Institutional environment and the development of franchise chains in the northern region of Brazil

Ambiente institucional e o desenvolvimento das redes de franquias na região norte do Brasil

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Abstract
The objective of this study is to identify which dimensions of the institutional environment are related to the presence of franchise chains in the Northern Region of Brazil. To achieve this objective, we used data from the ABF, covering 129 cities in the region, and data of the institutional environment, from the IBGE. The measurement of statistical data was performed using the technique of multiple regression and multivariate analysis. The results confirmed the three hypotheses of the study, and it is possible to conclude that the better the indicators related to demography, economic and human resources, the greater the attractiveness of franchise chains for the markets of the North Region. It is hoped, with this study, to contribute to the enrichment of the theory of the institutional environment, aimed at business expansion, and to the diffusion of the theory of geographic expansion to the Northern Region of Brazil, focusing on the model of franchise chains.
Keywords: franchise chains, institutional environment, regional development.

Resumo
O objetivo desse estudo é identificar quais dimensões do ambiente institucional estão relacionadas à presença de redes de franquias na Região Norte do Brasil. Para atingir esse objetivo, foram utilizados dados da ABF - Associação Brasileira de Franchising - contemplando 129 cidades da região envolvida, e dados do ambiente institucional, disponibilizados pelo IBGE. A mensuração dos dados estatísticos foi realizada com a técnica de análise de regressão múltipla e análise multivariada. Os resultados confirmaram as três hipóteses do estudo, sendo possível concluir que quanto melhores os indicadores relacionados à demografia, situação econômica e recursos humanos, maior será a atratividade das redes de franquias para os mercados da Região Norte. Espera-se, com este estudo, contribuir para o enriquecimento da teoria do ambiente institucional voltada à expansão dos negócios e para a difusão da teoria de expansão geográfica para a Região Norte do Brasil, com foco no modelo de redes de franquias.
Palavras-chave: redes de franquias, ambiente institucional, desenvolvimento regional.

1 Introduction

The franchise chain model emerged as one of the most used methods of doing business in the global economy, quickly spreading to most continents from the 1990s onwards.

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Currently, it is one of the most used strategies in companies' business expansion (Hoffman; Preble, 2003; Quinn & Doherty, 2000).

The franchise chain system is composed of a contract signed between two independent legal entities: franchisor and franchisee. The contract defines the rights and duties of each party, to be followed to ensure the success of the business. For example, franchisee support is the franchisor's responsibility, and includes training, product distribution logistics, business plan preparation, financial planning and know-how sharing. On the other hand, the franchisee is responsible for selling the service or product and paying the franchise fees (Gillis & Castrogiovanni, 2012; Melo *et al.*, 2015; Shane, 1996). Thus, the franchise chain system is considered a strategic tool that allows the entrepreneur to minimize risks and increase their market share.

Therefore, companies tend to seek this system with the intention of expanding their business quickly and comprehensively, especially outside the large centers. This is because the system helps to overcome barriers such as: low managerial skills, little knowledge of the market and limited availability of financial resources. (Oxenfeldt & Kelly, 1969).

This study specifically analyzes the behavior of franchise chains in the North of Brazil. According to the Associação Brasileira de Franchising (ABF), in 2021 the North Region was responsible for 5.3% of the sales of the franchise chain market, with 5.2% of the total number of units (ABF, 2020). Despite the small participation, in 2020 the region presented an economic growth of 6.7%, the highest in the country (Midwest 0.5%, South 5.1%, Southeast 6.3%, and Northeast 2.8 %). This fact demonstrates the potential for business growth in the region, indicating that it can be further explored in the expansion of franchise chains.

The Southeast Region is the one that most concentrates investments and units of franchise chains and, currently, the market is overloaded. Consequently, the tendency is for organizations to shift their focus to less explored locations. This is because the low presence of businesses can be favorable for those who intend to invest in the area, thus obtaining the advantages of pioneering (Melo, Delgado, Correa, & Borini, 2020; Melo, Borini, Isaac, & Correa, 2022).

