

Influence of social and spatial embeddedness on rural entrepreneurship in the Amazon: a study with a Brazilian tribe' enterprising Indians

Victor Silva Corrêa, Ana Paula Pricila Costa Abreu and
Mauro Vivaldini

*Postgraduate Program in Business Administration, Paulista University – UNIP,
São Paulo, Brazil, and*

Marina de Almeida Cruz

*Postgraduate Program in Business Administration,
Unihorizontes University Centre, Belo Horizonte, Brazil*

Abstract

Purpose – This study aims to investigate the influence of social and spatial embeddedness on indigenous rural entrepreneurship in Amazon/Brazil. Rural entrepreneurship has increased in recent years. Some studies have focused on the relevance of spatial embeddedness in understanding this phenomenon, whereas others have highlighted the importance of social embeddedness. Although some scholars have associated both construct dimensions to understand rural entrepreneurship in developed economies, such an association remains scarce when considering both emerging and developing contexts.

Design/methodology/approach – The strategy was qualitative, using the integrated case study method. The case was the Paiteir-Suruí indigenous tribe in the Amazon region, Brazil, recognized for the entrepreneurship of their community. Fourteen indigenous rural entrepreneurs participated in the study.

Findings – Field data show that entrepreneurs embed themselves in dense social networks that influence their decisions, including those involving the creation of enterprises. In addition, entrepreneurs are deeply embedded in rural territoriality (spatial), impacting how they create and seek to develop their own ventures.

Originality/value – The study of an empirical context that is still poorly explored has made two main contributions to the social and spatial embeddedness literature. First, evidence shows social influence on spatial embeddedness and vice versa, suggesting the need to integrate both perspectives. Second, this study contributes to the literature on rural entrepreneurship by shedding light on novel strategies for developing such enterprises. In addition, this study emphasizes the relevance of investigating the challenges that hinder rural entrepreneurial development in emerging and developing contexts.

Keywords Rural entrepreneurship, Embeddedness, Place management

Paper type Research paper



1. Introduction

Rural entrepreneurship has recently grown (Bakas *et al.*, 2019; Ghouse *et al.*, 2021; Müller and Korsgaard, 2018; Muñoz and Kimmitt, 2019; Pato, 2020; De Rosa *et al.*, 2019; Shrivastava and Kumar Dwivedi, 2021). “Indeed, rural entrepreneurship has emerged as one of the most potential tools for inducing the development of rural areas” (Pato, 2020, p. 210).

On some occasions, it surpassed the rate of entrepreneurship in urban areas (Fortunato, 2014; Pato and Teixeira, 2016). Indeed, Pato and Teixeira (2016) and De Rosa *et al.* (2019) emphasize how rural entrepreneurship positively affects job creation and well-being in rural areas. In addition, it can help overcome different challenges related to the institutional fragility of regions in emerging and developing countries (Marques *et al.*, 2019; Müller and Korsgaard, 2018; De Rosa *et al.*, 2019). Furthermore, several authors stress how rural entrepreneurship can reduce regional poverty (Gyimah and Lussier, 2021; Korsgaard *et al.*, 2015; Marques *et al.*, 2019; Montiel Mendez and Pelly, 2021; Si *et al.*, 2020). Thus, the growth of rural entrepreneurship has drawn the attention of scholars in this area (Muñoz and Kimmitt, 2019; Pato and Teixeira, 2018; De Rosa *et al.*, 2019).

However, there is still a lack of conceptual consensus in studies in this area (Gaddefors and Anderson, 2019; Pato, 2020; Pato and Teixeira, 2018; De Rosa *et al.*, 2019). Indeed, Pato and Teixeira (2018) highlight how the “clear definition of rural entrepreneur may not exist.” While some authors emphasize an indifference to rural entrepreneurship concerning that conducted in urban areas (Fortunato, 2014), others emphasize the need to consider the importance of the spatial context and also social networks in which entrepreneurs are embedded (Corrêa *et al.*, 2018; Gaddefors and Anderson, 2019; Galvão *et al.*, 2020; Müller and Korsgaard, 2018; Pato, 2020). For instance, Müller and Korsgaard (2018) highlight how rural entrepreneurship is a multifaceted spatial phenomenon in which “rural entrepreneurs are enabled and constrained by their immediate local spatial context.” Muñoz and Kimmitt (2019) emphasize how scholars should understand entrepreneurship as a social form embedded in rural areas. “This is relevant because the entrepreneurial process can be modified in line with or in pursuit of community objectives, which in turn facilitates the emergence of new business opportunities” (Muñoz and Kimmitt, 2019, p. 23).

On the one hand, although the relational theme fosters rural entrepreneurship literature, it does so often indirectly in efforts to conceptualize a better phenomenon (Gaddefors and Anderson, 2019). On the other hand, Korsgaard and Müller (2015) have highlighted how “research has paid less attention to the impact of the spatial context.” Moreover, studies addressing the association between relational and spatial embeddedness in an empirical context are rare. Even the few studies that have associated both themes specifically in rural entrepreneurship have focused on developed economies and contexts (Anderson and Obeng, 2017; Muñoz and Kimmitt, 2019). Much of the literature on rural entrepreneurship originates in Western cultures (Anderson and Obeng, 2017; Chitsaz *et al.*, 2019; Romero-Castro *et al.*, 2022). Pato and Teixeira (2016) emphasize how the theme of rural entrepreneurship is a European concern, mainly in the UK, Spain, Finland, Greece and other developed countries such as the USA. For example, although McKeever *et al.* (2015, p. 50) examined the “ways in which entrepreneurs engage with place and community,” associating reflections on embeddedness, the authors investigated two communities in Ireland, an advanced economy, according to the International Monetary Fund (Fund, 2020).

Despite their relevance, studies on spatial and social embeddedness in rural entrepreneurship in emerging and developing countries are scarce. To the best of our knowledge, no study has sought to understand rural entrepreneurship in Brazil, as expressed by the role played by enterprises from tribal communities in the Amazon. According to Müller and Korsgaard (2018), if entrepreneurs in impoverished countries and developing economies are restricted to local resources in a stronger way than rural entrepreneurs in developed countries, this aspect should be the subject of further research. Then, according to Pato and Teixeira (2016, p. 3), “given the rural entrepreneurial potential represents for less developed and underdeveloped countries, more research on the topic targeting these countries is imperative.” This study seeks to fill this research gap. Through

qualitative research using the integrated case study method, the authors investigated indigenous rural entrepreneurs from an Amazonian tribe called Paiter-Surui. The choice of case was intentional. Overall, 14 entrepreneurs from the tribe, responsible for the creation of different local enterprises, constituted observation and empirical units of analysis. The objective was to investigate the influence of social and spatial embeddedness on indigenous rural entrepreneurship in Amazon. Consequently, the following research questions arise:

RQ1. How do social and spatial embeddedness influence indigenous rural entrepreneurship in Amazon/Brazil?

This study makes essential contributions in answering this question. First, at a theoretical level, this study expands our understanding of the combined influence of social and spatial embeddedness on indigenous rural enterprises. In doing so, it draws attention to the underemphasized relevance of understanding both pieces of literature in an integrated and interdependent manner. Moreover, this study has political, practical and managerial implications in the empirical sphere, and can foster rural entrepreneurship in emerging and developing contexts.

2. Theoretical background

2.1 Urban undertakes, enterprises in rural areas and rural undertakes

Although remarks on rural entrepreneurship date back to research conducted before 1980, it was only during this decade that studies on the topic increased (Bernardo *et al.*, 2018; Pato and Teixeira, 2016). Since then, studies have flourished, particularly in Europe and the USA (Gaddefors and Anderson, 2019; Mahn *et al.*, 2022). Although rural entrepreneurship is a well-established field of research in Europe, scholars understand it as an extension of agriculture and tourism in North America (Gaddefors and Anderson, 2019).

