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Entrepreneurial Ecosystems in Small Towns: Franchise Chain Expansion

Abstract

Purpose: This article seeks to identify the interrelationships of institutional factors that compose an entrepreneurial ecosystem (EE) in small towns that can potentially increase the attraction of franchises.

Design/methodology/approach: We analysed 728 small towns with franchise chains that do not belong to metropolitan regions and are limited to populations of up to 50,000 inhabitants. Secondary data are obtained from the Brazilian Institute of Geography and Statistics. The data analysis technique used is Poisson regression.

Findings: A higher number of employed persons (H1), a higher savings (H2), and a higher number of educational institutions (H4) correlates with more franchise chains in small towns. The availability of institutional support (H3) does not correlate with the number of franchise chains. Regarding the interrelationships between factors, the interactive effect between two constructs is determined to cause a decrease in franchise chains, whereas interrelating three factors raises the number of franchise chains (R^2 = 72.3%).

Originality/value: The contribution of this article is bringing EE to the debate of the institutional environment's impact on new businesses. EE adds to the debate examining the interrelationships between different institutional factors. An EE not only identifies the factors, but also examines the interdependence of these factors, which can potentially explain the attraction of franchise chains in small towns.

Practical implications: The analysis identifies some environmental factors to be considered in market prospecting by franchise chains' expansion managers. These factors constitute a relevant analytical model focused on the regional development of franchise chains.

Social implications: Social contributions are directed to public policy professionals responsible for regional economic development, as emerging markets demand actions to encourage job creation when confronted with high unemployment rates and dependence on the informal economy.

Key Words: Entrepreneurial Ecosystem; Regional Development; Small Town; Institutional Environment; Emerging Market; Franchise Chains.

1. Introduction

The franchise industry faces growth barriers, particularly in large cities and metropolitan areas, where expansion in the markets where a franchise operates must be controlled to avoid unnecessary competition between the units of the same chain. One solution for rational expansion involves adapting a franchise's business model to explore markets in smaller cities (Moita and Guerra, 2012; Melo, Delgado, Corrêa and Borini, 2020; Melo, Borini, Isaac and Corrêa, 2023). However, this is not a simple endeavor, as studies highlight the difficulties of establishing structured businesses in smaller cities (Kelly, Ruther, Ehresman and Nickerson, 2016; Dubois, 2016; Roundy, 2017; Roundy, 2018; Melo *et al.*, 2023). In particular, limitations in the institutional environment include restrictions among the consumer public, inadequate disposable incomes for consumption, lack of workforce training and business knowledge, limited networking between local entrepreneurs, competition with informal local competitors, and difficulties with logistics and overall infrastructure (Neo and

Pow, 2015; Estrada, Sandu, Zrncic and McNulty, 2015; Roundy, 2017). These limitations become more challenging for franchising in emerging markets (Boudreaux and Nikolaev, 2019; Lanfranchi, Melo, Borini and Telles, 2021; Lanfranchi, Strehlau, Borini and Melo, 2021; Melo, Carneiro-da-Cunha and Telles, 2021). There are several aspects of the institutional environment that can constrain the expansion of franchises in small towns, and examinations to determine the settings that attract franchises to small towns are still based on the literature regarding the institutional environment.

However, the analysis of factors in the institutional environment can be restrictive in understanding the attraction of new franchise units to small towns. The analyses of institutional environment factors are static. They consider whether the factors are presented or not. The literature needs to bring to the debate the concept of entrepreneurial ecosystem (EE). EE is based on a biological metaphor, in which the interrelationship between participants in an environment may be capable of promoting business activities, involving both the private and governmental spheres. The result can enhance the growth of enterprises in geographic boundaries, be they countries, regions, or cities (Audretsch & Link, 2012; Stam, 2015; Spigel, 2017; Acs, Stam, Audretsch & O`Connor, 2017).

The EE perspective assumes that the interrelationship between participants in an economic environment could foster business activities (Stam, 2015; Spigel, 2017). This leads to analyses of the interdependence of the attractive investment factors that are related to the creation of businesses by entrepreneurs, including networks, leadership, finance, talent, new knowledge, intermediate services, formal institutions, culture, physical infrastructure, and demand (Stam, 2015; Stam and Spigel, 2018; Stam and Van de Ven, 2021; Leendertse, Schrijvers and Stam, 2022). EE includes institutional factors, but places emphasis on the interdependence of institutional factors for explaining the attraction of franchise chains to small cities (Neo and Pow, 2015; Estrada *et al.*, 2015; Kelly *et al.*, 2016; Dubois, 2016;

Roundy, 2017). When the EE is the focus of analyses the central point is not only the institutional factors themselves, but whether the interrelationship of the institutional factors that compose the EE of small towns can increase the attraction of franchise chains.

In this way, the article's objective is to show the importance of adding EE to the discussion of the impact of the institutional environment on new franchises. To develop the research, in addition to anchoring the article in the EE theoretical perspective, we adopt a quantitative approach to analyze the associated hypotheses. The subjects of article are franchise chains in small towns in Brazil. The use of Brazilian subjects is justified by the country's characteristics of a large consumer market with 90% of its cities having less than 50,000 inhabitants, representing approximately 37% of Brazil's population (Vieira, Roma and Miyazaki, 2020). The data analysis technique used is Poisson regression. The main result confirms the importance of EE, demonstrating that the interactive effect between factors is associated with an increased number of franchises in Brazil's small towns.

The main contribution of this article is to introduce the EE alongside the institutional approach. In other words, to understand the interrelationship between various institutional factors in EEs (Stam and Spigel, 2018; Vedula and Kim, 2019; Stam and Van de Ven, 2021; Leendertse *et al.*, 2022). We introduce this theme of interdependence to the debate regarding the competitiveness of franchise chains, where the institutional environment impact is already well discussed (Melo, Borini, Oliveira Jr. and Parente, 2015; Melo, Ogasavara and Borini, 2019; Lanfranchi *et al.* 2021a; Lanfranchi *et al.*, 2021b; Melo *et al.*, 2020; Melo *et al.*, 2023). Furthermore, by investigating the issue of small towns, we contribute to associated reflections on regional development (Neo and Pow, 2015; Estrada *et al.*, 2015; Kelly *et al.*, 2016; Dubois, 2016; Roundy, 2017; Roundy, 2018). In managerial terms, we contribute by identifying how EEs can be important drivers for franchise managers when making their choices to establish operations in new markets, and for public administrators regarding the

importance of enhancing the institutional environment by developing effective policies to facilitate the interrelations of factors and establish vibrant EEs.