In the context of regional expansion, one of the most relevant elements is the institutional environment, especially in Brazil, where regions have considerable institutional differences, whether cultural, demographic, legal or economic. Since institutional characteristics directly impact the business environment, they can influence companies' choice of locations for installing future units (Melo et al., 2020; Melo et al., 2022).

The institutional environment is composed of the set of social norms and regulatory structures, which demarcate economic behavior, corporate power, regulations, and governmental and non-governmental policies (Amin, 1999). Academic works on the subject tend to segment the institutional environment into several dimensions. The most cited in studies that address the behavior of franchise chains are the demographic, economic and human resources dimensions. The purpose of this study is to identify which dimensions of the institutional environment are related to the presence of franchise chains in the North of Brazil. For this, we intend to analyze the demographic, economic and human resources dimensions.

We expected to contribute to the enrichment of the institutional environment theory, focused on entrepreneurship, and with the dissemination of the theory of geographic expansion to the interior of the country, focusing on the model of franchise chains. In addition, the contribution in relation to the object of study is highlighted, since publications that address the North Region are scarce.

The article is structured as follows: literature review, subdivided into franchise chains, institutional theory and geographic expansion, development of hypotheses, methodology, analysis of results and conclusion.

2 Literature review

Franchise chains

According to the International Franchise Association - IFA (2014), franchising can be defined as a contract, or licensing, between two legally independent parties, involving: (1) continuous relationship; (2) network production; (3) unified marketing strategies; (4) transfer of marketing knowledge; (5) brand credibility; and (6) management, production, and marketing techniques.

Franchises result from a legal agreement signed between franchisor and franchisee with rights and duties of each party to be faithfully fulfilled. The functions of the franchisee and the franchisor are defined in the contract. It is the franchisor's responsibility to provide know-how, market expertise, training, and continuous training (Silva et al., 2016). The franchisee provides fee payments, such as advertising fee and royalties, which the franchisor will use to maintain the franchise chain (Alon, 2001; Melo *et al.,* 2015; Silva *et al.*, 2016; Shane, 1996). Therefore, the system allows franchise chains to expand their units through franchisees, reducing costs and risks (Lafontaine & Shawn, 2005; Silva *et al.*, 2016).

In the franchising literature, the issue of geographical dispersion is considered critical and has received wide attention in numerous works (Lafontaine, 1992; Shane, 1996). As the distance between the chain headquarters and the units grows, the risk of information asymmetry increases, which requires more efficient monitoring efforts. For example, the local demand condition is a type of information asymmetry problem. The local unit has more information about the demand in its area of operation than the franchisor, to mitigate the problem of asymmetry franchisors recurrently choose to directly operate some of their stores in certain areas to capture information from the local market (Lafontaine & Shawn, 2005).

From an economic point of view, it can be understood that franchise chains intend to create a quick way to expand their business through the sale of the brand, product, or services, to the franchisee for a predefined value (Melo *et al.*, 2015). Hence, the franchise chain system is an option to quickly increase the number of stores in various regions of the country without having to allocate resources or employees. For companies that have limited capital, this model becomes an opportunity for expansion with less financial support (Oxenfeldt & Kelly, 1969). In addition, the system attracts younger entrepreneurs, who feel secure in the managerial and operational support provided by the franchisor (Melo, Borini, & Ogasavara, 2019).

Institutional Environment

Elaborated in the early 1980s, strategic management can be defined as a constant search for marketing and institutional planning. The institutional approach to strategy focuses on interactions between institutions and organizations. These interactions can produce several effects, for example, the reduction of uncertainties and market barriers (Peng *et al.*, 2009).

Most of the works that address the institutional environment use North and Scott's work as a basis. North (1991) defines constraints on institutions as human factors linked to the structures of human interaction. Scott argues that institutions are structures that bring stability to social behavior. North divides institutions into formal and informal, and the core of this

division complements Scott's ideas, in which institutions are based on three basic pillars: regulatory, normative, and cognitive (Peng & Khoury, 2009).