Although the difference between urban and rural enterprises may seem obvious, in practical terms, the distinction between them is arbitrary (Pato and Teixeira, 2018). While Henry and McElwee (2014) argue that there are few differences between rural and urban developments, Pato and Teixeira (2018) and Fortunato (2014), in turn, highlight how exogenous factors, such as location, natural resources and economic environment, among others, impact the trajectory of companies in both contexts. Whether the contrast between urban and rural enterprises is not consensual, another subtle distinction has caught the attention of studies in the field: rural enterprises, the type of enterprise that is the focus of this study and that Pato (2020) calls “pure rural entrepreneurship” from those in rural areas (Pato and Teixeira, 2018):

The problem is that often studies do not recognize the increasing diversity of entrepreneurial activities in rural areas, and diminish the fact that rural entrepreneurial activities can exist in the rural space in a diversity of forms (Pato, 2020, p. 211).

Enterprises in rural areas engage only in an immediate spatial context with a place for their activities, using the same economic logic of search for profit adopted in other productive contexts. Such enterprises may be associated and not restricted with neo-rural movements (Dal Bello *et al.*, 2022a, 2022b; Quirós, 2019; Schwake, 2021), a counter-urban process, and “a post-industrial phenomenon that includes the immigration of middle-class and upper-middle-class city dwellers to rural areas.” (Schwake, 2021, p. 237). Many new-rural groups move from urban centers interested in improving their living standards and may look to entrepreneurship as a path to this realization (Schwake, 2021). Indeed, “whether passion, economic need or survival factors drive neo-

rural people to leave their city or origin country, many settle in regions on which others have already converged as micro-entrepreneurs” (Dal Bello *et al.*, 2022b, p. 901). Enterprises in rural areas seek economic advantages from businesses and entrepreneurs in rural areas. The expected results of the business disregard aspects such as the local population’s well-being or the development of rural regions. There is little involvement or engagement with rural locations that are weakly embedded in the rural context. This condition does not mean that a rural enterprise does not generate benefits for the rural space; instead, such benefits are not sought or desired by the enterprise (Gaddefors and Anderson, 2019; Korsgaard and Müller, 2015; Pato and Teixeira, 2018).

Several authors have defended how rural enterprises seek and engage with their spatial location as a space for profit, “place” of meaning and social life (Korsgaard and Müller, 2015; Pato and Teixeira, 2018). According to Korsgaard and Müller (2015, p. 13), “rural entrepreneurship thus is conceptualized as an entrepreneurial activity that engages with its spatial context and is embedded in its spatial context through resource use.” Such enterprises and entrepreneurs seek profits in rural spaces and create value in the rural context. They develop an intimate relationship between entrepreneurial activities and the places in which they are embedded. In other words, the development process of an enterprise is mixed with the rural context in which it is embedded:

In this sense, it is fundamental to recognise, that while several ventures in the rural are really rural, since they present “pure rural characteristics”, others only appear more or less casual in the rural space (Pato, 2020, p. 211).

These reflections suggest the following research proposition:

- P1. Rural entrepreneurs engage in immediate local spatial contexts. Their ventures seek profit and value creation in the rural context in which they are embedded.

Rural enterprises have local relevance as they also create value for the community (Dong *et al.*, 2021; Muñoz and Kimmitt, 2019; Pato and Teixeira, 2018). However, unlike enterprises in rural areas, rural enterprises use local resources in their production processes, privileges and rural development to the detriment of others, even if they are economically attractive from a rational perspective (Abilova *et al.*, 2021; Korsgaard and Müller, 2015; Pato and Teixeira, 2018). Indeed, Korsgaard and Müller (2015, p. 7) have emphasized how “rural entrepreneurship draws on the innate (natural, cultural, historical, human, social and/or financial) resources of a place which the venture needs to support its development.” In this sense, rural entrepreneurs adopt three fundamental strategies to develop their enterprises. The first involves increasing the value of a production unit, such as in organic agriculture. The second strategy involves expanding activities, such as agro-tourism. Such activities are usually associated with and found at the interface between society, community and biodiversity. The third strategy is called regrouping. In this case, rural enterprises have changed their original performance. For example, traditional agricultural companies invest in tourism and energy production (Korsgaard and Müller, 2015). Consequently, the following research propositions have emerged:

- P2. Rural entrepreneurs privilege local resources (natural, cultural, historical, human, social and/or financial) to their enterprises.
- P3. Rural entrepreneurs adopt three strategies to develop their enterprises: increasing production value, expanding activities and regrouping.

Note that all three strategies imply an entrepreneur's embeddedness in the local context, emphasizing the importance of understanding and valuing rural materiality.

2.2 Importance of context in rural entrepreneurship

Much of the research on entrepreneurship seeks to understand the role of social contexts and their influence on entrepreneurial activities (Gaddefors and Anderson, 2019; Pato, 2020; Shrivastava and Kumar Dwivedi, 2021; Wilkerson *et al.*, 2022). The same is true in some studies on rural entrepreneurship. Indeed, "a rural entrepreneur is someone who is embedded in the rural space." (Pato, 2020, p. 212). Although it remains an incipient field of research (Gaddefors and Anderson, 2019; Shrivastava and Kumar Dwivedi, 2021), several authors have shed light on the relevance of context to this type of entrepreneurship in recent years (Gaddefors and Anderson, 2019; Müller and Korsgaard, 2018; Shrivastava and Kumar Dwivedi, 2021). For example, Lang and Fink (2019) highlight how local resources are critical to the development of such ventures. According to Müller and Korsgaard (2018, p. 228), rural enterprises are complex, in which "spatial context frames and influences the entrepreneurial process." Even because if we consider the dichotomy between enterprises in rural areas versus rural enterprises as valid, i.e. "if we follow the idea that the rural shapes enterprise, [...] there is an inference that the context profiles enterprise deterministically" (Gaddefors and Anderson, 2019, p. 160). However, Gaddefors and Anderson (2019) defend the existence of different approaches or levels of analysis in the context and their influence on rural entrepreneurship, each of which prompts complementary research. Two of these approaches stand out, social and spatial. In this context, the literature on social and spatial embeddedness is relevant. Indeed, Korsgaard *et al.* (2015, p. 574) have argued as "several streams of research into entrepreneurship have identified contextual phenomena, including embeddedness, where an actor's contextual ties facilitate access to contextually bound resources."

2.3 Social and spatial embeddedness in rural entrepreneurship

Although the literature on embeddedness finds its origins in classic authors, such as Polanyi (2001), it was from the classic article by Granovetter (1985), considered the founder of the "New Economic Sociology," those reflections on the topic gained particular importance (Corrêa *et al.*, 2022; Stamm, 2021). The author reinterpreted the concept of "social embeddedness," defending the idea that the network relationships in which the entrepreneur is embedded influence all actions, including economic ones (Corrêa *et al.*, 2022; Stamm, 2021). According to Granovetter (1985), behaviors and institutions are compelled by ongoing social relationships and interpreting them as independent elements is a profound misunderstanding. "This mixing of activities is what I have called "social embeddedness" of the economy—the extent to which economic action is linked to or depends on action or institutions that are non-economic in content, goals, or processes" (Granovetter, 2018, p. 48). Pato and Teixeira (2016) emphasized how embeddedness is a prominent sub-topic in rural entrepreneurship. The following proposition emerges:

- P4. Rural entrepreneurs are embedded in networks of relationships that influence their actions, including economic ones.

In addition to social embeddedness (Baù *et al.*, 2019), studies on rural entrepreneurship have particularly emphasized another type of embeddedness, spatial, also called by some authors "placial embeddedness" (Baù *et al.*, 2019; Clausen, 2020; Muñoz and Kimmitt, 2019; Shrivastava and Kumar Dwivedi, 2021). Indeed, Gaddefors and Anderson (2019) point out

how the “rural” has spatial, social and economic boundaries. While embeddedness, as in [Granovetter’s \(1985\)](#) perspective, incorporates reflections on social and economic aspects, advancing the intersection between them, spatial embeddedness has recently extended the understanding of rural entrepreneurship to new frontiers ([Baù *et al.*, 2019](#)). Spatial or placial embeddedness suggests rural entrepreneurship embodies something beyond entrepreneurial activity: “a ‘value-added’ that has to do with the socio-spatial category of the rural” ([Korsgaard and Müller, 2015](#), p. 6). Spatial embeddedness suggests intimate knowledge of and concern for a place ([Baù *et al.*, 2019](#); [Clausen, 2020](#); [Muñoz and Kimmitt, 2019](#); [Shrivastava and Kumar Dwivedi, 2021](#)). This is primarily related to the entrepreneur’s concerns, including the well-being of local communities ([Gaddefors and Anderson, 2019](#); [Korsgaard and Müller, 2015](#)). For [Gaddefors and Anderson \(2019, p. 169\)](#), “rural entrepreneurship is likely best conceived as those activities where entrepreneurship interacts and engages with contexts.” Again, the concepts of space and place are prominent.

