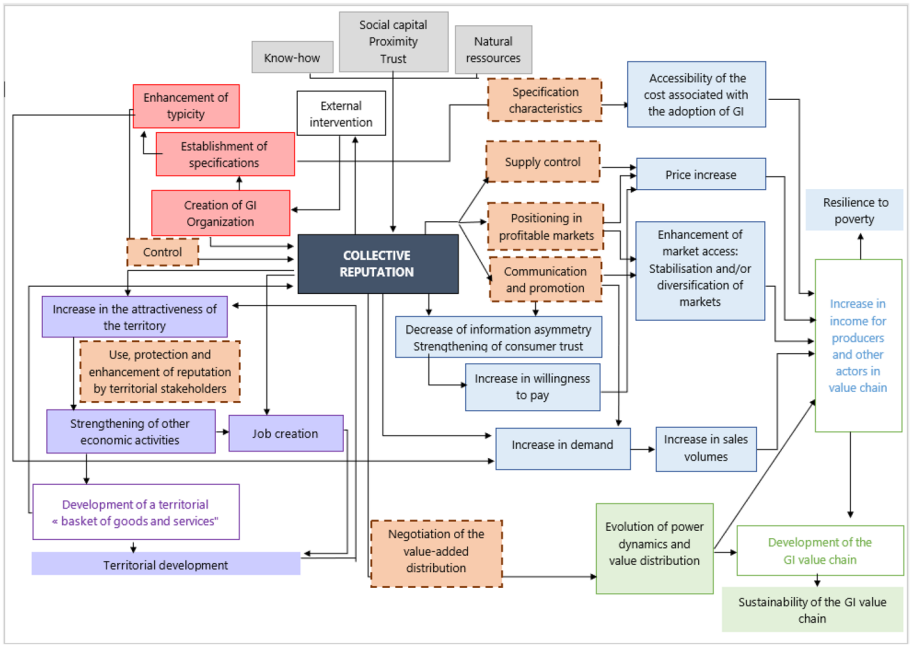

Fig. 2 Economic impact pathway of GI

At the GI value chain level, the ability of stakeholders to collaborate on value-added distribution and to negotiate, allowing each actor at various stages to benefit from GI, also contributes to ensuring their commitment to building and sustaining the GI sector. Regarding economic impacts at the territorial level, the engagement and involvement of local stakeholders in using, protecting, and enhancing the reputation of GIs strengthen territorial ties. However, this is only possible if these stakeholders perceive the GI's reputation as a common resource that drives development.

However, this potential impact pathway remains an ideal and general representation of the economic effects of GIs. However, each GI has specific goals defined by the initiating actors who prompted its establishment. The trajectory of GIs is thus linked to these goals and the valorization strategies implemented by the managing actors of the GI.

Characterization of situations of collective action within the GI process

A new approach to analyzing Collective Action (CA) in the GI initiative seems relevant to enhance the research results already obtained on collective actions. Indeed, few studies on GIs examine the success factors of CA. This work is a continuation of the research done by Bienabe et al. (2013) and Fournier et al. (2018), keeping the conceptualization of the collective reputation of GIs as a common resource. The approach involves categorizing the collective actions present in the conception and development of the GI according to the types of economic impacts noted in the impact pathway. This approach firstly allows for a better understanding of CA and determines the connection between specific categories of CA and a given economic impact. It also helps understand the occurrence of these CA, including their overlap or coexistence in the trajectory of GIs to encompass all the expected economic impacts of GIs.

