

Variables used to explain development in LPA context

Variáveis utilizadas para explicar o desenvolvimento no contexto de um APL

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Abstract

Based on previous studies, this research aimed to identify the variables used to explain development within the context of a local productive arrangement (LPA). A descriptive qualitative study was conducted through an integrative systematic review, combined with content analysis supported by the IRaMuTeQ® software. The integrative review resulted in the selection of 21 articles, which were organized into three classes and grouped into two categories. Group 01 comprised studies that systematically analyzed the relationship between LPAs and development. The identified variables included public spending, job creation, income generation, fiscal management, public policy, and the presence of an LPA. These variables were found to have a positive and significant relationship with development. Such findings may guide the actions of LPA stakeholders, policymakers, and other public agents in promoting development.

Keywords: clusters; development; territory.

Resumo

Diante dos estudos prévios, definiu-se como objetivo identificar as variáveis utilizadas para explicar o desenvolvimento no contexto de um APL. Realizou-se uma pesquisa qualitativa descritiva na qual empreendeu-se uma revisão sistemática integrativa (RSI) e utilizou-se a análise de conteúdo com suporte do *software* IRaMuTeq®. Por meio da RSI foram selecionados 21 artigos, organizados em três classes e divididos em dois grupos. No Grupo 01 constam os estudos que analisaram sistematicamente a relação com o desenvolvimento. As variáveis identificadas foram gastos públicos, geração de emprego, geração de renda, gestão fiscal, política pública e presença do APL, e seus resultados apontam uma relação positiva e significativa com o desenvolvimento. Estas indicações podem nortear ações dos atores dos APLs assim como os formuladores de políticas públicas e outros atores públicos quanto à promoção do desenvolvimento.

Palavras-chave: aglomerações de empresas; desenvolvimento; território.

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1 Introduction

This study focuses on the historical evolution of how firms have structured their production processes, along with the strategies adopted to promote development and enhance

competitiveness. Business agglomerations are viewed as expressions of this organizational pattern and are recognized for their role in fostering development.

Various terms have been used to describe such agglomerations (Silva & Martinelli, 2021), with local productive arrangement (LPA) being the most widely adopted in Brazil (Ribeiro, 2017). In this study, the terms “business agglomerations” and “LPAs” are treated as synonymous.

LPAs are considered to provide a range of benefits, particularly in terms of employment and income within the regions in which they are embedded. As a result, various actions may be implemented to support the development (Masquietto, Sacomano Neto & Giuliani, 2010) and reorganization of LPAs (Alderete & Bacic, 2020).

According to Ribeiro (2017), LPAs have been the subject of investigations by a range of institutions, given their role in fostering development. This diversity of perspectives partly explains the use of multiple terms to refer to such business agglomerations. Although this is justifiable, it warrants careful attention, as many definitions and classifications of LPAs are imprecise or incorrect. This conceptual ambiguity often leads to misinterpretations, which may negatively affect the formulation of instruments to support LPAs, particularly public policy initiatives.

These features reflect the inherent complexity of LPAs and reinforce the need for mechanisms such as governance to coordinate and structure their activities (Antero et al., 2019). According to Ribeiro (2017), LPAs can be defined by five dimensions: (i) territorial dimension, (ii) diversity of activities and of economic, political, and social actors, (iii) tacit knowledge, (iv) interactive learning and innovation (Ruffoni, Suzigan, & Tatsch, 2022), and (v) degrees of embeddedness.

Firms operating within LPAs play a central role in both business and territorial development (Olivares & Dalcol, 2014). Small enterprises, in particular, contribute by offering: (i) flexibility and agility; (ii) innovation and creativity; (iii) local job creation; (iv) integration into the production chain; and (v) support for entrepreneurship (Olivares & Dalcol, 2014).

Additionally, LPAs contribute to business and territorial development by promoting: (i) agglomeration economies; (ii) knowledge sharing; (iii) cooperative networks; (iv) development of local suppliers and customers; and (v) the attraction of investment and skilled labor (Olivares & Dalcol, 2014).

In the context of LPAs, development is often explained by variables such as: (i) the intensity of interaction among actors and (ii) social capital (Oliveira & Martinelli, 2014).

Given the range of approaches and perspectives in the literature on development and LPAs, key topics include: (i) the use of indicators, methods, and evaluation techniques; (ii) the impact of specific sectors; and (iii) strategies for development and promotion.