In a broad sense, space is the “processes of movement and mobility, and place as fixation or pause” ([Korsgaard and Müller, 2015](#), p. 9). While space is more abstract, a kind of network that develops owing to the movement between places, denoting displacement, place, in turn, is associated with something deeper, in which qualities, experiences, values and meanings are associated. “Place is experienced through intimate dealings with surrounding objects and people, exemplified through the infant child’s experience of the mother as a ‘safe place’” ([Korsgaard and Müller, 2015](#), p. 9). The duality between space and place has recently been addressed in research in various fields such as migration ([Corburn *et al.*, 2020](#); [Schewel, 2020](#)), geography ([Grillitsch and Sotarauta, 2020](#)), tourism ([Chua *et al.*, 2021](#); [Romão, 2020](#)), etc. For scholars who understand space and place from economic and social perspectives, both concepts denote the two faces in a spatial context ([Korsgaard and Müller, 2015](#)).

First, space is related to the economic evaluation of a location, essentially based on its capacity for profit. Therefore, space is dominated by economic aspects and relates to work, capital flow, resources and other concerns associated with profit optimization or companies’ accumulation of economic value. Place denotes the evaluation of a place concerning experiences and life. Place relates to the set of meanings and experiences, materials and social practices that characterize and make the place unique. [Korsgaard and Müller \(2015, p. 9\)](#) highlight how the “place is experienced through intimate dealings with surrounding objects and people, exemplified through the infant child’s experience of the mother as a ‘safe place’.” Places are created and continually recreated through the interactions and meanings of the people who constitute them. In this sense, a place results from practices in that place and the relationships associated with it. “As a consequence, places can be unique, have unique qualities, and become meaningful to those who feel attached to them” ([Korsgaard and Müller, 2015, p. 9](#)).

According to [Korsgaard and Müller \(2015\)](#), genuine and successful rural entrepreneurship results from the virtuous cycle between space and place. This virtuous cycle comprises dual and complementary dynamics. On the one hand, entrepreneurs extract value from the place by using and recombining local resources. Extracting and combining local resources generates tradable and transferable products in local and non-local markets is called “codification.” In other words, “coding results in a transformation of the place from which the codified resources were drawn” ([Korsgaard and Müller, 2015, p. 17](#)). On the other hand, rural entrepreneurs seek to create new products and services, ultimately adding value and providing positive feedback to the local environment. Creating goods and services that seek to contribute to the local context is called “re-valorization.” While codification is the process that connects “place” to “space,” re-valorization is the process that reconnects

“space” to “place.” According to the authors, a “virtuous cycle is achieved when the extraction of value leads to a re-valorization of the rural place in that the local resource base has been enriched” (Korsgaard and Müller, 2015, p. 17). Figure 1 illustrates the proposed reflection. The reflections presented, thus, far suggest the following research proposition:

- P5. Rural entrepreneurship results from a dynamic and virtuous cycle between space and place, manifested in revalorization and codification processes.

3. Method

3.1 Design

The methodological strategy is qualitative and more suitable for an in-depth understanding of empirical phenomena (Azungah, 2018; O’Kane *et al.*, 2021). Qualitative research allows informants to use their own words to describe their concepts and experiences, enabling them to understand and interpret the empirical context (Rashid *et al.*, 2019). This was a descriptive, single-case study. Several authors have emphasized the adequacy of research with single-case designs (Eisenhardt *et al.*, 2016; Ridder, 2017; Yin, 2018). For instance, Ridder (2017) highlighted the advantage of single-case studies that allow the researcher to conduct a detailed descriptive analysis and better understand “how” things happen. “In single case study research, the opportunity to open a black box arises by looking at deeper causes of the phenomenon” (Ridder, 2017, p. 282). In addition, single cases make it possible, as proposed here, to identify relationship patterns and to create, extend and test new theories. By associating two complementary theoretical approaches, namely, social embeddedness and spatial embeddedness, this study seeks, among other aspects, to qualitatively investigate the associations and connections between them. The case was the entrepreneurship of the indigenous tribe of the Paiter-Surui people in the Amazon/Brazil region.

3.2 Case description

The Paiter-Surui tribe covers 248,146.9286 hectares, 95% preserved in the Brazilian state of Rondônia and Mato Grosso in the Amazon region. The tribe has 28 villages which are scattered along indigenous lines. The name “lines” is standard in the area and symbolizes marked plots during colonization and territorial expansion projects. In other words, roads

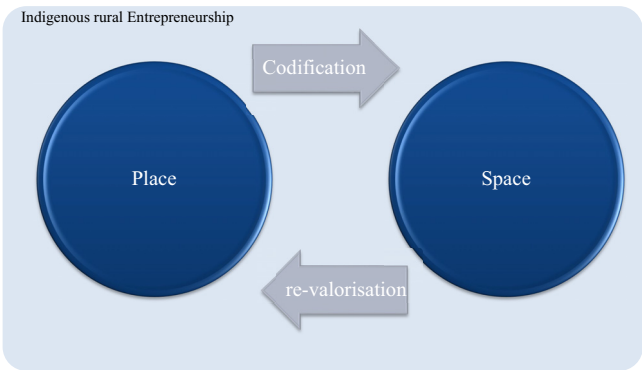


Figure 1.
Dynamics associated
with rural
entrepreneurship
between place and
space

Source: Created by authors

provide access to previously inaccessible places that geographically demarcate a region. The population of each village is variable, and one can find villages with approximately 45 people and others with hundreds. The authors selected as empirical units of analysis village number 14, the largest of them all, with approximately 40 families in all. The tribe is located in a region with three types of forest cover: dense tropical forests, ecological stress areas and open tropical forests. The climate of the region is predominantly tropical, warm and humid. The Indians call themselves Paiter, which in Portuguese means real people ourselves. Paiter-Suruí is a native language. The Paiter-Suruí Indian people are recognized locally and nationally for the entrepreneurship of their population of about 1,700. The local and national press published reports on local entrepreneurs and businesses. For example, several of them have won national awards related to, among others, the quality of the coffee produced, in addition to the recognition associated with banana production, Brazil nut extraction, babaçu, handicrafts, medicinal plants and tourism. This article provides images of the products and services offered by the entrepreneurial Indians who participated in this study. The photos are accessible through DOI 10.6084/m9.figshare.22329214.

3.3 Case delimitation

The single case was of integrated type. Two empirical units made up the case: the social and spatial embeddedness of the tribe entrepreneurs. In addition, 14 local entrepreneurs formed observation units, providing information on the empirical units of analysis and the case. In this study, an entrepreneur is someone who opens a business, whether formal or informal (Corrêa *et al.*, 2022). Accessibility and snowball technique, in which entrepreneurs showed new potential interviewees, guided the selection of cases (Ramadani *et al.*, 2019; Schlepphorst *et al.*, 2020). However, the interviewees' numbers were based on theoretical saturation, in which the inclusion of new observation units did not provide additional information to understand the case (Yin, 2018). Table 1 provides general information on the observation units and their enterprises, emphasizing the use of pseudonyms (#IRE1 to #IRE14) for ethical reasons.

3.4 Instruments

Data collection was conducted through in-depth semi-structured interviews. Several authors have emphasized the relevance of this technique to qualitative studies and case studies

Pseudonym	Gender	Business' branch
#IRE1	Male	Production of chestnuts and specialty coffee
#IRE2	Male	Crafts and food products
#IRE3	Male	Production of chestnuts and specialty coffee
#IRE4	Female	Specialty coffee and banana production
#IRE5	Male	Tourism
#IRE6	Male	Extractivism (Babaçu)
#IRE7	Male	Tourism
#IRE8	Male	Tourism and handicrafts
#IRE9	Female	Crafts and trade association
#IRE10	Male	Banana and specialty coffee production
#IRE11	Male	Medicinal plants
#IRE12	Male	Extractivism (Babaçu) and specialty coffee
#IRE13	Female	Craftsmanship
#IRE14	Male	Production of chestnuts and specialty coffee

Source: Created by authors

Table 1.
Characteristics of
interviewed
entrepreneurs

(Ebneyamini and Sadeghi Moghadam, 2018; Lawrence, 2020). Indeed, Lawrence (2020, p. 2) points out that the interview is “the basic mode of inquiry in qualitative research.” In this sense, Ebneyamini and Sadeghi Moghadam (2018) emphasized how in-depth interviews allow researchers to understand study participants’ different points of view. The authors recorded over 8.4 h (about three and a half days) of interviews, transcribing them literally. Table 2 details the interview script, breaking it down from the study’s aim to the propositions that guided evidence collection.