2. Literature review

2.1. Entrepreneurship Ecosystem (EE)

Multiple models list the factors that support regional entrepreneurial activity. As current studies acknowledge (Leendertse *et al.*, 2022; Kansheba and Wald, 2020), no consensus regarding a single instrument has been reached for measuring EE. Consequently, certain factors have greater relevance for certain ecosystems and business models (Corrente, Greco, Nicotra, Romano and Schillaci, 2019; Mungila Hillemane, 2020).

From a more recent perspective, Stam (2015), Stam and Spigel (2018), Stam and Van de Ven (2021), and Leendertse *et al.* (2022) propose an integrative model comprising 10 EE elements. These authors classify these elements into institutional arrangements (formal institutions, culture, and networks), resource endowments (physical infrastructure, demand, intermediaries, talent, knowledge, leadership, and finance), and the value created by entrepreneurs as an output of the EE. This model highlights the relevance of institutions in establishing the interrelationships between resources to generate value in the ecosystem, with networking as the provider of information flow and exchanges between participants.

EE studies are guided by geographic dimensions, such as towns, cities, regions, and countries (Malecki, 2018). Among studies analyzing geographic delimitations, some authors restrict their regional analyses, assuming that entrepreneurs' actions are based on locale, which can yield greater accuracy in revealing the business policies adopted by entrepreneurs (Leendertse *et al.*, 2022). For example, Stam and Van de Ven (2021) analyze 12 regional subdivisions in the Netherlands, demonstrating three groups of interrelationships, including (i)

talent factors, entrepreneurial culture, and support services; (ii) knowledge and leadership factors; and (iii) physical infrastructure and demand factors. Nevertheless, research gaps remain in studies that purport to demonstrate differences between regions in the same country (Alvedalen and Boschma, 2017). This opens space for research in countries with great geographical extension and intense cultural and economic diversities, such as those in Latin America (Leendertse *et al.*, 2022).

2.2. Regional Development and Small Towns

Such towns present additional challenges, as they often do not have conditions that are common to large urban centers, such as population density, infrastructure, human resources, and consumer markets. This regional differentiation is more complicated in small towns in emerging markets, as there may be difficulties in raising funds, less diversified economies, low public policy support, and lower quality networking, which make EE survival more challenging (Neo and Pow, 2015; Estrada *et al.*, 2015; Roundy, 2017). However, small towns can be promising sites of entrepreneurial activity and consequently in the development of regional businesses; thus, there are research opportunities for understanding the particularities involving EEs in small towns (Roundy, 2017; Kelly *et al.*, 2016; Dubois, 2016).

Roundy (2017) examines the characteristics of EEs in small towns. In the author's conception, limitations of these ecosystems include a lack of specialized human resources, less competitive markets due to smaller scale production, less infrastructure development, lack of professional support from incubators and third parties, less financial flow and consequent difficulty in fundraising. Nevertheless, such markets benefit from greater consumer loyalty, as personal relationships are more informal than those in large cities, and networking among participants tends to be stronger, given the greater proximity between participants. However, research on the most prominent markets has occupied the vast majority

of studies, and this concentration limits our understanding of income and consumer behaviour impacts in small towns, of which only a few are known based on the accumulated academic knowledge (Roundy, 2018).

2.3. Institutional Environment and Emerging Markets

Studies that apply institutional theory as a basis (Raza, Muffatto, and Saeed, 2019; Atiase, Mahmood, Wang, and Botchie, 2018) demonstrate adherence to the EE approach, presenting multilevel analyses of institutions (regulatory, cognitive, and normative) and their interactions in these ecosystems. Such studies analyze the quality of the institutional environment and determine the optimal conditions for entrepreneurs.

Nevertheless, the relationship between EEs and institutional environments still lacks depth, including (i) understanding institutional changes and EEs' ability to absorb these changes to establish new business opportunities; (ii) identification of the human resources responsible for leadership in EEs and their ability to guide institutional impacts; (iii) determining the institutions that create obstacles in regional development and make successful EE functioning difficult (Alvedalen and Boschma, 2017; Boschma, 2017). The institutional characteristics in certain locations may be more conducive to entrepreneurship, leading to more effective regional development. Particularly in markets with weak formal institutions, there is a greater strength of entrepreneurs' informal social capital (Sine and David, 2010; Huggins, Thompson, and Johnston, 2012; Boudreaux and Nikolaev, 2019). This highlights the formal institutional characteristics in underdeveloped and emerging markets, as emerging market institutions are generally lower quality compared with developed markets (Boudreaux and Nikolaev, 2019; Khoury and Prasad, 2015). Therefore, examinations of the relationship between EE and the institutional environment must be expanded.

Understanding the relationship between EEs and the institutional environments is an even higher priority for franchises, and there is an absence of studies regarding this phenomenon. In terms of the purpose of this article, some research is dedicated to understanding the competitive dynamics of franchise chains in emerging markets (Lanfranchi *et al.*, 2021a; Lanfranchi *et al.*, 2021b).

2.4. Entrepreneurship and Marketing (EM)

Entrepreneurship and marketing (EM) studies work on the particularities of these activities linked to small- and medium-sized enterprises (SME) by understanding that differences in the application of marketing exist compared to large companies. Sophisticated marketing models in small companies have not shown promise when the particularities of SMEs are not recognized. There is a strong dependence on the owner's knowledge, in an environment with a limited presence of specialists, with generalist professionals prevailing. This impacts these companies' reduced networking and low social insertion in the exchange of knowledge (Jones and Rowley, 2011; Alqahtani and Uslay, 2023). In the study, we noted the contribution of the franchise model for entrepreneurs. There is the benefit of belonging to an extensive network of knowledge disseminated by the franchisor to its franchisees. This configuration allows for greater identification and exploration of opportunities by working in a network (Melo *et al.,* 2020; Melo *et al.,* 2023; Melo, Carneiro-da-Cunha and Telles, 2022).