These themes help illuminate the dynamics and challenges LPAs face in advancing development (Oliveira & Martinelli, 2014). This context points to the need for alternative approaches to better understand the relationship between LPAs and development.

Accordingly, this study seeks to identify the variables used to explain development within the framework of an LPA. The findings aim to support LPA stakeholders, public policymakers, and other relevant actors engaged in promoting business and territorial development, thereby contributing to both research and practice.

2 Theoretical Framework

This discussion focuses on three central themes: local productive arrangement¹ (LPAs), development², and territory³, which are examined in the following subsections.

2.1 Business agglomerations and their contributions to development

Since the 1960s, firms have undergone significant changes in how they organize production (Silva & Martinelli, 2021). Alvarenga et al. (2013) highlight the contributions of a group of Italian economists, including Bagnasco (1977)⁴, Becattini (1987)⁵, Brusco and Sabel

¹ According to Lastres and Cassiolato (2003), LPAs are territorial agglomerations of economic, political, and social actors focused on a specific set of economic activities, which display linkages, even if at an early stage. Other terms referring to forms of business concentration or agglomeration are used interchangeably.

² In this study, development encompasses all its dimensions and are based on the notion of territorial development, as proposed by Dallabrida (2017).

³ Territory is used here as a synonym for territorial scope. It refers to the spatial configurations where productive, innovative, and cooperative processes occur (Dallabrida, 2017).

⁴ Bagnasco, A. (1997) *Tre Italie. La problematica territoriale dello sviluppo italiano*. Bologna: Il Mulino.

⁵ Becattini, G. (1987). *Mercato e forze locali: il distretto industriali*. Bologna: Il Mulino.

(1981)⁶, and Fuà (1983)⁷, who began in the 1970s to analyze a new model of growth within traditional manufacturing sectors.

In this context, there were shifts in the spatial distribution of small and medium-sized enterprises, which adopted distinct organizational patterns and actively involved the local community. These arrangements emphasized specialization, cooperation, competition, entrepreneurship, and the continuity between social and economic life (Alvarenga et al., 2013).

Lustosa and Rosario (2016) argue that urbanization and industrialization, along with variations in productive capacity and technological capability, occur differently across countries and regions. One approach to addressing productivity and the efficient division of labor has been to consider territory as a framework for organizing productive spaces and activities. Growth and competitiveness strategies (Telles et al., 2024), particularly those implemented through public policies, often incorporate elements linked to development processes (Lustosa & Rosario, 2016). These strategies frequently refer to endogenous development, which is rooted in the interdependent relationships among actors within a given territory (Alderete & Bacic, 2020; Telles et al., 2024).

Coelho Junior and Silva (2021) highlight that, in the 1970s, development proposals began to be formulated by local actors, who organized themselves in various ways into business agglomerations.

In this context, these agglomerations have come to be recognized as sources of productivity (Linhares, Gonçalo & Vargas, 2021). Additionally, Alderete and Bacic (2020) emphasize that international studies by Perroux (1955)⁸, Hirschman (1958)⁹, and Myrdal (1957)¹⁰ on the relationship between business agglomerations and development have demonstrated a positive association.

These agglomerations can foster economic development through (i) job creation; (ii) stimulation of innovation; (iii) enhancement of competitiveness; (iv) development of value chains; and (v) attraction of investment (Olivares & Dalcol, 2014).

These agglomerations are globally observed phenomena and are referred to by various terms, including clusters, LPAs, industrial districts, poles, science parks, *milieu innovateur*,

⁶ Brusco, S. & Sabel, C. (1981). *Artisan production and economic growth, in the dynamics of labour market segmentation*. London: Academic Press.

⁷ Fuà, G. (1983). *L'industrializzazione nel Nord Est e nel Centro*. Bologna: Il Mulino.

⁸ Perroux, F. (1955) Note on the concept of growth pole. *Economie Appliquée*, 8(1-2), 302-20.

⁹ Hirschman, A. O. (1958). *The strategy of economic development*. New Haven: Yale University Press.

¹⁰ Myrdal, G. (1957). *Economic theory and sub-developed regions*. México: Fondo de Cultura Económica.



consortia, forums, and other variants (Linhares, Gonçalves & Vargas, 2021; Silva & Martinelli, 2021). In the Brazilian context, LPAs represent practical applications adapted to specific theoretical and empirical contexts (Ribeiro, 2017) and constitute the most widely adopted term (Linhares, Gonçalves & Vargas, 2021).