3.5 Data operationalization and analysis

Overall, the authors conducted 19 interviews with 14 local entrepreneurs, five of which were conducted more than once. In other words, of the 14 interviewees, more than one interview was conducted with five. There are two main reasons for this result. The first was the length of the interviews, due to language. Given the difficulty in understanding some of the interviewees, as their native language was Paiter-Surui, some interviews had to be conducted more than once to understand the entire proposed script. In these cases, a translator from the tribe participated in the data collection. The second reason is the data collection period during the Covid-19 Pandemic. This factor made it impossible to access the tribe, which was inaccessible to outside visits for health reasons. All interviews were

Study aim	Research proposition	Open question
<i>Investigate how do social and spatial embeddedness influence indigenous rural entrepreneurship in Amazon/Brazil?</i>	<i>P1:</i> Rural entrepreneurs engage in immediate local spatial contexts. Their ventures seek profit and value creation in the rural context in which they are embedded <i>P2:</i> Rural entrepreneurs privilege local resources (natural, cultural, historical, human, social and/or financial) to their enterprises <i>P3:</i> Rural entrepreneurs adopt three strategies for developing their enterprises: increasing production value, expanding activities and regrouping <i>P4:</i> Rural entrepreneurs are embedded in networks of relationships that influence their actions, including economic ones <i>P5:</i> Rural entrepreneurship results from a dynamic and virtuous cycle between space and place, manifested in the revalorization and codification processes	<i>OQ1:</i> Why did you create your venture? <i>OQ2:</i> How does the local community influence your venture and vice versa? <i>OQ3:</i> What are your enterprise’s leading products and services? <i>OQ4:</i> How do you obtain the necessary inputs for the marketed products? <i>OQ5:</i> What do you do to grow your company? <i>OQ6:</i> How do family and community members influence this process? <i>OQ7:</i> How are the company decisions made? <i>OQ8:</i> Does anyone influence this process? Who and how? <i>OQ9:</i> What is the primary source of profit for enterprises? How do you seek to increase this number? <i>OQ10:</i> What is the relationship between enterprises and their communities? <i>OQ11:</i> Do developments benefit local communities in any way? How?

Table 2.
Interview guide **Source:** Created by authors

conducted in a public place, combined and scheduled in advance with the selected entrepreneurs. The authors took notes during the transcription, which helped analyze and discuss the data. After literal transcription, the authors categorized the data and followed the content analysis technique widely used in qualitative studies (Rashid *et al.*, 2019). The categorization was thematic, initially following the five theoretical propositions (P1-P5) that deductively guided the evidence collection. Indeed, the theoretical propositions derived from the literature guided the data collection. Ridder (2017, p. 13) states, “propositions or frameworks provide direction, reflect the theoretical perspective, and guide the search for relevant evidence.” In this sense, the theoretical propositions acted in two ways. Initially, it was a guide for the collection of evidence. Then, as a parameter, the authors performed the analytical generalization, which contributed to the studies in the area.

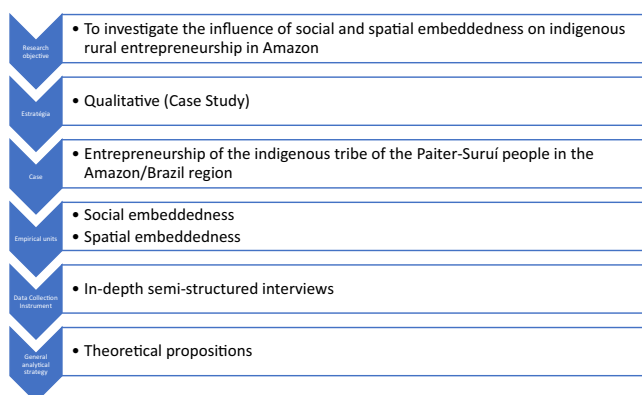
Rashid *et al.* (2019, p. 12) highlight how “theme generation and coding are the most recognized data analysis method in qualitative empirical material.” The authors categorized the evidence into five hierarchical thematic levels: the fifth being a decomposition or a sub-level of the fourth, the fourth level as a decomposition of the third and so on. Depending on the interviewees’ interpretations, each phrase or passage could be in more than one thematic category or subcategory. At the first level, this categorization process was deductive and inductive based on interpreting the study’s authors at the other levels. The process generated 329 records, grouped into 64 unprecedented categories formed by combining the categories of the five hierarchical levels. To increase the reliability and replicability of the study, Appendix presents the coding matrix detailing all 64 categories generated at their five corresponding levels. The general analytical strategy followed theoretical propositions in which the authors sought to extrapolate field evidence to the underlying literature (Yin, 2018). Figure 2 presents the methodological approach of the study.

4. Analysis and discussion

The analysis and discussion of the data will follow the thematic structure subdivided by the propositions that initially guided evidence collection (Yin, 2018).

P1: Rural entrepreneurs engage in immediate local spatial contexts. Their ventures seek profit and value creation in the rural context in which they are embedded

Field evidence supports Proposition 1 by simultaneously expanding it. First, empirical data shows how indigenous rural entrepreneurs deeply engage in their immediate local



Source: Created by authors

Figure 2.
Methodological
procedures

contexts (Korsgaard and Müller, 2015; Pato and Teixeira, 2018). Indeed, #IRE6 and #IRE7 emphasized how they would leave their ventures if they harmed the local tribe. “If it harms my community, I would not move forward with my business” (#IRE7). In this sense, although they seek profits from their ventures, they also aim to create value for their embedded community. Evidence suggests that pursuing value creation occurs in five main ways: mutual assistance, concern for the local community, maintenance of the local culture, preservation of indigenous territory and encouragement of production and the local economy.

The first was through a strong network of mutual assistance among the residents of the indigenous community (#IRE1, #IRE3, #IRE4, #IRE6, #IRE8, #IRE11, #IRE12 and #IRE14). This approach involves the following three fundamental dimensions: One of them relates to access to domestic funding (#IRE1 and #IRE3). #IRE1 emphasizes how the cooperative created a reserve fund to support entrepreneurial initiatives by local indigenous people. According to #IRE3, the idea is “to create a criterion in which the cooperative member will take part, like a public notice.” Another sphere of help includes entrepreneurs’ support for food subsistence in the community (#IRE1, #IRE4 and #IRE6). The practitioners of traditional family farming, #IRE8, highlighted how residents of the tribe faced food difficulties during the pandemic. In this sense, the “association sought resources and bought basic food baskets for families in the community.” Finally, note how mutual assistance encourages work (#IRE8 and #IRE14). For example, #IRE14 highlighted how he created a company to encourage the retention of young family members in the community. “I sell the nut because it will generate employment for my son within the community. He does not have to leave town.”

The second way entrepreneurs seek to create value for a community is a deep concern for the local community. For example, #IRE5 highlights how, unlike other eco-tourism companies with no limit on visitors, the number of visitors in the tribe is limited. “We have our audience. People can visit us, bringing no risk to our territory or culture.” Third, enterprises seek to create value through the maintenance and dissemination of local culture (#IRE1, #IRE2, #IRE5, #IRE6, #IRE8, #IRE9, #IRE11 and #IRE12). #IRE5 highlights how he created the company to “be a place to work to strengthen the local culture.” Note that the strengthening of culture has motivated the creation of enterprises. In this sense, #IRE8 emphasizes how the enterprise idea is “to work on the culture of the Paiter people. The aim of expanding the history and importance of Paiter culture.” The fourth form of value creation is the quest for entrepreneurs to preserve indigenous territory (#IRE1, #IRE2, #IRE4, #IRE5 and #IRE7). “This area here can be deforested. This area cannot be deforested. Each resident has a space where he can make his profit” (#IRE7). The fifth primary way to create value is to encourage local production. #IRE2 highlights how to buy from community producers to encourage indigenous production:

With each nut harvest, we choose a producer from which we will buy. They supply the product or the raw material for us, and we also help them sell their products.