From an entrepreneurship perspective, studies involve understanding the entrepreneur's profile and identifying opportunities, innovations, and new businesses (Gilmore, 2011). For marketing researchers, the agenda focuses on creating, communicating, and delivering value to consumers (Gundlanch and Wilkie, 2009). Thus EM emerges from this junction as they seek to expand their businesses, identifying opportunities to be explored with innovations in their markets and value to their consumers (Most, Conejo and

Cunningham, 2018; Sadiku-Dushi, Dana and Ramadani, 2019; Homsi, Hashem and Freihat, 2020; Alqahtani and Uslay, 2023).

There are EM agendas that come close to the framework of this article's proposal on the expansion of franchise chains to small cities and the respective EE. These studies establish that EM deals with topics linked to the expansion of enterprises, prospecting and exploring business opportunities, creating networks, and delivering value to stakeholders (Hills, Hultman, Kraus and Schulte, 2010; Pane Hade, Kernek and Toombs, 2016; Alqahtani and Uslay, 2020; Morrish and Jones, 2020; Alqahtani and Uslay, 2023).

Being a field of study that is still recent in academia, because it combines two fields of study, this expansion of research presents even greater potential for development (Jones and Rowley, 2011; Lopes, Laurett, Antunes and Oliveira Jr., 2021). The literature indicates constructs to be explored in research on EM. For Jones and Rowley (2011), four perspectives are integrated: (i) *market orientation*, (ii) *customer orientation*, (iii) *entrepreneurial orientation*, and (iv) *innovation orientation*. These elements are very close to the constructs of Yadav and Bansal (2020), who focused on five research perspectives: (i) *entrepreneurial orientation*, (ii) *marketing orientation*, (iii) *innovation orientation*, (iv) *customer orientation*, and (v) *business performance*.

3. HYPOTHESES

3.1. Market Environment

Consumer demand for products and services is one of the most frequently analyzed institutional factors in studies regarding the potential of EE. The rationale for this institutional factor is easily understood, as it is associated with the population's purchasing power. Markets with low consumption power have lower viability for formal enterprises. The metrics

used to verify the potential of a regional market involve indicators related to the incomes, employability, and size of the local population (Isenberg, 2010; Mack and Mayer, 2016; Stam and Van de Ven, 2021; Leenderstse, Schrijvers and Stam, 2021).

When analyzing the characteristics of small towns in comparison to large cities, additional challenges emerge from population limitations and the configuration of economic strata. These population and economic restrictions tend to generate uncompetitive regional markets, with low sector diversification that is restricted to essential consumption sectors. A limited number of studies provide insightful information about the uniqueness of consumers in small towns, encompassing their consumer behavior, impact of income, innovation attraction, and preference for local brands (Roundy, 2017; Roundy, 2018).

One of the metrics of analysis in small towns is local unemployment indicators. When analyzing particularities regarding the sources of income in municipalities, it is possible to be more exact in determining the potential of markets with population restrictions. Some studies demonstrate the relationship between a population's employability and propensities toward consumption, as the employed population has a greater consumption capacity (Carpenter and Moore, 2006; Shugan, 2007; Melo *et al.*, 2020). Therefore, the following hypothesis is proposed:

H1: Attraction of franchise chains to small towns is positively associated with the consumer market environment of the entrepreneurial ecosystem.

3.2. Financial Environment

Local savings indicators signal a population's capacity for financial expenditure, on the part of entrepreneurs and the consuming public. For the productive sector, these reserves can be used to expand business. For the banking sector, it demonstrates a funding capacity that can be converted into loans. From the perspective of households, it indicates consumption

potential for various products and services (Lang, Ofek and Stulz, 1996; Aghion, Comin, Howitt and Tecu, 2016; Malkina, 2019; Shaikh, 2021; Brazilian Entrepreneurial Cities, 2022).

Access to financial resources is relevant for creating and sustaining enterprises' operations. When examining the particularities of emerging markets, the prevalence of informal investors is notable, and individual savings investments are among the main sources of financial resources for Brazilian entrepreneurs (Criscuolo and Menon, 2015; Brazilian Entrepreneurial Cities, 2022; Stam and Van de Ven, 2021).

The experience of large enterprises in terms of potential financial resources differs from small enterprises' regional development, as access to equity funding, angel investors, and venture capital is not always attainable. Regional development is dependent on bank resources, local entrepreneurs' financial reserves, and the financial reserves of entrepreneurs' family members and friends. This mainly occurs in environments with institutional limitations, such as emerging markets where entrepreneurs face greater difficulties accessing capital (Robb and Robison, 2014; Boudreaux and Nikolaev, 2019).

Financial access is another variable to be examined, as it promotes consumption by the population and is considered a positive factor for attracting business. There are greater financial restrictions in interior markets than in large economic centers (Melo *et al.*, 2020; Melo *et al.*, 2022). Given this situation, the following hypothesis is proposed:

H2: Attraction of franchise chains to small towns is positively associated with the financial environment of the entrepreneurial ecosystem.

3.3. Institutional Support

Activities conducted by institutions that support regional entrepreneurship contribute to entrepreneurs' assistance and technical training, including legal, accounting, financial, and marketing advice, among others. In addition to such training, such organizations also increase

opportunities to intensify networking among entrepreneurs, resulting in greater access to the regional network of investors, suppliers, public representatives, and local stakeholders (Isenberg, 2010; Eveleens, Van Rijnsoever and Niesten 2017; Goswmai, Mitchell and Bhagavatula, 2018; Roundy, 2017; Vendula and Kim, 2019; Van Rijnsoever, 2020; Leendertse *et al.*, 2022).