Oliveira Do Bu Araújo and Cavalcanti Ramalho (2023) report that in 1990, the Research Network on Local Innovative Production Systems (*Rede de Estudos em Sistemas Produtivos Inovativos Locais* - REDESIST) at the Federal University of Rio de Janeiro (UFRJ) coined the term local productive arrangement (LPA). Ribeiro (2017) adds that the term gained prominence in the 1990s following its adoption in federal development policies.

LPAs are generally considered to emerge spontaneously. However, it is recognized that they may also receive institutional support (Alderete & Bacic, 2020). Drawing on a neo-Schumpeterian perspective, Gondin and Shima (2019) argue that the state plays multiple roles, including fostering relationships among actors, shaping market structure and development, identifying shared interests, and coordinating actors and institutions around a development project.

In Brazil, public policy priorities have shifted over time. In the 1970s, the focus was on expanding the industrial base. Beginning in the 1990s, development policies increasingly targeted micro and small enterprises (MSEs) (Lustosa & Rosario, 2016).

A prominent example of this shift is the adoption of LPA-based policies by Brazilian states in the 2000s, which emphasized drivers of local development and produced outcomes in job creation, income generation, and increased production (Lustosa & Rosario, 2016; Ribeiro, 2017).

2.2 Strategies for addressing LPA challenges and fostering development

While firms within LPAs may benefit from shared resources and collaboration, they also face challenges related to the coordination and organization of joint actions (Antero et al., 2019). The literature identifies several strategies to address these challenges and foster LPA development, including coordination, participation, cooperation, governance, and the institutional context.

Antero et al. (2019) emphasize the need for a mechanism to organize and guide development efforts, identifying governance as the appropriate tool. Recognizing that

governance is a multifaceted concept used across different theoretical approaches, the authors sought to address it within the context of an LPA. To this end, Antero et al. (2019) proposed an analytical model based on synthesizing frameworks that bring together complementary conceptual dimensions for understanding and analyzing the core elements of governance: representativeness (identifying actors and their activities) (De Sordi & Meireles, 2010), cooperation, and coordination.

Antero et al. (2017) draw on Britto's (2002)¹¹ perspective on business network theory to examine the structure of the relational system connecting various actors and the mechanisms through which it operates and that enable its ongoing reproduction, consolidation, and potential transformation over time.

Eliza (2014) identifies multiple forms of networks and emphasizes the benefits firms may derive from participation. She highlights the importance of recognizing shared interests to sustain cooperation and enhance competitiveness (Telles et al., 2024). Effective network participation, she argues, requires adherence to a code of conduct grounded in loyalty, responsibility in meeting obligations, and fair pricing practices. These principles not only support the growth of individual firms but also contribute to the broader development of their regions (Eliza, 2014).

Antero et al. (2017) define cooperation as a set of social constructs specific to the actors within a LPA, who share resources to pursue joint actions and achieve common goals. The concept is examined through the lens of joint action, characterized by its scope, diversity, frequency, purpose, shared resources, and resulting benefits.

These actions are designed to serve shared interests, contributing to the development of the LPA. When sustained over time, they enhance integration, mutual trust, communication, and coordination among actors (Antero et al., 2019).

Understanding coordination within the LPA involves examining factors related to how activities are organized and managed (Antero et al., 2016a; Antero et al., 2019).

Organization refers to both the level of formality and the management structure adopted within the LPA. Formality is marked by standardized processes involving planning, implementation, and control. Management structure is assessed through three factors: the

¹¹ Britto, J. (2002). *Cooperação interindustrial e redes de empresas*. In: Kupfer, D. & Hasenclever, L. (Org.). *Economia industrial: fundamentos teóricos e práticos no Brasil*. Rio de Janeiro: Elsevier.



number of firms involved, the purpose of joint actions, and the level of interaction among actors (Antero et al., 2016a).

In terms of coordination, actor integration and participation are key dimensions. Integration refers to how connected the actors are and is observed through their presence, proximity, and influence. Participation concerns the centralization of decision-making and the extent to which actors are involved in deliberative processes within the LPA (Antero et al., 2016a).