P2: Rural entrepreneurs privilege local resources (natural, cultural, historical, human, social and/or financial) to their enterprises.

Field data confirm Proposition 2, detailing and expanding it to the indigenous rural context (Korsgaard and Müller, 2015; Pato and Teixeira, 2018). Indeed, entrepreneurs mainly use local resources to develop their enterprises, emphasizing three of them: natural and cultural, endorsing previous studies, besides tourism, identified here innovatively. Although scholars may understand tourism as a natural resource, the data suggest the relevance of highlighting it among the others, given entrepreneurs’ emphasis on its particular relevance.

These natural resources include Brazilian nuts, bananas, yams, cassava (#IRE1 and #IRE14) and coffee (#IRE4). Two aspects related to this type of resource are notable. First, entrepreneurs produce both sales and consumption (#IRE4). “The bananas we produce are for family consumption and business, so these things are going together.” The second relates to concerns about which natural resources should not be used. For example, #IRE9 emphasizes how “it does not work with animal feathers or teeth because we could cause harm to the fauna.

A second vital resource for entrepreneurs is culture, expressed mainly through handicrafts such as the production of necklaces and ceramics (#IRE5, #IRE8, #IRE9, #IRE11, #IRE13 and #IRE14). “Craft products arise from culture. Each person has their own culture, making handicrafts of various models according to people’s knowledge (#IRE13). This component has two essential features: The first is its hereditary dimension. “I have learned from my mother. Since I was a child, I saw and then taught her. Similarly, I do so with my daughters. It is a hierarchy of education, part of our culture.” The second characteristic is linkage with natural resources. “Our job is to maintain the forest because we depend on it for this raw material” (#IRE9). The third resource is tourism (#IRE5; #IRE8). “Over time, many curious people wanted to visit. At first, I denied it. Until one day, I accepted” (#IRE5). #IRE5 emphasizes how the work of indigenous tourism is new in Brazil, only allowed in 2016.

P3: Rural entrepreneurs adopt three strategies for developing their enterprises: increasing production value, expanding activities and regrouping

The field data corroborate the two strategies highlighted in the literature (Korsgaard and Müller, 2015). While the data suggest the relevance of strategies to increase production value and expand activities, with a particular emphasis on the former, evidence does not suggest that regrouping is a relevant strategy in the indigenous rural entrepreneurial context. Anecdotal evidence suggests that regrouping strategies require more significant planning and investment, possibly more common or prone in developed contexts than in emerging or developing countries such as Brazil. The main initiatives to increase production value by indigenous rural entrepreneurs are not using pesticides (#IRE3), thus, allowing the production of organic items (#IRE4 and #IRE6), the use of social media (#IRE2 and #IRE5), creating a quality seal (#IRE1) and appropriation of the storytelling technique (#IRE3).

For example, #IRE3 emphasizes how “farmers have got it into their heads that they cannot use pesticides.” #IRE4 highlights how organic production allows “the differentiation of our agribusiness.” Another way to increase production value is by indigenous people using the internet. They use this feature in two ways. The first is learning recipes online, which can be improved by using local resources. #IRE2 emphasizes how his wife learned to make stuffed bonbons from YouTube videos. After learning about this, she invested in producing chestnut bonbons and chocolates with chestnuts. The second is to use the internet as a resource to promote indigenous products. #IRE5 highlights how the dissemination of her work on social networks “has aroused the interest of people from various places in Brazil and other countries to want to come and meet.” The third practice was to create a quality seal for indigenous products. #IRE1 highlights how it is in the “phase of validating a green seal for our chestnut. As a result, we will have greater added value from the nut.” According to the entrepreneur, fair trade, recognized by specificity, can give indigenous products added value not identified in items produced elsewhere. “If we do not show this, no traditional market will give this value to these products.” Another practice used to add value to products is storytelling. “We share our stories. In the cafe itself. When we sell coffee, the product goes with the producer’s history, with a little history of making, harvesting, and drying it.”

In contrast to the strategies highlighted in the literature, this study also identifies the different strategies undertaken by indigenous entrepreneurs (Korsgaard and Müller, 2015). These strategies can be grouped into two main groups: those related to endogenous capacities, such as strategic planning (#IRE2, #IRE5 and #IRE6), investing in the purchase of local inputs (#IRE2) and training (#IRE1, #IRE2, #IRE7 and #IRE8). Another relates to improvements in skills exogenous to the tribe, such as exports (#IRE1, #IRE3 and #IRE6), making external partnerships (#IRE2, #IRE3, #IRE4, #IRE5, #IRE6, #IRE7, #IRE8, #IRE11, #IRE12 and #IRE14), investing in networks of relationships, including partnerships with cooperatives (#IRE1; #IRE9) and using the internet (#IRE2, #IRE5 and #IRE8). Among endogenous strategies, #IRE2, #IRE5 and #IRE6 emphasize the importance of strategic planning. “Just as other small companies here in the city have their strategic planning, their vision, so do we” (#IRE2). #IRE5 highlights how it has “business plans for handicrafts, chestnuts, tourism, coffee, and bananas. This manual guides us.” Another endogenous strategy indigenous people undertake is to invest in local inputs even when the selling price is not competitive. According to #IRE2, “when nut prices were between BLR 2.50 and BLR 3.00, I always bought BRL 6.00 from them.” The third endogenous strategy is investing in training. #IRE1 highlights how the cooperative is “planning to offer our community courses in entrepreneurship, financial education or cooperativism.”

Exports are an exogenous strategy emphasized by indigenous entrepreneurs. “We have already started transporting our coffee to Switzerland. I am sure that we would have sent it to other countries if it were not for the pandemic” (#IRE3). The second exogenous strategy widely identified in the field is the construction of partnerships with external entities. Among the institutions, the following stand out: the Brazilian Micro and Small Business Support Service (Sebrae; #IRE2); the coffee producer “Três Corações” (#IRE3, #IRE12 and #IRE14), as well as NGOs (#IRE11), international institutions (#IRE3; #IRE5), churches (#IRE5), university (#IRE5), Institute of Technical Assistance and Rural Extension (Emater; #IRE3) and government (#IRE3). A third exogenous strategy would strengthen relationships with indigenous entrepreneurial people from other tribes (#IRE9) and even create joint cooperatives (#IRE1). Finally, a crucial exogenous strategy is to use the internet as a market resource. #IRE2 highlights how “it has an Instagram® page. All our products are also via WhatsApp®.” In this sense, #IRE5 emphasizes how “she likes to browse the Internet and has discovered many things. For example, I met Airbnb® and registered with the Cultural Center. A month later, I received an email from a couple in Portugal interested in meeting them.”

4.1 The hidden side of rural entrepreneurial development: a reflection from an emerging and developing context

This study also advances novel reflections by recognizing different limiting aspects that antagonistically impact the development of entrepreneurs. Unlike in the context of developed countries, in which reflections on development strategies are partially sufficient, in emerging and developing countries such as Brazil, such reflections must also accompany, and in advance, equally important analyses on aspects that limit the development process of rural enterprises. Indeed, as highlighted by Müller and Korsgaard (2018), entrepreneurs from poor economies find themselves to be embedded in the restricted context of local resources. Therefore, the development process is two-sided. On the one hand, development strategies, such as those already addressed in the literature and expanded in this study. However, challenges that limit entrepreneurial growth remain poorly explored.