The actions to promote enterprises developed by supporting institutions include initiatives such as tutoring, training, meetings, conferences, and startup weekends that can intensify the network of relationships between entrepreneurs, orienting them as part of a local business community, and enabling a greater exchange of experiences and understanding of the dynamics of these ecosystems (Spigel, 2017; Ter Wal, Alexy, Block and Sandner, 2017; Stam and Van de Ven, 2021).

However, when analyzing the characteristics of small towns, a minimal number of initiatives promote enterprises through technology parks, incubators, and business accelerators. There is also a smaller network of relationships, as there are fewer participants in these ecosystems compared with large cities. This is an additional challenge for entrepreneurs in such locations, who must seek relationships and external support to build and expand their ecosystem (Roundy, 2017; Ayatse, Kwahar and Iyortsuun, 2017; Eveleens *et al.,* 2017; Leendertse *et al.*, 2022). Based on this information, the following hypothesis is proposed:

H3: Attraction of franchise chains to small towns is positively associated with the institutional environment that supports the entrepreneurial ecosystem.

3.4. Human Resources Environment

Human resources are a constantly present factor of EE studies, and it is essential to analyze the current capabilities of entrepreneurs and collaborators. From the perspective of entrepreneurs, broader knowledge is required, encompassing leadership, negotiation, and

strategic skills and operational knowledge. To measure this construct, some studies use education indicators at secondary and university levels (Isenberg, 2010; Boudreaux and Nikolaev, 2019; Vedula and Kim, 2019; Leendertse *et al.,* 2022; Stam and Van de Ven, 2021).

In international studies involving several countries, analyses related to human capital highlight the need for complementary educational programs in emerging and developing markets, due to existing inadequacy of the educational system in these countries (Galvão, Ferreira, and Marques, 2018). These characteristics are intensified in emerging economies when considering small towns, as there is less labor force availability in these locations than large centers.

Regarding the specificities of franchise chains, an established business model facilitates the transfer of knowledge between units that are adaptable to local realities. Franchisees are required to have local management skills for franchises, as determined by the franchisor. Thus, franchise chains are capable of advancing local human capital skills through technical training for both franchisees and employees to conduct franchised activities. This characteristic of the franchise model can overcome existing deficiencies in the formation of the operational workforce of the markets where the franchises operate (Melo, Carneiro-da-Cunha and Borini, 2018; Santiago *et al.*, 2020; Melo, Carneiro-da-Cunha, and Telles, 2021). Based on the above, the following hypothesis is proposed:

H4: Attraction of franchise chains to small towns is positively associated with the human resources environment of the entrepreneurial ecosystem.

3.5. Interrelationships

The interrelationships between the environmental factors of an EE have a greater influence than the actions of the individual parts. We argue that the EEs of franchise chains in

small cities have some unique components, considering the nature of the franchise business approach based on retail and pre-formatted models. The relationship between the consumer market, consumption power, institutions supporting entrepreneurs, and workforce training are some of the factors of EEs that are relevant to sustaining franchises in small towns (Isenberg, 2010; Mack and Mayer, 2016; Melo, Carneiro-da-Cunha and Borini, 2018; Stam and Van de Ven, 2021; Leenderstse, Schrijvers and Stam, 2021; Melo, Carneiro-da-Cunha, and Telles, 2021).

Market potential is related to a population's income capacity for consumption, and is among the main factors of business attraction. This includes consumers with income from professional occupations as well as savings and investments (Lang *et al*, 1996; Aghion *et al*., 2016; Malkina, 2019; Shaikh, 2021; Brazilian Entrepreneurial Cities, 2022).

The institutional support structure for entrepreneurs is also among the necessary elements for EEs. This factor has the benefit of supporting networking with other local entrepreneurs. This element is relevant as it can enhance the commercial vision of franchisees assessing commercial potential and the overlap of local adversities common to other traders (Isenberg, 2010; Eveleens *et al*., 2017; Goswmai *et al*., 2018; Roundy, 2017; Vendula and Kim, 2019; Van Rijnsoever, 2020; Leendertse *et al.*, 2022).

The availability of skilled labor is another element that could strengthen EEs in small towns. Thus, potential local employees must have an educational precondition to capably absorb the requirements of training and qualification by the franchisors (Melo, Carneiro-da-Cunha and Borini, 2018; Santiago *et al.*, 2020; Melo, Carneiro-da-Cunha, and Telles, 2021). Given the interrelationships between these factors, the following hypothesis is proposed:

H5: Attraction of franchise chains to small town is positively associated with the interrelationships between the market, financial, institutional support, and human resources environments of the entrepreneurial ecosystem.

Given the arguments presented above, Figure 1 illustrates the research framework developed for this article.

Insert Figure 1 here

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4. Methodology

4.1. Data

The data obtained and investigated in this research are part of a collection available from the Brazilian Institute of Geography and Statistics (IBGE Cities, 2021), including cities with franchise chains that are not constituents of metropolitan regions, and limited to populations of up to 50,000 inhabitants. According to the IBGE, such towns are conceptually small cities (Vieira *et al.*, 2020). The list of cities with franchise chains was obtained through a request to the Brazilian Association Franchising in 2021. The sample for this research includes 728 small cities.

The relevance of research on franchises in small towns is justified, due to their predominance in Brazil. The official data from the IBGE (Vieira *et al.*, 2020), demonstrate the predominance of small towns in Brazil. There are 5,570 cities, of which 5,037 (90%) are cities with less than 50,000 inhabitants, and around 37% of the Brazilian population is dispersed in small towns. In addition, studies that analyze the performance of franchise chains in the interior of Brazil are scarce and only apply the institutional environment perspective and not EEs (Melo *et al.*, 2020; Melo *et al.*, 2023). Figure 2 shows Brazilian population cities map.