Table 1 Characterization of CA in a GI approach

	Objectives of CA	«Community» of CA	Scope of CA	Outcomes of CA	Economic impacts
SCA1	Construction and institutionalization of collective reputation	Actors of the origin-based product value chain interested in registration Support organizations Public actors	Actors in the potential geographical area of the GI	Registration of GI	Institutionalization of the protection of collective reputation
SCA2	Improvement and protection of collective reputation	GI organization members Support organizations Public actors	GI organization	Enhancement of the value of GI product by each producer	Improvement of producers' income
SCA3	GI value chain creation and fairer value-added distribution within the value chain	Actor of GI value chain within or outside the territory Support organizations Public actors	GI value chain	Establishment of a functional value chain Accepted value-added distribution among actors in the value chain	Sustainability of the value chain
SCA4	Strengthening the territorial anchorage of the GI	GI organization members Territorial actors Support organizations Public actors	Territory	Mutual reinforcement between GI products and other activities in the territory	Territorial development

The economic impact pathway outlined above, especially the necessary conditions for achieving economic impacts, when juxtaposed with literature on CA in the GI approach discussed earlier, reveals that these conditions rely on collective actions. Examining this impact pathway allows us to identify situations of collective action based on their goals in terms of economic impacts, starting with GI registration as the primary objective to achieve economic impact. We use the term "Situation of Collective Action" (SCA), borrowed from Ostrom, instead of CA, to define: "*the interaction among actors who have certain positions, action capacities at different stages of decision-making processes, linked to the degree of control and the information they possess, the likely consequences of their actions, and the costs and benefits expected from these consequences*" (Ostrom and Basurto 2013).

Table 1 illustrates the characteristics of the four SCA identified, including their objectives and the actors involved in each category.

The first category of SCA (SCA1) encompasses the collective actions necessary for GI registration, including the enrollment of stakeholders and the establishment of various institutional frameworks for GI:GI organization, specifications, and internal regulations. Indeed, GIs are collective rights, and their registration process serves to identify the stakeholders eligible to utilize them. This process is carried out by a GI organization, which is composed of potential users of the GI. Upon registration, this organization is responsible for the management, protection, and promotion of the GI. The members of this organization are required to follow the specifications they have collectively established and to fulfill their responsibilities according to the statutes and internal regulations. These members contribute to its governance as members of the general assembly.

Depending on the country and the legal framework governing GIs, the GI organization may be required to be representative and include various stakeholders from the GI value chain; however, it may also consist solely of producers. A governance body, comprising both a decision-making and an executive entity, should be responsible for making decisions for the organization and for overseeing activities related to its aforementioned missions.

Three categories of SCA (SCA 2, SCA 3, and SCA 4) developing in parallel contribute to obtaining economic impacts corresponding to three categories of economic impacts located on different scales, namely the production system, the value chain, and the territory. Improvements in producer incomes, value chain resilience, and territorial development are the corresponding impacts.

- SCA 2 is associated with the impact on improving producers' incomes. According to the conditions outlined in the impact pathway, achieving various economic effects of GIs leading to enhanced producer incomes (such as cost accessibility related to GI adoption, price increases, improved market access, and increased sales) is closely linked to how reputation is protected and enhanced to enable valorization. These conditions necessitate collective actions related to engaging users, commitments, and strengthening the capacity of the GI organization responsible for managing and protecting the GI, as well as developing commercial and marketing strategies.
- SCA 3 involves stakeholders in the GI value chain. They encompass all collective actions contributing to a more balanced distribution of added value among the various stakeholders.
- SCA 4 comprises collective actions aimed at strengthening the territorial anchoring of the GI to foster territorial development.

On what does the success of these collective action situations depend? An analysis of success factors

Understanding the categories of SCA within the GI approach, which reflect the multiple objectives of this innovation, enables a deeper exploration in attempting to identify the factors influencing the success of CA, i.e., the factors that promote actor engagement in various CA. These factors are presented in Table 2. The plurality of SCA, the involved actors, the scales of these SCA, and the expected objectives demonstrate that the factors vary from one SCA to another, thus requiring an individual analysis for each category.

SCA 1: Construction and institutionalization of collective reputation

SCA 1 concerns all CA involved in the registration of the GI. The registration of the GI, also known as the institutionalization of the GI's reputation, is a process consisting of four phases. Each phase requires a set of CA.