This article identifies several factors that limit the development of rural entrepreneurship. However, it is essential to note that the study of the limitations of rural entrepreneurship is not without precedents. Other investigations have already addressed

rural entrepreneurship's limitations and challenges (Feder and Nițu-Antonie, 2017; Fortunato, 2014; Korsgaard *et al.*, 2015). However, such studies focus mainly on developed contexts, which are far from the empirical reality investigated here. For example, Korsgaard *et al.* (2015) investigated small rural islands in Denmark, a developed country. Among the challenges identified in this study, the following stand out: funding (#IRE2, #IRE3, #IRE10 and #IRE12), lack of government support (#IRE3, #IRE4 and #IRE9), infrastructure (#IRE3), illegal exploitation of indigenous land (#IRE14), devaluation of artisanal products (#IRE8; #IRE9), prejudice (#IRE2; #IRE12) and more recently, the Covid-19 pandemic (#IRE3; #IRE7; #IRE9). Among these limitations, lack of funding stands out. "We still do not have credit from financial institutions" (#IRE2). According to #IRE3, "the land where we live belongs to the Union (Federal Government); unfortunately, we have no guarantee that we will repay the loan." According to the indigenous people, the second major challenge is the absence of government support. "We do not always have government support. So many bodies that work directly with indigenous people have to pass the demands on to the State's ministers." Another obstacle to entrepreneurial development is the illegal exploitation of indigenous lands. #IRE14 emphasizes how "many loggers wanted to cut down trees, and we would not let them. The logger got angry, and I took great care not to cut it down." #IRE8 and #IRE9's devaluation of artisanal products associated with prejudice against indigenous work (#IRE2, #IRE12) also harms businesses. Another major challenge is the Covid-19 pandemic. "In this pandemic, we were isolated; we suffered greatly." The empirical data suggests the emergence of a new research proposition.

P3a: The development of rural enterprises derives from a combination of development strategies and overcoming different challenges in emerging and developing countries.

P4: Rural entrepreneurs are embedded in networks of relationships that influence their actions, including economic ones.

Field evidence supports Proposition 4 (Granovetter, 1985, 2018; Pato and Teixeira, 2018). Indigenous entrepreneurs' networks directly influence their decisions, including economic ones (#IRE1, #IRE2, #IRE3, #IRE4, #IRE5, #IRE6, #IRE7, #IRE8, #IRE9 and #IRE11). Among the influence groups, Sebrae includes, as a community agent external (#IRE2), the family (#IRE2, #IRE8 and #IRE11), with emphasis on the closest relatives, and, above all, the tribal community (#IRE3, #IRE5, #IRE6, #IRE7, #IRE8, #IRE9 and #IRE11). When deciding on a business, #IRE2 stresses how he consults partners like Sebrae. He also counted his wife as support for the business. "My wife and I sit down and analyze whether we are moving our business forward or backward." #IRE11 also highlights the importance of the family nucleus. "When I started this project, I talked to my family; my father and mother, who are my advisers, asked them if it was possible to put the idea into practice." The community appears to have a significant influence on entrepreneurs' decisions. "Everyone is a partner and owner in the village" (#IRE7). According to #IRE3, the process occurs: "We sit down with the community, leaders and chiefs and hold an assembly. In it, we talk about the difficulty and decide together." #IRE5 also emphasizes "talk to the community as well, to see how best we can move our business forward." Finally, #IRE7 adds, "the idea is not always mine; I always look for my community."

P5: Rural entrepreneurship results from a dynamic and virtuous cycle between space and place, manifested in the revalorization and codification processes.

Empirical evidence confirms P5 (Korsgaard and Müller, 2015). Indigenous rural entrepreneurs assess and extract income from their professional activities from the space. #IRE5 highlights the importance of space and codification processes:

We need to understand that we need to work to eat. Today, our lives as indigenous people are no longer those we have had before contact. We live in a world where capitalism is, and we are part of that world.

According to the entrepreneur, “we need to work, harvest, produce to eat and sell simultaneously, so we need to keep up with these advances in the modern world.” Codification can occur through various initiatives. One of these involved pesticides in production (#IRE1 and #IRE11). “In the production of coffee, we use the same techniques as any other producer. The difference is that pesticides are not used” (#IRE1). Another implication is the creation of partnerships that allow producers to expand the market beyond the local area. #IRE1 exemplifies the codification process in practice. According to the entrepreneur, “the primary product of the cooperative is Brazil nuts, then coffee, bananas, etc.” He points out how the chestnut even has “a cultural relationship because the chestnut tree is sacred to our people. Besides providing food, it brings us another potential on the global stage today, which is financial.” The entrepreneur adds: “Besides being food for the people, it can be sold not only in Brazil but throughout the world.” Note how the entrepreneur codes the nut, transforming the fruit tree, a place of cultural significance, into marketable products in the domestic and foreign markets. The same was true for palm trees (#IRE6). “There is a palm tree called Babaçu; the Surui people use it culturally. From it, we make “malocas” and handicrafts.” Finally, #IRE9 highlights the need for Igarapés to extract the clay necessary for local ceramic production.

At the same time, enterprising Indigenous people “re-value” space. “The association is non-profit. The money is not for us to get rich but to invest in the artisans’ performance.” Indigenous entrepreneurs seek to create products and services that add value to a place. #IRE3 summarizes and differentiates local entrepreneurs’ thinking. “The difference between entrepreneurship in non-Indigenous society and ours is that we want to benefit other people, not just us as a person, but the collectivity” (#IRE3). Indigenous entrepreneurs seek to contribute to the local context in diverse ways. For #IRE5, “before developing or implementing any project within our territory, we try to understand how it can help us and impact us too.” One way to bring local benefits, as already highlighted, is to buy products produced locally, even if they are more expensive than those offered in the market (#IRE2, #IRE5 and #IRE10). The second method was to revert the profit to the benefit of the community (#IRE1 and #IRE7). “We have this vision to recount how much we have received to share it among families” (#IRE7). According to #IRE1, “our cooperative has created a reserve fund for the community, or community members, or cooperative members can request assistance. So, the cooperative has this role of meeting the demand.” The third method involves providing training to the community. #IRE1 emphasizes how the benefits are not restricted to cooperative members. “If we are going to teach only the cooperative members, it has no social meaning. The whole community must benefit.” The final method is reforestation. “We must take some percentage and choose a Surui institution with a reforestation project” (#IRE2). According to #IRE11, “from 2019 2019 to 2022, we planted over 2,500 fruit and medicinal trees. We have 50 distinct species of medicinal plants that belong to our people.” According to him, the aim “is to increase this number, discovering new plants to be planted in the center.” For #IRE6, “organized the work. All this here is native and, over time, we reforest to increase production.” Note the virtuous cycle between codification/revalorization/codification in this example. Entrepreneurs extract and combine tangible products that are marketable locally and internationally. In turn, it seeks reforestation (revalorization) to code again. In other words, entrepreneurs appropriate Place’s resources, turning it into a marketable space (space). For example, #IRE10 points out how “each woman artisan leaves her product in the store and the money goes to her

afterwards,” which is evidence of codification. In turn, entrepreneurs aim to revalue their place through their ventures. Evidence of this is when #IRE1 points out a community development plan. According to him, “the goal was to do a study of the indigenous land to try to understand the potentiality, and what it had to offer in return to the Paiter People.” Note that there is a concern about the codification of space so that through it, entrepreneurs can revalue the place. Entrepreneurs seek to create enterprises that ultimately revalue their place. There is recursion between the two spheres. The search for revaluation drives codification, whereas codification impacts revaluation.

4.2 Entrepreneurs’ socio-spatial embeddedness

This analysis contributes to the literature on social and special embeddedness by understanding and integrating the current theoretical approaches to rural entrepreneurial phenomena. These two perspectives have been approached theoretically interconnectedly. Immediate relational structures (family and community) influence rural entrepreneurs, thereby impacting their economic and entrepreneurial decisions. In turn, note how such relationships influence economic decisions related to the codification of a place and revaluating space. In this sense, social embeddedness acts as a social and cultural background from which entrepreneurs seek to profit from their entrepreneurial activities and the community’s well-being derived from them. Codification and revalorization practices are embedded in place and space, as the current literature sustains (Korsgaard and Müller, 2015).

However, they are also embedded in dense, ongoing social relations that shape and influence them (Granovetter, 1985, 2018). While spatial embeddedness denotes the entrepreneur’s agency, social embeddedness alludes to the equally relevant influence of networks as an independent variable on entrepreneurial action. The same perspective is perceived in codification (P5). Although entrepreneurs seek to profit from their actions and resources, such profits are not exempt from the influence and opinion of immediate relationships, mediating and impacting entrepreneurial choices. Along these lines, this study suggests considering entrepreneurs’ socio-spatial immersion when analyzing the combined impact of relationships and space on entrepreneurial trajectory and development. To better understand this suggestion, Figure 3 illustrates the argument. In this figure, quadrants Q1–Q4 represent the points perceived and discussed in the research. For example, “Q1-Mutual assistance” appears in the discussion in P1, “Q4-Natural resources” in P2, “Q2-Community training” and “Q3-Endogenous strategies” in P3. Similarly, all other empirical evidence was addressed earlier in analyzing and discussing the results obtained.