Antero et al. (2016b) examine how participation affects the development of LPAs. Greater participation is understood to facilitate both development and coordination. Particular attention is given to decision-making, which may follow either centralized or participatory models.

In centralized decision-making, authority is concentrated in the hands of a few LPA actors, which may discourage broader participation and lead to distrust in the process. Participatory decision-making, by contrast, involves democratic practices and the engagement of diverse actors who reconcile their interests to support LPA development, resulting in consensus on shared needs (Antero et al., 2016b).

In the institutional context, Jacometti et al. (2016), drawing on institutional theory, examine how public policies shaped firm performance within the LPA, helping to explain the significant economic growth observed.

The authors argue that the institutional context comprises institutional and technical elements of the environment that both shape and are shaped by the organization. This context operates at three levels: local/regional, national, and international.

Jacometti et al. (2016) define isomorphism as the tendency of organizations to resemble others, driven by pressures from the institutional context. Organizations typically face institutional mechanisms that lead to isomorphic change, which can be classified as coercive, normative, or mimetic.

Coercive isomorphism arises from formal and informal pressures imposed by the state, other organizations, or cultural expectations on which the organization depends. Normative isomorphism refers to the process of professionalization, which promotes uniformity in work conditions and methods through shared interpretations and practices aligned with organizational demands. Mimetic isomorphism occurs when, faced with uncertainty and ambiguity, an organization imitates a model organization as its only viable option.

Jacometti et al. (2016) argue that the institutional environment consists of the rules and procedures of a given social context, which guide organizational behavior. An organization's adherence to these rules is what ensures its legitimacy and contextual support. The authors identify beliefs, values, norms, and constraints as the core elements that shape the institutional environment.

2.3 Public policy evaluation

Given the complexity of promoting development, the 1990s marked a shift in public policy toward locally focused initiatives (Antero et al., 2020a). In this context, several proposals emerged to strengthen public action, including the coordination of efforts across government levels and better responsiveness to local actors' needs (Antero et al., 2020a).

In Brazil, the term LPA gained prominence in the 1990s, when the federal government began incorporating it into specific development-oriented policies, including the Multi-Year Plans (from 2000), the National Plan for Science, Technology, and Innovation (2007–2010), and the Productive Development Policy (2008–2013) (Ribeiro, 2017).

Public policies supporting LPA development include the federal Interministerial Ordinance No. 200/2004¹² and the Minas Gerais state policy established by Law No. 16.296/2006¹³. Another important development was the creation of the Permanent Working Group for LPAs (GTP-APL) in 2004, responsible for coordinating national LPA initiatives under the Ministry of Development, Industry, and Foreign Trade (MDIC), with the participation of 33 public and private institutions (Antero et al., 2015, 2020a, 2020b).

Public policies are understood as a primary mechanism through which the government promotes development. Lasswell (1958)¹⁴ defines public policy as an action aimed at benefiting a specific group of actors who, by virtue of their characteristics, warrant attention, as their inclusion can lead to contextual change—that is, an improvement in existing conditions. From this perspective, public policy raises key questions: “Who gets what?” “Why?” and “What

¹² *Portaria Interministerial nº 200, de 02 de agosto de 2004.* (2004) Establishes the Permanent Working Group for Local Productive Arrangements – GTP APL. Retrieved from: http://portalapl.ibict.br/biblioteca/Portaria_Interministerial_numero_200_2004_MDIC.html.

¹³ *Lei 16.296, de 01 de agosto de 2006.* (2006) Establishes the State Policy for Supporting Local Productive Arrangements and provides other measures. Retrieved from: <http://leisestaduais.com.br/mg/leiordinaria-n-16296-2006-minas-gerais-institui-a-politica-estadual-de-apoio-aos-arranjos-produtivos-locais-e-da-outras-providencias>.

¹⁴ Lasswell, H. D. (1958). *Politics: Who Gets What, When, How*. New York: Smith P.



difference does it make?” The responses to these questions reflect distinct positions that enhance understanding of the topic (Antero et al., 2020b).

In line with foundational authors like Dye (1984)¹⁵, Peters (1986)¹⁶, Lynn (1980)¹⁷, Mead (1995)¹⁸, Antero et al. (2020b) share the view that public policy represents government in action, carried out amid conflicting interests and diverse demands.