Creation of the core group: The formation of the core group of the GI Organization (Phase 0) is an optional phase because it is absent in cases where the core group is imposed by the State. However, if the GI results from the initiatives of the actors, the convergence of their interests on the origin-based product as well as the homogeneity of representation on its specificity and reputation can trigger an interest in

Table 2 Proposal of success factors for CA in the GI approach

Categories of SCA		Internal factors of SCA	External factors of SCA
SCA1	Creation of the core group	Convergence of actors' interest in the origin-based product Homogeneity of representation on the specificity and reputation of the origin-based product Proximity among actors Pre-existing interpersonal trust among the initiating actors	National legal framework for GIs
	Construction of the GI organization	Homogeneity of representation on the specificity and reputation of the origin-based product Homogeneous dependence on the origin-based product Convergence of actors' interest in the GI initiative Perception of the legitimacy of the initiative's core group Reputation of potential members and core group Interpersonal trust among members	
	Legitimation of the Board of Directors (BoD)	Reputation and trust among members Actors 'perception regarding the BoD's ability: to construct decision-making rules to establish an election process accepted by the members"	
	Creation of institutions and GI registration	Homogeneity of actors Organizational trust in the BoD based on their perception regarding the characteristics of the BoD and their ability: to establish representative, inclusive, accessible, operational, and legitimate rules to implement a system of control and enforcement of the rules	
SCA 2	Quality Improvement	Adequacy of the rules with the members' capacity (financial and technical) Perception of equity in access to use and benefits derived from reputation Ability of the GI organization to control and enforce the specifications Self-organizational capacity of the GI association"	Support from the State and its policy regarding the GI Context of the conventional value chain
	Strengthening the ODG	Ability of the GI organization to control and enforce the specifications Trust in the governance of the GI association Group size	

Table 2 (continued)

Categories of SCA		Internal factors of SCA	External factors of SCA
SCA 3	Establishment of a functional value chain	Homogeneity of representation across the GI organization sector and its potential	Demand and consumer interest in the GI product
	"Accepted" distribution of value added	Interdependence among actors Dependency of actors on the GI value chain Institutions: specifications and internal regulations of the GI organization Heterogeneity of actors	
SCA4	Strengthening the territorial anchorage of the GI	Convergence of interests among territorial actors Homogeneity in the representation of reputation and the dependence of various actors on it Geographical proximity reinforcing trust and relationships among actors involved in CA Territorial heritage	National policy supporting local development

valorizing the product and/or an interest in protection. Pre-existing proximity (Rallet & Torre 2004) and interpersonal trust (Torre 2002) among these initiating actors can contribute to facilitating interactions. Their motivation is further ensured by the fact that the project is supported by a legislative framework in the nation. Consultation and exchanges among these founding actors, with or without the support of external organizations, can strengthen the core that will drive the initiative.

Construction of the GI Organization: According to AfrIPI (2022), establishing a structure representing producers and other stakeholders, known as the GI Organization, is crucial in the initial phase of the GI. This step also involves CA. The actors most likely to join the GI Organization are those with a common understanding of the potential of the origin-based product and its reputation, a homogeneous dependence on these resources, and personal interests converging with those of the GI initiative. Therefore, actors' motivation to participate in the CA is also influenced by their perception of the legitimacy of the initiative's leaders (the core group or State), other members' reputations, and interpersonal trust.

Legitimation of the Board of Directors (BoD): The legitimization stage of the GI Organization's Board of Directors (BoD) constitutes a fully CA in the GI process (Phase 2). Besides reputation and trust among GI Organization members, the success of this CA depends on their ability to establish decision-making rules and to establish an election process accepted by the members. In general, the BoD is expected to be representative, inclusive, legitimate, competent, motivated, present homogeneous interests and powers, and has a good relationship with the actors supporting the initiative.