Insert Figure 2 here

4.2. Research Variables

The dependent variable is the number of franchise chains in the municipality, signaling the attractiveness of a municipality for different franchise chains (Melo *et al.*, 2023). The independent variables include (i) market, (ii) financial, (iii) institutional support, and (iv) human resources environments, which are key environmental variables for the development of regional businesses and the institutional environment for entrepreneurship (Isenberg, 2010; World Economic Forum, 2013; Stam, 2015; Spigel, 2017; Stam and Spigel, 2018; Vedula and Kim, 2019; Melo *et al.*, 2020; Melo *et al.*, 2023; Stam and Van de Ven, 2021; Leendertse *et al.*, 2022). The environmental factors were selected based on the characteristics of the business model based on the franchises, which is retail-based and owned by entrepreneurs (Melo *et al.,* 2020; Melo *et al.,* 2023). Thus, the selected factors concern the potential of the consumer market (market), the financial capacity for consumption (financial), the institutional support for entrepreneurs (institutional support), and the availability of labor for operation in the franchises (human resources). Table 1 presents descriptions of the variables and respective institutional environments.

Insert Table 1 here

4.3. Analytical Procedures

The data analysis technique used is zero-truncated Poisson regression, as the dependent variable has count data (Agresti, 2002); in this case, the number of franchise chains in a municipality. The hypothesis tests considered probability values (p-value) < 0.05 (*), p-value < 0.01 (**), and p-value < 0.001 (***). The criterion of the predicted direction in the theoretical hypotheses (β) is also considered to determine whether the influence of the

independent variables is positive (associated with an increased number of franchises, $\beta > 0$) or negative (with a decrease, $\beta < 0$).

To identify the optimal model and perform sensitivity analysis, some general adjustment tests are performed to compare the nested models (Wooldridge, 2012), such as the contrast between Akaike information criterion (AIC) levels and the proportion of explanation of the variability of the dependent variable (adjusted pseudo-R^2). The nonlinear terms of the independent variables already existing in the model are also added to minimize the possibility of bias in estimating the parameters by containing an omitted variable within the error term (Ramsey, 1969). Verification of the intensity of multicollinearity and heteroscedasticity was also tested (Breusch and Pagan, 1979; O'Brien, 2007), which can be circumvented by correcting standard errors (White, 1980).

The analyses are conducted using R software (R Core Team, 2013) and the RStudio visual interface (RStudio Team, 2020) with the Hmisc libraries (Hothorn *et al.*, 2022; Harrell Jr, 2021), to test the correlations; performance (Lüdecke, 2022) for some model tests and assumptions; rsq (Zhang, 2022), to calculate the adjusted pseudo-R^2 coefficients; and sandwich (Zeileis and Lumley, 2022) and lmtest (Hothorn *et al.*, 2022) to operationalize the analyses related to homoscedasticity.

5. Results

The first model (M1) is the most basic, while the last model (M7) is the most complex and represents the final version used for testing the hypotheses. M1 is composed only by the intercept, and M2 has the addition of the fixed effects by state. The addition of this variable is particularly important because it does not load the model with a very large number of cities and serves as a control for the size of the geographic context, which could introduce several aspects that may confound the main effect that we seek to measure.

M3 adds all variables that test the hypotheses of interest. M4 is adjusted according to the result of the previous model. The interactions (interrelationships) between the variables of interest are added in M5. The main objective of investigating these interrelationships is to test the joint effect of each of the hypotheses tested in the article. M5 only includes the pair-to-pair interactions of the hypotheses that previously have some significance. M6 adds an interaction between the variables that have statistical significance. Finally, quadratic nonlinear effects are included in M7. This specification is essential for preventing possible significant nonlinear effects from accumulating from the error term of the equation.

Regarding the general fit of the model, the AIC indicates that the inclusion of new variables is responsible for reducing by almost half the errors found in the first model (AIC = 6,084) in comparison to the last one (AIC = 3,173). Regarding the explanation of the total variability of the dependent variable, controlling for fixed effects is not responsible for adding much information. Nevertheless, when adding both the variables that operationalize the hypotheses and their interactions, an increase of more than 30% in each of the cases is evident. Hence, most of the variability present in the dependent variable is explained by the variables of interest (adjusted $R^2 > 60\%$) to the detriment of the question of control or complementary to the core of the article.

As expected, adding the variables that interrelate with the main effects of interest reveals a considerable increase in collinearity between the variables (such as VIF > 5), as a portion of the same information present among the independent variables is also present in the interactions. However, this addition remains relevant for explaining the phenomenon in question, and does not present any significant problem for the interpretation of the parameters (O'Brien, 2007), as there is no perfect multicollinearity (Wooldridge, 2012). Finally, a test is performed to determine whether there is sufficient evidence of the presence of heteroscedasticity (Breusch and Pagan, 1979). Except for the most basic models, the levels of

variability of the independent variables are not homogeneous (p-value < 0.001). To address this limitation, the standard errors are corrected (White, 1980) and the results are presented in Table 2.

Proxy variables representing the constructs described in the theoretical framework are used to test the hypotheses. H3 regards the promotion of enterprises, which is the only variable not associated with the number of franchise chains in municipalities (p-value > 0.05). For H1, the number of people employed in the municipality represents the environment of market demand (p-value < 0.001, ***). For H2, the level of savings represents economic activity and the financial environment (p-value < 0.01, **). For H4, the number of secondary education establishments represents professional training and the environment for developing talent (p-value < 0.001, ***). These last three reveal strong statistical significance (at least p-value < 0.01) in all models, regardless of the variation in the interrelationships used in the different specifications. It is also possible to determine whether the direction of the interrelationships remains the same as that predicted in the literature; that is, an increase in employed people (H1), savings (H2), or educational background (H4) is associated with an increase in the number of franchise chains ($\beta > 0$).

We also test the nonlinear effects that our hypotheses could have. No significant relationships were found for employed people (p-value > 0.05) and level of savings (p-value > 0.05), but significant and negative relationships were found for secondary education (p-value > 0.01, **). This can be interpreted as meaning that investment in secondary education (H4) is responsible for increasing franchise levels up to a certain threshold, at which an inflection occurs, after which any further increase in educational support is associated with a decrease in the number of franchise chains. This interrelationship presents an inverted U shape.