Focusing on development promotion, the need to assess government performance highlights the relevance of public policy evaluation. This field developed amid increasing complexity in policy formulation and the demand for more effective responses from policymakers. Public policy serves as an analytical tool that can be applied in different ways: (i) to evaluate a program’s performance based on its processes and outcomes, or (ii) to assess a specific phase of the policy cycle (Antero et al., 2020b).

Antero et al. (2015) view public policy evaluation as a management tool for public affairs. Acknowledging the range of definitions found in the field, they identify five core elements for its understanding: concept, objectives, types, basic components, and analytical criteria.

Rua (2000)¹⁹ identifies four key analytical criteria: (i) effectiveness, defined as producing the expected results regardless of cost or means; (ii) efficiency, which refers to achieving expected results at the lowest cost using the most appropriate means; (iii) effectivity, understood as generating lasting, direct or indirect outcomes or impacts that result in positive externalities; and (iv) equity, which contributes to sustainability and the reduction of inequality and exclusion, thereby enabling social change (Antero et al., 2020b).

Since public policy evaluation addresses observed effects and changes, no universally applicable method exists. Defining the purpose of the evaluation is essential to clarify its intent, as its value depends on how it is used (Antero et al., 2015).

Ex-ante evaluation offers an alternative approach to public policy evaluation by anticipating possible outcomes before the policy is implemented. It is a forward-looking

¹⁵ Dye, T. D. (1984). *Understanding public policy*. New Jersey: Prentice Hall.

¹⁶ Peters, B. G. (1986). *American public policy: Promise and performance*. New Jersey: CQ Press.

¹⁷ Lynn, L. E. (1980). *Designing public policy: a casebook on the role of policy analysis*. Santa Mônica: Goodyear.

¹⁸ Mead, L. M. (1995). Public policy: vision, potential, limits. *Policy Currents*, 5(1), 1-4.

¹⁹ Rua, M. G. (2000) Avaliação de Políticas, Programas e Projetos: Notas Introdutórias. Mimeo. Recuperado de: <http://www.enap.gov.br/downloads/ec43ea4fUFAM-MariadasGraAvaliaPol.pdf>.

approach designed to predict both the policy's consequences and its potential impact on the environment (Antero et al., 2015).

It is also important to consider projections, predictions, and conjectures, as well as factors that may limit the application of this analytical approach. Doing so helps ensure that public management actions are carried out appropriately and align with the principles and criteria under evaluation (Antero et al., 2015).

The concept of public policy, in its broader scope, includes government decisions about how and where to allocate resources. Antero and Emmendoerfer (2021) argue that development can be promoted in different ways. These actions may involve public spending and fiscal management practices aimed at supporting a specific area, sector, or activity.

Antero and Emmendoerfer (2021) identified two main lines of inquiry in studies on this topic: (i) public spending intended to promote development by supporting specific areas, sectors, or activities, and (ii) the influence of fiscal management performance in public administration on development. These studies differ in terms of study location, the proxies used to assess development, and the number of variables employed to measure influence (Antero & Emmendoerfer, 2021).

Public policies aimed at promoting LPA development can be examined using the questions previously outlined.

In Brazil, although issues have been identified in the formulation and design of federal and state policies supporting LPA development, their coordinated character stands out as a positive feature. These policies pursue aligned objectives: to strengthen LPAs and, in turn, promote development in the territories where they operate. Their goals and intended beneficiaries have also been identified (Antero et al., 2020a; Antero et al., 2020b).

The role of LPAs in development is significant, particularly due to the benefits derived from sectoral and territorial concentration. Given the challenges specific to LPAs, it is necessary to identify strategies that reduce these barriers and support collective action by local actors in organizing and coordinating efforts toward business and territorial development (Antero et al., 2020a). These priorities should be reflected in public policies aimed at fostering development.



3 Methodological Procedures

This study employed a descriptive qualitative approach (Collis & Hussey, 2005; Cooper & Shindler, 2016), grounded in an integrative review (Consoni, 2016).

The study posed the following research question: What variables are used to explain development in the context of an LPA?

To answer it, the stages of the integrative review were followed, as outlined by Consoni (2016): (i) define the research question; (ii) establish the objective; (iii) select search strings; (iv) choose databases; (v) determine search strategies; (vi) set selection criteria; (vii) analyze and present the results; and (viii) draw conclusions.

The objective was to identify the variables used to explain development in the context of an LPA, as guided by the research question presented above.