Creation of institutions (Specifications and Internal Regulations) and GI registration: The establishment of the GI Organization and the BoD leads to the construction of institutions regulating the GI and the GI system, which are the specifications and the internal regulations of the GI Organization (Phase 3). The process of

constructing the specifications is based on discussions, exchanges, and negotiations (Belletti et al. 2017) concerning the delimitation of areas, rules regarding resources, and practices to reach a consensus. The internal regulations, on the other hand, concern the rights and duties of GI Organization members. In addition to organizational trust in the BoD, members' perceptions of the characteristics of the BoD and their ability to establish (i) representative, inclusive, accessible, operational, and legitimized rules, (ii) measures allowing the enforcement of these rules, and the corresponding control system influence the motivation of actors in GI registration.

Research conducted on this particular stage of the GI process also enriches the knowledge regarding the success factors of SCAs around the establishment of institutions. Dentoni et al. (2012) support Ostrom on this factor by raising the issue of the heterogeneity of "the community" as one of the factors negatively influencing rule definition and collective action.

SCA 2: Improvement and protection of collective reputation

SCA 2 encompasses CA aimed at improving the reputation of the GI and establishing a reputation that allows everyone to improve the product. It depends on the GI Organization members who are both owners, users, and beneficiaries of the GI. Analysis of the functioning and development reveals that better valorization of the GI depends on the individual commitment of each actor involved in the GI to improve quality and on the strengthening the GI Organization, which is the body carrying the GI. These two elements require efforts and cooperation from the actors.

Quality Improvement: The first and most important prerequisite for quality improvement is the commitment of each actor to comply with the specifications. The first unavoidable variable in the success of this CA is therefore the characteristics of the rules as presented in Phase 3 of SCA 1. The adequacy of the rules with the members' capacity (financial and technical) to follow them then influences their commitment to quality. Their perception of equity in access to the use of reputation, through these rules, can also impact their commitment.

The BoD's ability to set up an operational control system and to apply sanctions in case of non-compliance also influences members' commitment to investing in quality. Indeed, an efficient control system allows for the exclusion of free riders and ensures the effectiveness of the GI at the consumer level to enhance quality. This capacity for self-organization of the GI Organization can have implications for the trust that members have in the organization. Furthermore, it should be noted that this capacity may be related to group size (Olson 1965), as asserted by Kolady and Lesser (2010), and that increased production can cause quality control issues.

It is important to note that a number of external factors play significant roles in this SCA because these factors can contribute to strengthening the variables of the CA mentioned above. Among these factors are the support of accompanying organizations to the GI Organization, the existence and capacity of external control, the positioning of the state and its policy regarding the GI, as well as the context of the conventional value chain.

Strengthening the GI Organization: The organizational structure plays a role in protecting and promoting the label's reputation. It is also responsible for ensuring that the

resource is beneficial for its members. In addition to compliance with the specifications, adherence to the internal regulations, including contributions to the collective, demonstrates commitment to the collective. The effectiveness of this SCA is dependent on the characteristics of the internal regulations, how they are implemented and managed, and the level of confidence in the GI Organization's governance. Similar to SCA 2, group size can influence the success or failure of this SCA.

Moreover, participation in collective activities of the GI Organization also contributes to its reinforcement. The expected collective actions may involve the development and monitoring of collective strategies in terms of production and marketing, including commercialization, quality controls, supply, and promotion. These strategies are crucial for enabling and maintaining the valorization of the GI (Vandecandelaere et al. 2018).

The success of these CA indicates how appropriate these rules (specifications and internal regulations) are regarding the expected objectives of the GI in terms of valorization. It also reveals the need for rule adjustments.

SCA 3: Value-added distribution within the value chain

SCA 3 represents the category of CA contributing to the establishment of a functional GI value chain and the distribution of value added accepted by actors at various stages. The term "accepted distribution" refers to a distribution of value added perceived as beneficial for each category of actors, motivating them to stay in the GI value chain. To determine the factors influencing this CA, the literature on value chain governance was utilized to complement the variables proposed in Ostrom's theory of CA (E. Ostrom 1990).