Granovetter (1985) divided social embeddedness into two spheres, social and economic, investigating the impact of the first on the second. In turn, the spatial embeddedness breaks down between places and spaces according to the socio-economic perspective here focus of interest (Korsgaard and Müller, 2015). Social embeddedness affects place (Quadrant 1–Q1) when, influenced by relationships, entrepreneurs seek to create value in a rural context through initiatives such as mutual assistance and concern for the community. Such an influence from social to place is observable, for example, when #IRE7 overlaps the community’s interests with those of the business itself. “If it harms my community, I would not move forward with my business” (#IRE7); Or when entrepreneurs seek to maintain the local culture, maintaining and expanding its history and importance (#IRE8). At the same time, social embeddedness also impacts space (Quadrant 2–Q2), influencing entrepreneurs to buy products locally and reversing their businesses’ profits to benefit the community, among other initiatives associated with re-valorization. For example, when the sense of collectivity influences entrepreneurs to buy indigenous products, it encourages local trade,

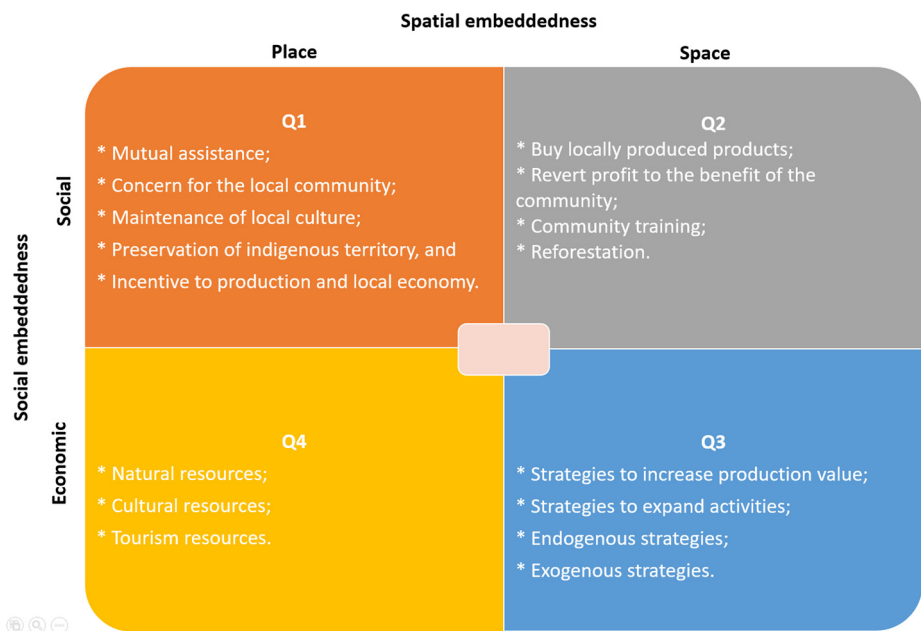


Figure 3.
Theoretical
association between
social and spatial
embeddedness

Source: Created by authors

even though it is comparatively more expensive than what is available in other markets. Revaluation is also evident in initiatives such as reforestation and community training.

In this sense, such revalorization would reflect spatial embeddedness, as supported by the literature, and be derived from the impact of immediate social relationships (family and community). Empirical data allows us to conclude that immersion in networks of relationships influences both the way entrepreneurs evaluate the place in relation to the set of meanings and experiences (Place), as well as the way they assess aspects related to work, capital flow, resources and other concerns associated with profit optimization or companies' accumulation of economic value (Korsgaard and Müller, 2015). In turn, economic concerns influence the space where entrepreneurs develop different strategies to search for the growth of their enterprises (Quadrant 3–Q3). Finally, economic relationships and interests influence and are influenced by place through the use of natural, cultural and tourism resources by entrepreneurs (Quadrant 4–Q4). Economic interests influence the place where entrepreneurs restrict the creation and development of their ventures to local resources or when they define together with the community that can or cannot be deforested. In turn, place influences the economic side when the Indigenous defines which natural resources cannot be used, such as feathers and animal teeth, or when entrepreneurs allocate production for their consumption, impacting the decision of which item to plant, or even when the cultural framework of the tribe impacts the crafts that entrepreneurs produce.

5. Final considerations

This study contributes to the literature on social and spatial embeddedness by suggesting the relevance of understanding and integrating both theoretical perspectives when studying rural entrepreneurial phenomena. Simultaneously, by appropriating the context of a

developing country, this study explores how indigenous rural entrepreneurs seek to create value in their communities. Five values stand out: mutual help, concern for the local community, maintenance of the local culture, preservation of the indigenous territory and encouragement of local production and economy. On the other hand, based on the analysis carried out, the importance given to the exploitation of natural, cultural and tourist resources cited in the literature was not relevant in this specific study, despite the field data showing that they are hereditary and inseparable from the natural environment. Instead, exploring the cultures and businesses better integrated with other communities was more evident. In addition, entrepreneurs use a business development strategy to increase the value of production through four main practices: not using pesticides, allowing the production of organic items, using social media, creating a quality seal and appropriating storytelling techniques. In addition, this study identifies several strategies undertaken by rural entrepreneurs not yet emphasized by studies in the area, grouping them into two complementary categories: those related to endogenous capabilities, such as strategic planning and investment in the purchase of local inputs and training, and those exogenous to the tribe, such as exporting, making external partnerships, investing in networking, including partnerships with cooperatives and using the internet.

The evidence from this study contributes to [Pato's \(2020\)](#) observation of the current need for more studies that help understand the limitations/constraints of rural entrepreneurship in greater depth. The field data suggest that the rural entrepreneurial process is a combination of strategies that seek the development of their enterprises, associated at the same time with initiatives aimed at overcoming various entrepreneurial challenges, still little explored in the local community. Given these limitations, initiatives related to public policies have been pointed out as lacking in promoting rural entrepreneurship ([Korsgaard and Müller, 2015](#)). Here, the data raised in the study allow the authors to suggest essential implications in this direction, emphasizing the policy's impact on legislation, entrepreneurial ecosystem and public institutions. Regarding legislation, indigenous rural entrepreneurs see exporting as an exogenous strategy for the development of their enterprises, and policymakers could encourage or de-bureaucratize the export of rural products, specifically indigenous products. In addition, some indigenous entrepreneurs have created rural businesses to give their children work and income options. In this sense, initiatives related to including indigenous people in the formal labor market are relevant, including the benefits of access to the social security system. Finally, legislators can contribute to local value creation by passing laws that help preserve indigenous territories and produce and sell local products.

As for the ecosystem, evidence shows that culture plays a vital role in the indigenous communities of Paiter-Surui. Allowing indigenous entrepreneurs to access the edicts of cultural promotion promoted by the federal and state spheres can stimulate the local entrepreneurial ecosystem. This access can be achieved by allocating or creating specific lines of credit for indigenous cultural projects and fostering the economy, entrepreneurs and local culture. Moreover, as cultural resources are among the main factors in the codification of local entrepreneurs, and considering their inseparability from natural resources, public policymakers should create instruments to support and maintain indigenous environmental reserves. Finally, another initiative associated with the entrepreneurial ecosystem concerns the communication infrastructure ([Machado et al., 2020](#)). Indigenous entrepreneurs use social media as a practice associated with a strategy to increase the value of production ([Korsgaard and Müller, 2015](#)). Thus, investing in a digital communication structure in rural areas or providing unbureaucratic access to credit for projects associated with information technology is relevant. Therefore, the survey data offers suggestions for public institutions.

For example, indigenous entrepreneurs mentioned a lack of institutional support during the Covid-19 pandemic, highlighting the relevance of significant social aid to indigenous people in periods of socioeconomic fragility. Such assistance can be achieved by politically decentralizing government agencies to address the interests of indigenous communities. For example, the interviewees highlighted how the tribe's demands had to be approved at the ministerial level.