The following search strings were defined: “Arranjo produtivo local and desenvolvimento,” “Arranjos produtivos locais and desenvolvimento,” “APL and desenvolvimento,” “APLs and desenvolvimento,” “Concentração de empresas and desenvolvimento,” “Concentrações de empresas and desenvolvimento,” “Aglomeração de empresas and desenvolvimento,” “Aglomerações de empresas and desenvolvimento,” “Cluster and desenvolvimento,” “Clusters and desenvolvimento,” “Milieu innovateur and desenvolvimento,” “Distrito industrial and desenvolvimento,” “Distritos industriais and desenvolvimento,” “Distrito Marshaliano and desenvolvimento,” “Distritos Marshalianos and desenvolvimento,” “Arranjo e sistema produtivo e inovativo local and desenvolvimento,” “Arranjos e sistemas produtivos e inovativos locais and desenvolvimento,” “Sistema produtivo local and desenvolvimento,” and “Sistemas produtivos locais and desenvolvimento.”

The following databases were consulted: Scientific Electronic Library Online (SCIELO), Scientific Periodicals Electronic Library (SPELL), Science Direct, and the Journals Portal of CAPES (Coordination for the Improvement of Higher Education Personnel). Searches were conducted between August 14 and 18, 2023, with an updated search performed on May 16, 2024.

The integrative review aimed to identify publications from the past ten years (January 2013 to May 2024) that addressed the topic of interest. Abstracts were reviewed to assess alignment with the study and confirm open access availability. When aligned, articles were downloaded for full reading. A total of 366 articles were initially identified. After abstract

screening, 52 were selected for full-text review. Following the removal of duplicates, 39 articles remained. Of these, 21 addressed the research question and were included in the study's theoretical framework.

Content analysis was conducted (Bardin, 2015), with support from the IRaMuTeq® software (Ratinaud, 2009; Ratinaud & Marchand, 2012). The procedure followed the stages of pre-analysis, coding, data processing, and interpretation (Bardin, 2015).

The pre-analysis stage involved verifying whether the articles aligned with the study's objective in order to include them in the corpus of analysis.

The results were processed using IRaMuTeq® (Ratinaud, 2009; Ratinaud & Marchand, 2012), through (i) textual statistics, which include word count, average frequency, *hapax* (words that appear only once), active and supplementary forms, as well as stem-based word reductions; and (ii) Descending Hierarchical Classification (DHC), which groups text segments and vocabulary into a hierarchical class system based on Chi-square tests.

The corpus was processed using the following monothematic command: ****
*artigo_01.

Since the study seeks to identify the variables used to explain development within the context of LPAs, the selected studies were divided into two groups: Group 01 and Group 02. Studies in Group 01 present procedures such as data collection and analysis techniques that support a systematic examination of the relationship between specific variables and development. Group 02 studies, by contrast, do not include such methodological approaches. The material was then categorized and subcategorized, as detailed in Table 01.

Table 01

Categorization of variables used to explain development in the context of the LPA

Category	Subcategories	Group	Theoretical Basis
Institutions	Presence of an LPA	G1	Alderete and Bacic (2020)
	Presence of an LPA	G1	Antero and Emmendoerfer (2021)
	Presence of an LPA	G1	Antero et al. (2020a)
	Presence of an LPA	G1	Antero et al. (2020b)
	Presence of an LPA	G2	Fernanda (2014)
	Presence of an LPA	G2	Oliveira Do Bu Araújo and Cavalcanti Ramalho (2023)
	Presence of an LPA	G1	Olivares and Dalcol (2014)
	Presence of an LPA	G2	Ribeiro (2017)
Attributes	Absorptive capacity	G2	Linhares, Gonçalo and Vargas (2021)