Establishment of a functional value chain: Major factors enabling actors to cooperate in this value chain include the homogeneity of their representation of the GI value chain and their vision of its potential, as well as the degree of dependence of different actors on this value chain. Additionally, factors at the value chain level significantly contribute to this CA, including the level of demand and consumer interests in the product, which also influence the existence of the GI value chain. The specificity of SCA 3 lies in the fact that the national and/or international context of the conventional value chain may affect the establishment of the new value chain.

"Accepted" distribution of value added: In a GI value chain, the reputation of the GI relies on upstream actors. This dependency relationship would ideally shift bargaining power in favor of producers. However, downstream actors possess market power and expertise in product marketing. The presence of this duality (interdependence of actors and conflict of individual interests) thus calls for collective efforts from actors at each stage in order to reach a compromise on the sharing of created value and to establish a sustainable value chain.

Equity in the distribution of GI value added is also influenced by the institutions (specifications and internal regulations) governing the use of GIs and how they were constructed. The asymmetry of bargaining power among actors within the same stage (horizontal) or across different stages (vertical) can guide the construction of rules and disadvantage certain actors (Cardoso et al. 2022). It is noteworthy that the heterogeneity of actors' resources (human capital, social capital, and financial capital) is correlated with the level of bargaining power possessed by the actors.

SCA 4: Strengthening the territorial anchorage of the GI

This category of collective action aims at mutual reinforcement between GI products and other activities within the territory, thus consolidating the territorial anchorage of the GI. These activities resemble a basket of territorially-based goods and services built upon the reputation of the GI, which, according to Angeon and Vollet (2008), is "the result of a set of complementary goods and services that reinforce each other in local markets, a combination of goods (public or private) contributing to the image of the territory and its reputation effects, and coordination among the producers of the basket who internalize the territorial rent." According to Durand (2016), the collective management of the common resource at the origin of the quality rent by territorial actors has a triple advantage: ensuring the sustainability of the quality rent, facilitating the implementation of territorial coordination around the resource, and fostering the emergence of territorial quality rent. This territorial quality rent, a resource at the territorial level derived from the reputation of the GI, leads to territorial development.

Research focusing on territorial CA, also known as transversal CA (Amblard et al. 2018), contributes to defining the factors most likely to positively impact CA. One of the main challenges faced by CA in a territory, highlighted by Gumuchian et al. (2003) in their definition of territory, is the multitude of actors with divergent interests. One of the key success factors for a GI in territorial development is therefore the convergence of interests among actors, allowing them to collaborate on a project to enhance the reputation of the GI. However, for this to occur, there must be homogeneity in the representation of reputation and the dependence of various actors on it to encourage their engagement in the collective project.

The development of collective action can also be conditioned by a variety of territorial factors. Among these factors, the territory (in its material dimension) stands out as the support and scope of this CA. It provides actors with geographical proximity that facilitates and enhances their interactions, reinforcing trust and relationships among them to the benefit of this territorial collective action. The territory's assets, including social capital, organized proximity among interested actors, and the coherence of the collective action with other actions present in the territory, also contribute to the success of this CA.

What specific factors in the Global South may affect CA development and the impacts of GIs?

We aimed to show that the impact of GIs depends on the success of various collective actions throughout the GI process and to identify the success factors of these collective actions. We can then re-analyze the literature on GIs, looking for factors likely to diminish actors' capacity for collective action.

Fournier (2015) reminds that GIs are essentially social constructs, which poses a significant challenge in establishing a list of factors or conditions that guarantee the expected economic effects and impacts. Furthermore, because the impacts of GIs rely on how they are implemented and vary by context and place (Cardoso et al. 2022), identifying the common element of GI successes becomes even more challenging.