Other nonlinear results test the interrelationships between the variables proposed in the hypotheses. A general result that is consistently observed between M5 and M7 is that the

interactions between employed people (H1) with savings (H2) or secondary education (H4) are associated with a decrease in the number of franchise chains in a municipality ($\beta < 0$). This clarifies that just having an increase in employed people (H1), whether this is interrelated with a level of savings (H2) or educational level (H4) is not enough to increase the number of franchise chains. In contrast, interacting the three variables reveals a significant marginal increase in the number of franchise chains in a municipality ($\beta < 0$; p-value < 0.05, *). Therefore, the interactive effect between just two constructs can generate a decrease, while interrelating empirically verifies an increase.

Insert Table 2 here

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6. Discussion

The research carried out outlined the particularities of the environmental factors involving the attraction of franchise chains to EEs in small Brazilian cities. When analyzing the results, such locations stand out due to higher levels of employed workers, bank savings, and educational institutions. In turn, the attraction of franchises was not significant because of the presence of support institutions. Notably, there is a positive relationship in attracting franchises when three factors are interrelated, with a decrease when only two factors are interrelated. These findings differ from other research involving EEs. This is due to the various particularities of the sectors in which they operate, regional configurations, consumer demands, and the objectives of research involving EEs.

Classic studies involving EEs focused on analyzing the prevalence of technological sectors with global demands. These are ecosystems with products that have an international impact, not just local. The best-known case is Silicon Valley/United States (Saxenian, 1994; Kenney and Von Burg, 1999), however there are other relevant regional ecosystems, such as

Kyoto/Japan (Aoyama, 2009), Arizona/United States (Mack and Mayer, 2016), Tel Aviv/Israel (Klingler-Vidra, Kenney, and Breznitz, 2016), Edinburgh/Scotland (Spigel, 2016) and Calgary/Canada (Spigel, 2017). There are particular characteristics of each ecosystem, which can transcend the perimeters of local operations, depending on the ecosystems' business dynamics. This calls for increasingly regionalized analysis of EEs (Leendertse *et al.,* 2022; Stam and Van de Ven, 2021).

Furthermore, recent studies have been conducted in ecosystems in both American and European regions.. These results indicate that younger American ventures benefit from the expertise of more experienced entrepreneurs despite institutional factors (Vedula and Kim, 2019).

In the case of Europe, studies show that most urbanized regions had better scores compared to rural regions and Eastern Europe. This suggests a particular understanding of small cities and less economically developed regions (Leendertse *et al.,* 2022).

Therefore, given the regional particularities and the businesses analyzed, generalizing based on the results of the research is difficult. However, the research provides strong evidence that environmental factors are business attractors.

7. Conclusion

7.1. Theoretical Implications

The main theoretical contribution of this research is the identification of EE factors in small towns that are interrelated to the presence of franchise chains in an emerging market. This complements studies on *EEs* (Isenberg, 2010; World Economic Forum, 2013; Stam, 2015; Stam and Spigel, 2018; Vedula and Kim, 2019; Stam and Van de Ven, 2021; Leendertse *et al.*, 2022; Mohammadi and Karimi, 2022), the r*egional development of small towns* (Neo and Pow, 2015; Estrada *et al.*, 2015; Kelly *et al.*, 2016; Dubois, 2016; Roundy,

2017; Roundy, 2018), the *institutional environment of emerging markets* (Sine and David, 2010; Huggins *et al.*, 2012; Khoury and Prasad, 2015; Melo *et al.*, 2015; Melo, Ogasavara and Borini, 2019; Boudreaux and Nikolaev, 2019; Lanfranchi *et al.*, 2021a; Lanfranchi *et al.*, 2021b), the *expansion of franchise chains in inland markets* (Moita and Guerra, 2012; Melo *et al.*, 2020; Melo *et al.*, 2023), and *EM* (Jones and Rowley, 2011; Gilmore, 2011; Pane Haden, Kernek and Toombs, 2016; Most, Conejo and Cunningham, 2018; Sadiku-Dushi, Dana and Ramadani, 2019; Yadav and Bansal, 2020; Alqahtani and Uslay, 2020; Lopes *et al.,* 2021; Alqahtani and Uslay, 2023). Specifically, these contributions indicate a lack of relevance of local development institutions, as franchise chains may lower franchisee entrepreneurs' need for such support, given the advisory skills and market intelligence provided by franchisors.

Another contribution is correlating the interrelationships between employed people, savings, and educational background with the increase in the number of franchise chains. However, there is an inflection point at which educational investment is linked to the increased franchise chains. This may be related to employability options sought by high school graduates, as well as the saturation level of local market for franchises.

The third contribution reveals the interrelationships between employed people with savings or educational training, which are associated with reductions in franchise chains in municipalities, indicating that only an increase in employed personnel, whether interrelated with level of savings or educational training, is not enough to increase franchise chains.

The fourth contribution indicates that when interrelating the three environmental factors (employed people, savings, and secondary education), there is a marginal increase in the number of franchise chains in a municipality. This also demonstrates that more complex relationships are required to establish attractive regional development for franchises in small towns.

There is a fifth contribution aimed at EM studies based on the constructs by Jones and Rowley (2011) and Yadav and Bansal (2020). This involves five orientations: (i) *Entrepreneurial orientation*, deals with the proactiveness of franchise chains in the search for opportunities in new markets, including the attitude of entrepreneurs toward establishing franchises in these small towns; (ii) *Market orientation*, the requirement of franchise chains to shape their businesses and consequently the marketing mix for operations in small markets, including the strengthening of business networks with local entrepreneurs aiming to explore these regional particularities; (iii) *Innovation orientation*, the establishment of a franchise in a small town with a mix of innovations, given the modeling of these businesses with contemporary marketing mixes, they tend to be superior points of sale to pre-existing models in small towns; (iv) *Customer orientation*, brand equity efforts by franchise chains, technological actions in digital marketing on social networks, alongside the franchise chain's know-how in working on relationships and value generation concepts and; (v) *Performance*, the expansion of franchise chains to small towns involves expanding the scale capacity of these networks, by expanding into these markets, the network increases its bargaining power with suppliers. Thus, there are several contributions and intersections when studying the entrepreneurial ecosystem of small cities for franchise chains and the respective studies in EM.