	Innovative capacity	G2	Linhares, Gonçalo and Vargas (2021)
	Environmental dimension	G2	Alvarenga et al. (2013)
	Economic dimension	G2	Alvarenga et al. (2013)
	Social dimension	G2	Alvarenga et al. (2013)
	Employment creation	G1	Olivares and Dalcol (2014)
	Income generation	G1	Olivares and Dalcol (2014)
	Innovation	G2	Lustosa and Rosario (2016)
	Innovation	G2	Gondin and Shima (2019)
Relations	Actor articulation	G2	Coelho and Silva (2021)
	Social capital	G2	Oliveira and Martinelli (2014)
	Trust	G2	Ribeiro (2017)
	Cooperation	G2	Antero et al. (2017)
	Cooperation	G2	Ribeiro (2017)
	Actor interaction	G2	Oliveira and Martinelli (2014)
Management	Coordination	G2	Antero et al. (2016)
	Coordination	G2	Ribeiro (2017)
	Governance	G2	Antero et al. (2019)
	Governance	G2	Ribeiro (2017)
	Participation	G2	Antero et al. (2016b)
Promotion	Public engagement	G2	Coelho and Silva (2021)
	Public spending	G1	Antero and Emmendoerfer (2021)
	Fiscal management	G1	Antero and Emmendoerfer (2021)
	Public policy	G2	Antero et al. (2015)
	Public policy	G1	Antero et al. (2020b)
	Public policy	G1	Antero et al. (2020a)
	Public policy	G1	Jacometti et al. (2016)
	Public policy	G2	Ribeiro (2017)

Source: Elaborated by the authors based on research data.

Drawing on the analyses conducted with IRaMuTeq® (Ratinaud, 2009; Ratinaud & Marchand, 2012), the corpus was interpreted, and the results are presented in the next section.

4 Results

The results concerning the variables used to explain development in the context of an LPA are based on the information presented in Table 01. These variables correspond to the subcategories listed in the table. The section begins with a conceptual description of the variables identified across all analyzed studies, with emphasis on those found to be related to development. This is followed by a discussion of the studies included in Group 1.

Within the institutions category, the variable "presence of an LPA" refers to the identification of at least one local productive arrangement within a given territory (Alderete &

Bacic, 2020; Antero & Emmendoerfer, 2021; Antero et al., 2020a; Antero et al., 2020b; Oliveira Do Bu Araújo & Cavalcanti Ramalho, 2023; Fernanda, 2014; Olivares & Dalcol, 2014; Ribeiro, 2017). LPAs may exist at macro, meso, or micro levels and manifest in different configurations depending on the actors involved, geographical location, and their function within the local productive and innovation system (Oliveira Do Bu Araújo & Cavalcanti Ramalho, 2023). The presence of an LPA is associated with positive development outcomes (Alderete & Bacic, 2020; Antero et al., 2020a; Olivares & Dalcol, 2014; Ribeiro, 2017).

The attributes category comprises the following variables: absorptive capacity, innovative capacity, environmental dimension, economic dimension, social dimension, employment creation, income generation, and innovation.

Employment creation reflects the ability of LPAs to create jobs, contributing to both economic and social development. Recognizing employment generation as a central component of development highlights its role in strengthening firms and boosting the economy (Olivares & Dalcol, 2014).

Income generation serves as an indicator of the employment impact of LPAs, offering a basis for designing policies and actions aimed at strengthening local firms and advancing development. This assessment supports the formulation of public policy recommendations that more effectively promote development and improve economic and social conditions (Olivares & Dalcol, 2014).

Finally, the promotion category encompasses public action, public spending, fiscal management, and public policy.

Public spending involves the allocation of financial resources by government administration to promote municipal development. These expenditures may target specific areas, sectors, or activities aimed at fostering economic and social growth. Moreover, effective fiscal management is highlighted as a relevant factor, as spending patterns can positively influence development outcomes at the municipal level (Antero & Emmendoerfer, 2021).

Fiscal management involves a set of practices and decisions concerning the administration of public financial resources, aiming to ensure their efficient, transparent, and accountable use. When effectively implemented, it supports the proper allocation of funds to promote business growth and regional development (Antero & Emmendoerfer, 2021).

Public policy refers to the set of government actions, directives, and decisions aimed at addressing specific societal issues, seeking to meet public needs and foster development

(Antero et al., 2015; Antero et al., 2020a; Antero et al., 2020b; Jacometti et al., 2016; Ribeiro, 2017). In the context of LPAs, public policies are designed to support and strengthen these local arrangements.

In addition to the conceptual description of each variable, the referenced studies indicate how these factors influence development. It is also important to consider which studies present empirical evidence confirming such relationships. Among those in Group 01, only Alderete and Bacic (2020), Antero and Emmendoerfer (2021), Antero et al. (2020a), Antero et al. (2020b), Jacometti et al. (2016), and Olivares and Dalcol (2014) applied systematic procedures to establish the link between the identified variables and development.