For more than two decades, several research studies devoted to these questions have contributed to identifying the success factors of GIs. The factors advanced by these works include the product's specificity and reputation (Barjolle & Sylvander 2002; Pédelahore et al. 2021), market relevance and marketing strategies (Barjolle & Sylvander 2002; Vandecandelaere et al. 2018), institutional framework and support (Vandecandelaere et al. 2018), the GI control system and market surveillance (AfrIPI 2022; Belletti et al. 2016), as well as support for the GI initiative, especially from public authorities (Barjolle & Sylvander 2002; Bramley and Biénabe 2013a; Quiñones-Ruiz et al. 2016). However, theoretical and empirical research on GIs indicates that CA engaged in the GI initiative are the most important determinant in GI success.

Exclusion and GIs: How does it affect the CA in the GI approach in the Global South?

Addressing the issue of exclusion is essential in the GI approach in the Global South, where GIs are perceived as an innovation implemented to achieve a development objective. Indeed, to be effective in this role, GI must move away from a "club good" configuration that would only benefit a select few actors and be accessible to those eligible for its use.

However, as inclusive as the specifications may be, they should be strict enough to ensure the homogeneous quality of the GI and prevent a depreciation of its reputation. This condition regarding the specifications clarifies two types of exclusion that could have effects on CA in GIs. Thus, we distinguish exclusion around the trade-off between quality and inclusion, leading to positive exclusion regarding CA, and exclusion caused by the top-down approach and the lack of involvement of producers in the establishment of GIs, negatively impacting the capacity for CA.

Trade-off between quality and inclusion for setting rules

The literature reveals differing opinions from authors regarding the incentive role of specifications for CA depending on the level of inclusion presented by the specifications. Indeed, Belletti et al. (2016) argue that less demanding specifications in terms of practices and control tend to allow for better participation and greater use of the GI by producers. However, this type of specifications may not contribute to achieving differentiated quality, which is of interest to consumers and for which they might be willing to pay a premium. Conversely, stricter specifications may lead to the risk of exclusion of some producers but can also strengthen the capacity for collective management of the GI (Fournier 2015). The (strict) rules of the specifications in this case allow for the construction of highly specific quality, establishment of the product's reputation, and potentially producing added value that is more interesting for the actors. This interest subsequently encourages them to establish rules for good collective management. Furthermore, it is important to emphasize that the pursuit of specific and superior quality that induces technological change and requires innovation and/or investment could indirectly exclude certain actors from using the GI. In this situation, the specifications fail in their role to incentivize and strengthen the collaboration and coordination of actors, as Fournier (2008) suggests.

Top-down approach: limiting the involvement of certain actors in collective action

While in Europe, the registration process of a GI results from a collective request by a group of value chain actors, In Southern countries, however, the GI initiative and/or the registration request may come from actor externals to the value chain, such as the government (Carimentrand et al. 2019). This may be driven by national policy of the country incentives related to the TRIPS Agreement. In such cases, the government may play a significant role in the GI's trajectory, both in the registration process and in its development. However, this top-down approach does not always promote the real involvement of producers and the consideration of their interests in the process. This approach poses two significant risks to the development of the GI and the potential impacts it will generate. The first risk is the difficulty for producers to take ownership of the GI when they are supposed to be its legitimate users. Medeiros and Passador (2022) raise the issue of GI internalization. Indeed, insufficient involvement of producers in the process would explain the low appropriation of the GI, which adds to a lack of consideration for the interests of producers in the construction of the GI, which could discourage them from using it.