Alongside these contributions to EM studies, we note the filling of the research gap identified by Eggers, Niemand, Kraus, and Breier (2020) and Lopes *et al.,* (2021) by presenting emerging perspectives that are still little explored. This contribution concerns the work in business networks in influencing EM actions. This becomes clear when we talk about the expansion of franchise chains and the attraction of EEs. Another research gap filled highlighted by Alqahtani and Uslay (2023) as promising themes to be developed in EM,

involves the empirical application in emerging markets, EM and networking, the influence of EEs, and the use of quantitative data.

7.2. Managerial and Social Implications

Management contributions are addressed to franchise chain expansion managers. These analyses identify some critical environmental factors to be considered in prospecting plans in small towns. The understanding of environmental factors as well as the interrelationships between these factors is relevant for expansion managers. This analytical model could produce more reliable conclusions for determining the location of franchises in expansion plans.

Social contributions are directed toward public policy managers responsible for regional economic development to promote entrepreneurship and the local business environment. In emerging markets, high unemployment rates and dependence on informal economies are endemic economic realities. This requires government officials to promote job creation, at their various levels of action, whether federal, state, or municipal. Consequently, the promotion of public policies to support the development of EEs is one of the alternatives for regional development, as franchise-based businesses may generate jobs and income for populations in the interior of the country.

7.3. Research Limitations and Future Studies

Some limitations are related to the institutional factors verified in this research, specifically (i) market does not measure the income of the employed population, but is restricted to measuring the proportion of the population that is employed; (ii) financial, considering only savings in banks, excludes financial reserves in real estate and other assets; (iii) institutional support does not include the purpose of the development agencies, but only

the existence of such public institutions; and (iv) human resources does not measure the number of high school graduates, but only the number of educational institutions.

Opportunities for future studies include the following topics involving small towns: (i) investigation of other institutional factors and interrelationships in EEs; (ii) analysis between regional clusters to identify the characteristics and spillover effects of these national ecosystems; (iii) sectoral studies within the franchising sector, with the objective of identifying segments with superior business modeling; (iv) verifying the correlation between franchise fees and attractiveness in small towns to determine related investment patterns; and (v) choice of other factors determining the EE, as mentioned in the theoretical models, in alignment with the availability of data by official bodies.

Furthermore, alongside the suggestions mentioned, there is a recommendation for specific future studies on EM; in this case, the identification of innovations and the impact on regional markets by local franchisees in conjunction with franchisors. This can help deepen the perspective on marketing orientation, customer orientation, entrepreneurial orientation, innovation orientation, and performance (Jones and Rowley, 2011; Roundy, 2018; Yadav and Bansal, 2020). Finally, we addressed the inclusion of quadratic terms to minimize the bias of omitted variables. However, we discovered exciting results about the nonlinear effects to respond to a methodological concern and to represent the hypotheses in combining the proxies for ecosystems. The results obtained are highly encouraging and pave the way for further investigation, especially by moving beyond the mindset of linear relationships.

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Figure 1: Research framework