Alderete and Bacic (2020) examined whether participation in an LPA contributes to municipal development. Their findings demonstrate that LPAs foster local development in non-metropolitan areas of the state of São Paulo.

Antero and Emmendoerfer (2021) analyzed public spending and fiscal management to assess their influence on municipal development. In municipalities within LPAs, they identified not only differences in average public spending (particularly in health) and fiscal management indicators (such as personnel expenses, investment, liquidity, and debt cost), but also a stronger impact on socioeconomic development.

Antero et al. (2020a) examined the impact of public policy on the development of LPAs in Minas Gerais. The findings show that investments produced a 9.35% increase in the development indicator of municipalities participating in LPAs and supported by the state's Public Policy for Supporting LPAs between 2006 and 2016.

Antero et al. (2020b) analyzed the public policy aimed at supporting the development of LPAs in Minas Gerais, considering its impacts on development. The results indicate a significant and positive effect of this policy on both GDP (as a proxy for economic development) and IFDM (as a proxy for socioeconomic development).

Jacometti et al. (2016) sought to examine the role of public policies in explaining the rapid economic development of the furniture LPA in Arapongas, Paraná, between 2000 and 2012, using an institutional analysis perspective. The findings indicated that public policies did not produce a positive and significant effect on development.

Finally, the study by Olivares and Dalcol (2014) evaluated the contribution of LPAs to local development in the state of Rio de Janeiro. The findings underscore the relevance of LPAs, particularly in terms of their significant impact on employment and income generation, as well

as regional economic growth.

Among the studies in Group 01, only Jacometti et al. (2016) did not find evidence of a relationship between the analyzed variable and development. According to the authors, this outcome may be attributed to the fact that the policies were designed without involving LPA actors. In this context, such policies are understood as institutions, (i.e., rules of the game) that generally fail to reflect the interests of the targeted actors and thus tend to be ineffective in promoting development.

5 Conclusion

This study aimed to identify the variables used to explain development in the context of an LPA. A descriptive qualitative approach was employed, using the integrative systematic review method given its alignment with the research objective. Additionally, content analysis was performed with support from IRaMuTeq®.

This study is grounded in the understanding that LPAs are recognized as drivers of development. The reviewed studies pointed to a relationship between LPAs and developmental outcomes. The analysis revealed three areas of concentration: (i) business agglomerations and their contributions to development; (ii) strategies for addressing the challenges inherent to LPAs and enhancing their performance; and (iii) the evaluation of public policies.

The studies identified the following variables: articulation among actors, public action, absorptive capacity, innovative capacity, social capital, trust, cooperation, coordination, environmental dimension, economic dimension, social dimension, governance, innovation, interaction among actors, participation, public policy, and the presence of an LPA.

While the potential of these variables to promote development is recognized, some studies lacked systematic procedures to confirm this relationship. This reflects a recurring feature in the literature addressing the connection between LPAs and development. It reinforces the need to expand research efforts that respond to this gap and to define a research agenda in which these variables are more thoroughly examined.

Drawing on the content of these studies, two distinct groups were established. Group 01 comprises studies that apply procedures, such as data collection and analysis techniques, that



enable a systematic examination of the relationship between specific variables and development. Group 02, by contrast, does not include such procedures.

Thus, the variables identified in the studies from Group 01, namely public spending, employment creation, income generation, fiscal management, public policy, and the presence of an LPA, can inform a research agenda focused on investigating LPAs across different sectors and territories. The remaining variables may serve as a foundation for studies that seek to systematize the relationship between LPAs and development. This observation is relevant, as each LPA presents distinct characteristics and may respond differently to the same development-oriented intervention.

In addition to the variables discussed, the analyzed studies highlight the relevance of debating the artificial construction of LPAs and the role of local productive vocation. They emphasize the need to align the interests of LPA actors, development policymakers, and the residents of the territories where LPAs are situated.

Greater attention to cultural traditions and the historical context of local territories has drawn increasing interest due to its potential to support the implementation of development initiatives that reflect the interests of all stakeholders involved.

One limitation of this study was the limited number of comparable studies, which posed challenges for the matching process. Another constraint was the limited availability of secondary data on LPAs, which restricted the range of explanatory variables that could be used to explore the relationship between LPAs and development.

These observations also serve as suggestions for future research, reinforcing the need for a broader perspective on LPAs that goes beyond their role in promoting business and territorial development.

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