Insufficient participation of producers in the elaboration of rules (specifications) poses a risk of some producers from benefiting from the label. The use of a top-down approach in the construction of the specifications may favor modern practices or techniques distant from traditional practices and inadvertently or purposely favor certain actors who have the most influence in the process. Thus, the group of actors who can follow only modern techniques can benefit from the advantages offered by the GI. This situation occurred in the case of the Nicaraguan cheese Queso Chontaleno, where the specifications, whose registration was accompanied by international organizations, did not correspond to the interests of traditional producers who were not sufficiently involved in the process (Mancini 2013). The case of Mèo Vac mint honey, whose registration was initiated by the central government of Vietnam, also reflects this lack of consideration for traditional practices. The specifications, whose construction did not sufficiently involve traditional honey gatherers, required the use of wooden hives that did not correspond to the traditional practices of beekeepers, resulting in their implicit deprivation of the use of the GI (Fournier et al. 2018). The same goes for tequila GI where modern methods and industrial techniques were imposed to be able to use the GI. The exclusion caused by the specifications had negative consequences on the economy of excluded households (Bowen and Valenzuela Zapata 2008). Instead of being a development tool, the GI contributed to impoverishing these categories of producers. Galtier et al. also report the case of GI coffee from the Dominican Republic where some producers are victims of the rules elaborated which were little focused on local production and thus caused exclusion (Galtier et al. 2013).

Construction of producer organizations: What traps to avoid?

GI approach not based on trust and social cohesion

The requirements for registering GIs in the Global South vary greatly from one country to another (Marie-Vivien et al. 2019). In the case of African countries enrolled in the Bangui Agreement of OAPI, registration must be done through a structure or collective organization formed by producers and/or stakeholders in the sector. In this scenario, the

GI process will encourage the creation of this GI organization. However, even if membership in the organization is voluntary, it does not guarantee the success of CA in the absence of trust among members or shared past experiences that demonstrate the reciprocity of members' commitment. Nevertheless, trust and reciprocity are norms that contribute to strengthening CA according to (Ostrom 1998), and building trust requires time and interaction. This explains the difficulty of CA in the early stages of establishing a GI. The work of Quinones reinforces the limitation of this top-down approach for CA development in organizations carrying the GI. She argues that working with an existing producer organization where social cohesion and trust are already established prior to the GI project encourages producer participation and facilitates rule acceptance (Quiñones-Ruiz et al. 2016). The top-down approach adopted in setting up GIs in the Global South, which have a weak tradition of CA (Bowen, 2012 as cited in (Cardoso et al. 2022), can be a significant factor contributing to the failure of CA within a GI process.

Group heterogeneity

Issues related to inequitable distributions of values created by GIs sometimes hinder the GI from fulfilling its role as a development tool. It has been previously mentioned that actors with greater negotiation power and resources obtain more benefits in certain GIs, either directly through value-added sharing or indirectly through their influence in rule-making.

Further examination of this issue reveals that this imbalance reflects the heterogeneity among GI users within the collective organization of the GI. Various studies support Ostrom's emphasis on this factor, explaining how crucial it is for the outcomes of CA within a GI framework. Quinones-Ruiz et al. confirm that actor heterogeneity is one of the factors influencing the collective outcomes of CA in GI processes (Quiñones-Ruiz et al. 2016). Dentoni et al. (2012) specify that this heterogeneity covers various aspects such as actor characteristics, resources, and strategies. Bramley and Bienabe (2013a) also confirm that collective decision-making within a GI is influenced by the relationships and dynamics among different actor profiles, and that a balanced representation of these profiles positively impacts the equitable distribution of GI profits.

In Africa, legal texts at the level of OAPI and certain ARIPO countries, such as Uganda have integrated "representativeness" as a criterion to be included in the constitution of the collective organization that registers and manages the GI (AfrIPI 2022). The objective is not only to avoid forms of exclusion but also to ensure that the interests of each type of producer can be defended. However, it is interesting to explore, through the analysis of the impacts of GIs implemented within this framework, the feasibility of establishing such collective organizations and to what extent this criterion impacts CA and profit distributions among GI users.

Institutional support for GIs: what challenges does GI development in the Global South face?

As an innovation in the Global South, and specifically in Africa, the establishment of GIs requires support, and since the State often initiates this innovation, the responsibility falls on it. Faure et al. (2018) argue that for innovations to be adopted, the actors initiating the innovation should provide the space and resources for key actors to do so.