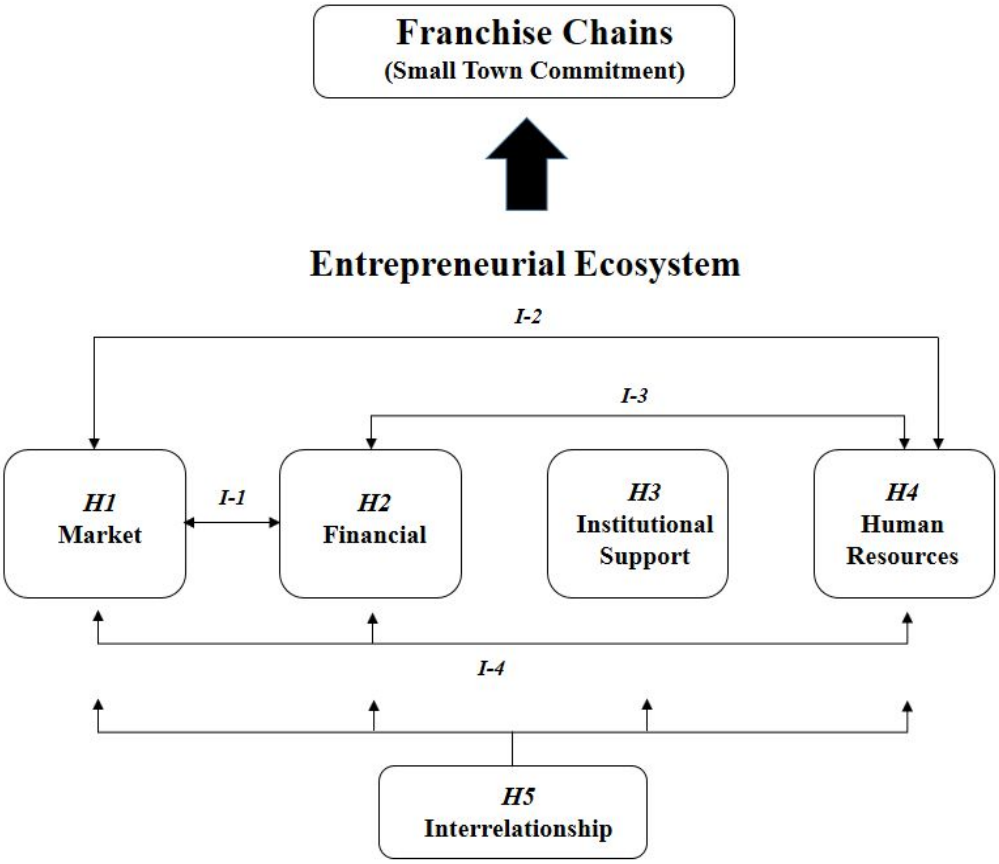


Table 1: Variable descriptions

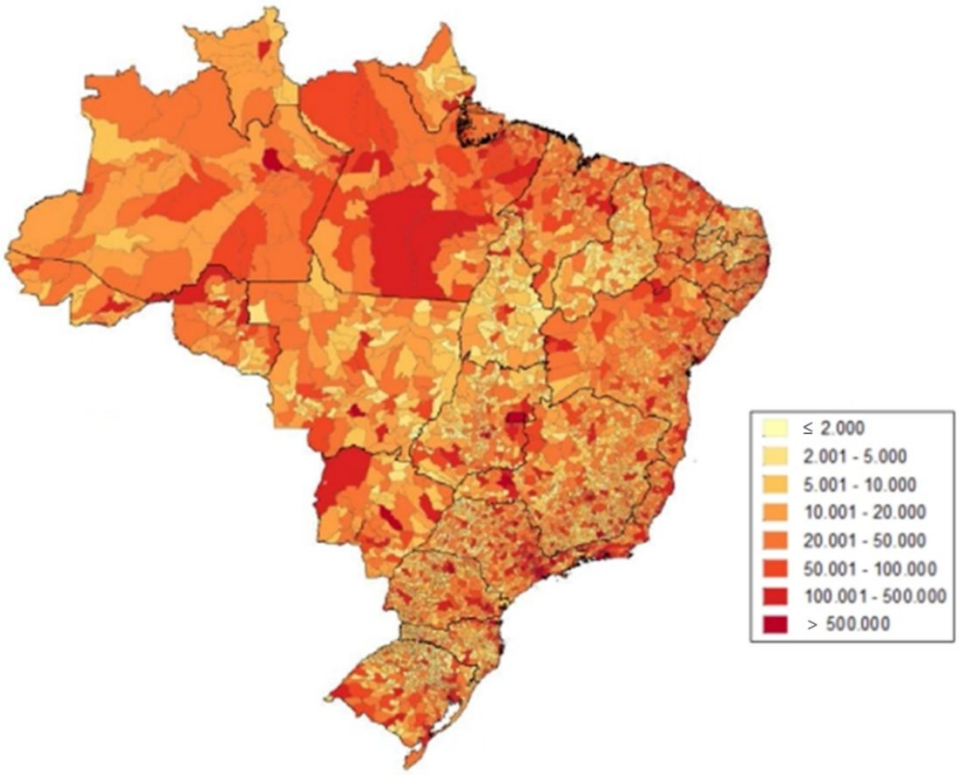
ENVIRONMENT	Market	Financial	Institutional Support	Human Resources
VARIABLE	Employed people	Savings	Fostering ventures	Secondary education
DESCRIPTION	Measured by the percentage of people employed in a municipality, which is useful in understanding the economically active population in a municipality. This indicator signals the potential consumer market based on the population with formal income.	Measured by financial savings reserves in bank accounts in a municipality. This indicator signals consumption potential based on the population's financial reserves. The banked population is considered.	Measured by the number of programs to promote local enterprises. This is an institutional indicator that represents public actions to support entrepreneurs in a municipality.	Measured by the number of secondary education units, as an indicator of secondary education training of the local workforce. As franchises operate in the commerce sector, this level of education aligns with the required capabilities.
AUTHORS	Carpenter and Moore, 2006; Shugan, 2007; Isenberg, 2010; Mack and Mayer, 2016; Melo *et al.*, 2020; Stam and Van de Ven, 2021; Leenderstse, Schrijvers and Stam, 2022	Lang, Ofek and Stulz, 1996; Dubois and Menon, 2015; Aghion, Comin, Howitt and Tecu, 2016; Malkina, 2019; Shaikh, 2021; Stam and Van de Ven, 2021; Brazilian Entrepreneurial Cities, 2022	Isenberg, 2010; Eveleens, Van Rijnsoever and Niesten 2017; Goswmai, Mitchell and Bhagavatula, 2018; Roundy, 2017; Vendula and Kim, 2019; Van Rijnsoever, 2020; Leendertse *et al.,* 2021	Isenberg, 2010; Boudreaux and Nikolaev, 2019; Vedula and Kim, 2019; Leendertse *et al.*, 2022; Stam and Van de Ven, 2021
DESCRIPTIVES:				
Mean	3760	71194556	0.336	3.280
Median	2767	48904345	0.000	3.000
SD	3449	69404525	0.472	2.460
Min.	235	0	0.000	1.000
Max.	43409	673816793	1.000	16.000

Source: authors (2024)

Table 2: Results

Variables	M1		M2		M3		M4		M5		M6		M7	
	β	s.	β	s.	β	s.	β	s.	β	s.	β	s.	β	s.
Intercept	1.54E+00	***	2.08E+00	***	1.59E+00	***	1.60E+00	***	1.18E+00	***	9.10E-01	***	8.59E-01	***
Hypotheses														
Employed people (H1)					6.27E-05	***	6.28E-05	***	1.77E-04	***	2.07E-04	***	1.78E-04	***
Savings (H2)					1.59E-09	**	1.59E-09	**	3.01E-09	***	5.88E-09	***	6.71E-09	***
Institutional support (H3)					9.26E-03									
Secondary education (H4)					8.30E-02	***	8.31E-02	***	8.24E-02	***	1.33E-01	***	1.84E-01	***
Nonlinear Effects														
Employed people ²													1.03E-09	
Savings ²													-2.31E-18	
Secondary education ²													-7.08E-03	**
Interrelationships														
Employed people x Savings									-1.88E-13	***	-4.04E-13	***	-4.57E-13	**
Employed people x Sec. edu.									-6.57E-06	***	-1.08E-05	***	-9.22E-06	**
Savings x Sec. edu.									2.03E-10	*	-2.12E-10		-3.82E-11	
Employed p. x Sav. x Sec. edu.											2.68E-14	**	2.65E-14	*
Fixed Effects			X		X		X		X		X		X	
AIC	6084		5721		3542		3540		3201		3187		3173	
R^2 adjusted	0.000		0.040		0.372		0.373		0.707		0.710		0.723	
VIF (average)					3.510		4.100		9.440		32.500		53.100	
BP Test			0.800		0.000		0.000		0.000		0.000		0.000	

Figure 2: Brazilian cities population map



Source: Scussel (2014)