Another aspect observed in this study has important implications for entrepreneurial training programs. Because strategic planning is an endogenous initiative, indigenous people are committed to developing their enterprises, and technical and managerial education institutions can plan courses and training associated with management disciplines, such as planning, sales and marketing. In addition, computer software disciplines can expand entrepreneurs' skills in dealing with technologies. In addition, exports are among entrepreneurs' exogenous strategies. Thus, export and investment promotion agencies in Brazil (such as the export promotion agency Apex) could plan short- and medium-term practical training to expand indigenous entrepreneurs' knowledge about the processes and requirements needed to export national products. Finally, considering the relevance of tourism to the codification of local communication, courses related to this theme are essential.

McGehee *et al.* (2010, 2015) understood social capital as networks and norms through which people can access resources and power. This social capital, in turn, could stem from two distinct network structures: a more occluded one (bonding social capital; Coleman, 2009; Silva *et al.*, 2020), formed by strong ties between its members, and a more spatial one, derived from the benefits arising from the connection between individuals inserted in networks that are distant from each other (bridging social capital; Burt, 2000, 2004; Silva *et al.*, 2020). Although the literature on social capital and immersion is remarkably related, this study did not provide any evidence. Therefore, future studies should investigate the impact of both types of social capital on indigenous firms. For example, social capital is more relevant for a particular enterprise, which resources every kind of social capital provides entrepreneurs and at what entrepreneurial stage they need.

6. Limitations and suggestions for future research

This study has some limitations. The first was related to the period of data collection during the Covid-19 pandemic, when indigenous entrepreneurs were isolated and access to the Paitê-Suruí community was restricted. The authors conducted part of the interviews in the community when the stricter rules of social isolation cooled down. The other interviews were conducted during scheduled meetings in the school environment. The second limitation is related to the language itself. Some entrepreneurs interviewed did not speak Portuguese, the native language of the authors of this study. The translators assisted the authors during the interviews. They made part of the evidence collection possible, although the literacy of the entrepreneurs' speeches may have been lost. The third limitation concerns the evidence collection instrument, which was restricted to interviews.

On the other hand, studies like this raise new questions, thus generating other research opportunities that can better contribute to the theme. One of them would be to advance reflections on spatial rooting based on social rooting. In addition, the field data suggest that, in emerging countries, the advancement of rural enterprises results from a combination of developmental strategies and overcoming numerous challenges. In this sense, comparing whether rural enterprises in other regions (specifically in the indigenous context) would

have similar challenges and performance is time for further research. Along these lines, endogenous and exogenous development strategies could be further explored in rural entrepreneurial performance, including in other contexts. For example, endogenous methods are more appropriate during the early stages of enterprises, giving way to exogenous strategies during their longitudinal evolution. Similarly, explore whether endogenous and exogenous strategies influence the strategy of increasing the value of production, expanding activities and regrouping and vice versa. With this, we analyze why regrouping strategies are less likely to occur in emerging and developing countries and identify the barriers that may discourage such initiatives.

The five ways entrepreneurs seek to create value for their enterprises are mutual aid, concern for the local community, local cultural maintenance, indigenous territory preservation and encouragement of production and the local economy. Further studies should investigate the presence of such factors in different rural contexts, corroborating, refuting and expanding our understanding of these values. In this sense, questions arise about how rural entrepreneurs and indigenous people relate to their natural environment and how the population's culture influences their relationship with space and place. For example, how does the distance between villages affect the relationships and collaboration between residents? How does climate and geography influence entrepreneurship development? How do local resources determine indigenous entrepreneurial businesses' performance? Does the Amazon context differ from the other rural contexts?

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Further reading

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Appendix

Category 1	Category 2	Category 3	Category 4	Category 5
P1	Indigenous enterprise	Concern for the local community	–	–
P1	Indigenous enterprise	Concern for the local community	Helping each other - mutual solidarity	–
P1	Indigenous enterprise	Concern for the local community	Living with the community	–
P1	Indigenous enterprise	Concern for the local community	Beware of the local population	–
P1	Indigenous enterprise	Concern for the local community	Keep the local culture	–
P1	Indigenous enterprise	Concern for the local community	Preservation of the territory	–
P1	Indigenous enterprise	Concern for the local community	Sustainability	–
P2	Indigenous enterprise	Concern for the local community	Helping each other - mutual solidarity	Job
P2	Indigenous enterprise	Concern for the local community	Helping each other - mutual solidarity	Financing
P2	Indigenous enterprise	Concern for the local community	Helping each other - mutual solidarity	Health
P2	Indigenous enterprise	Concern for the local community	Purchase of local products	–
P2	Indigenous enterprise	Concern for the local community	food safety	–
P3	Local resources	–	–	–
P3	Local resources	Cultural	–	–
P3	Local resources	Forestry	–	–
P3	Local resources	Natural	–	–
P3	Local resources	Natural	Worrying about what not to use [...]	–
P3	Local resources	Natural	Self-support	–
P3	Local resources	Tourism	–	–
P4	Indigenous enterprise	Development strategies	Add value to the product	–
P4	Indigenous enterprise	Development strategies	Add value to the product	Tell the product story
P4	Indigenous enterprise	Development strategies	Add value to the product	Internet
P4	Indigenous enterprise	Development strategies	Add value to the product	Do not use pesticides
P4	Indigenous enterprise	Development strategies	Add value to the product	organic product
P4	Indigenous enterprise	Development strategies	Add value to the product	Vegetarian
P4	Indigenous enterprise	Development strategies	Aspects that limit development	–

(continued)

Table A1.
The coding matrix
detailing all 64
categories generated
at their five
corresponding levels

Category 1	Category 2	Category 3	Category 4	Category 5
P4	Indigenous enterprise	Development strategies	Aspects that limit development	Climate
P4	Indigenous enterprise	Development strategies	Aspects that limit development	Devaluation of the artisanal product
P4	Indigenous enterprise	Development strategies	Aspects that limit development	exploration of the land
P4	Indigenous enterprise	Development strategies	Aspects that limit development	Lack of government support
P4	Indigenous enterprise	Development strategies	Aspects that limit development	Infrastructure
P4	Indigenous enterprise	Development strategies	Aspects that limit development	Pandemic
P4	Indigenous enterprise	Development strategies	Aspects that limit development	Preconception
P4	Indigenous enterprise	Development strategies	Aspects that limit development	Training
P4	Indigenous enterprise	Development strategies	Compete for prizes	–
P4	Indigenous enterprise	Development strategies	Cooperatives	–
P4	Indigenous enterprise	Development strategies	Promotion notice	–
P4	Indigenous enterprise	Development strategies	Business sustainability strategy	–
P4	Indigenous enterprise	Development strategies	Export	–
P4	Indigenous enterprise	Development strategies	Financing	–
P4	Indigenous enterprise	Development strategies	Financing	International
P4	Indigenous enterprise	Development strategies	Internet	–
P4	Indigenous enterprise	Development strategies	Invest in the purchase of local inputs	–
P4	Indigenous enterprise	Development strategies	Invest in the purchase of local inputs	even more expensive
P4	Indigenous enterprise	Development strategies	External partnerships	Emater
P4	Indigenous enterprise	Development strategies	External partnerships	Sebrae
P4	Indigenous enterprise	Development strategies	External partnerships	Três corações
P4	Indigenous enterprise	Development strategies	Trainings	–
P5	Embeddedness	Relationships impact economic decision	–	–
P5	Embeddedness	Relationships impact economic decision	Community	–
P5	Embeddedness	Relationships impact economic decision	Family	–
P5	Codification	–	–	–
P5	Codification	Importance of codification	Capitalism	–
P5	Codification	Not using pesticides	–	–
P5	Codification	External partnerships	Importance	–
P5	Re-valorization	–	–	–
P5	Re-valorization	buy local product	–	–
P5	Re-valorization	Knowledge	–	–
P5	Re-valorization	encourage other people	–	–

(continued)

Table A1.

Table A1.

Category 1	Category 2	Category 3	Category 4	Category 5
P5	Re-valorization	Institution to help the community	–	–
P5	Re-valorization	concern for the land	–	–
P5	Re-valorization	Reforestation	–	–
P5	Re-valorization	Revert profit to the community	–	–
P5	Re-valorization	Trainings	–	–

Source: Created by authors

Corresponding author
Victor Silva Corrêa can be contacted at: victor.correa@docente.unip.br