Nonetheless, GI adoption experiences in the Global South have demonstrated that institutional weaknesses limit State intervention and support for GIs, even in cases when the initiative is included in national policy (Bowen 2010 cited in Bramley 2011). This lack of intervention contributes to the failure of GIs as innovative development tools. It is characterized by the State's lack of involvement in benefit-sharing control, support for access to information for GI actors, and the absence of policies or instruments promoting GI development and promotion (Bowen 2010; Galtier et al. 2013). Additionally, quality control in the Global South is also affected by institutional gaps. The absence of certification bodies in the Global South places this responsibility on states, which themselves are limited in this area.

This institutional weakness is partly due to the high cost associated with protecting and developing GIs, from establishing institutional frameworks to monitoring and controlling GIs and the market, as well as the cost of protecting GIs in other countries or regions (Bramley 2011).

Even though the emergence of GIs in some Global South countries has been financially supported by international donors, the successful development of GIs also depends on the financial empowerment of GI Organization and the financial capacity of States to support GIs and their protection both domestically and internationally. The expenses related to GIs, however, ought to be viewed as an investment because, given the economic advantages of GIs at different levels, GIs continue to be relevant innovations for Global South countries if certain conditions are satisfied.

Conclusion

The internationalization of GIs since their recognition by the WTO has presented an opportunity to address economic, social, and environmental challenges for countries in the Global South, notably in Africa, due to the capacity of this quality label to establish sustainable development. The emergence of GIs in these countries has been perceived as a multifaceted innovation: primarily agricultural because they standardize agricultural practices according to specifications established by the actors themselves, which may or may not require changes in practices, but they are also innovations at the level of the value chain and the territory through the changes in coordination modes they generate among actors at these different scales.

This article aimed to shed light on the success factors of these innovations. Based on a literature review and theoretical analysis, an economic impact pathway was constructed. We centered it around the question of collective reputation, which was identified as the main resource to be managed collectively. We have shown that four collective action situations emerge along this impact pathway, for GI registration, product qualification (collective reputation improvement and protection), value chain construction and territorial anchoring. Our analysis of these collective action situations has enabled us to shed light on their success factors.

Finally, we were able to identify certain trends in the development of GIs in developing countries that do not appear to guarantee the success of these collective actions. The identified factors include trade-offs that are often lead to exclusion, the construction of organizations driven without consideration for the cohesion and homogeneity of the

groups, and insufficient institutional support. These factors are therefore constraints on GIs fulfilling their role as a development tool.

Taking these factors into account allows for better adjustment of approach in GI implementation projects in the Global South, particularly in Africa, which is rapidly expanding in terms of GIs. The new methodology that this article proposes for analyzing GI success factors, entirely focused on resolution of collective action situations, may help local economic actors and decision-makers, once empirical validation of these success factors has been achieved through case studies.

Abbreviations

ARIPO	African Regional Intellectual Property Organization
BoD	Board of Directors
CA	Collective Actions
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
GIs	Geographical Indications
LAFS	Localized Agri-Food System
OAPI	Organisation Africaine de la Propriété Intellectuelle
PAMPIG	Projet d'Appui à la Mise en Place des Indications Géographiques
SCA	Situation of Collective Actions
TRIPS	Trade-Related Aspects of Intellectual Property Rights Agreement
WTO	World Trade Organization

Acknowledgements
Not applicable

Author contributions
MR contributed to conceptualization, literature search, methodology, formal analysis, writing—original draft, and writing—review. SF contributed to conceptualization, literature search, methodology, writing—review, supervision, and validation. ML contributed to conceptualization, literature search, writing—review, supervision, and validation. All authors read and approved the final manuscript.

Funding
We kindly acknowledge the French Development Agency (AFD) for funding this research as part of the Facilité IG .

Availability of data and materials
Not applicable.

Declarations

Competing interests
The authors declare that they have no competing interests.

Received: 19 March 2024 Revised: 20 November 2024 Accepted: 15 December 2024
Published online: 29 December 2024

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