In the institutional environment, the social, political, and economic dimensions allow the development of informal barriers (values, norms, sanctions, traditions, and codes of conduct) and formal rules (laws, economic rules, constitutions, property rights, and contracts). In this way, institutionalism can contribute to reinforcing the incentive structure and fostering economic transformations (North, 1991).

Geographic Expansion

For a growth strategy to be effective, it needs to consider some essential aspects, such as: geographic location, target market and supply chain characteristics (Silva *et al.,* 2016*)*. Franchise chains use geographic expansion strategies to expand their businesses and thereby improve their performance. In this way, they take their brand, products, and services to other regions, conquering consumers in new markets. This model involves a set of management challenges, for example: growth planning and expansion management, both characteristics to be analyzed in the region where the new units will be implemented (Barringer & Greenig, 1998).

Among the advantages of the geographic expansion of franchise chains, the economy of scale and the possibility of distributing unique business capabilities in different regions stand out. In addition, franchise chains that are better positioned geographically are more likely to explore market opportunities and access different strategic resources. Therefore, geographic diversification expands the competitive advantages of the franchise chain (Chung, Cheng, & Hsieh, 2007; Greening, Barringer, & Macy, 1996).

Companies that arrive first in a market are more likely to choose the best strategic points in relation to companies that arrive later. Companies that arrive late in a market find it more difficult to establish themselves. However, some late entrants that have greater market scale power have more tangible and intangible resources, which can be used to neutralize the advantages developed by the companies that arrive first (Chung, Chen, & Hsieh 2007). The way in which the regional expansion strategy occurs in the context of franchise chains is little discussed in the literature. Despite this, it is a relevant subject for evaluation in decision-making regarding the choice of location for expansion. In addition, the geographic aspect is also considered when making decisions about investments, business performance, attractiveness of new customers and target market, which can contribute to the profitability of the entire chain. (Silva *et al.,* 2016).

The regional development process includes not only economic growth, but also social, cultural, environmental, and political factors. This process includes changes in the social composition and socioeconomic indicators, such as poverty, unemployment, and inequality (Xavier *et al*., 2013). The main objective of regional development is to make peripheral and remote regions sustainable (Muller, 2016). There is a consensus on the existence of a relationship between entrepreneurship and regional development, so that entrepreneurship can positively influence development, since the entrepreneur is an agent for the introduction of new technologies and resources, in addition to stimulating employment and promoting growth economic (Muller, 2016).

Many franchise chains have organized their expansion plans in search of new franchisees in the North region of the country. According to a survey by the Associação Brasileira de Franchising (ABF, 2016), the North is the region with the lowest participation in the national franchise chain sector, and in the second quarter of 2017 it represented only 4.9% of the total revenue of franchise chains in the country. Despite this, the region has shown a good

economic performance, and the tendency is for more franchise chains to seek business opportunities in the region.

It is important to point out that, even considering the progress of academic research, studies on the North of Brazil are still incipient. Pereira and Silveira (2019), when studying the scientific production segmented by State, highlight that, in most works, there is a predominance of the South and Southeast regions, while the North Region is less expressive in the amount of research.

IBGE data indicate that the economy of the North Region is based on plant and mineral extraction. The highlighted states are Amazonas and Pará. In Amazonas, we can mention as highlights the Manaus Free Trade Zone (created in 1967 to encourage industrialization in the region), oil extraction on dry land and gas production in Coari. Pará stands out in the export of iron ores from the Serra dos Carajás and in agriculture. In addition, Tocantins stands out in agribusiness, Rondônia stands out in agriculture and coffee production, Amapá in the extraction of manganese in Serra do Navio, and Roraima in the production of rice and its mineral reserves. In addition, the North Region has expression in the tourist market, attracting tourists who want to know the Amazon Forest. In this way, a study on the institutional scenario will provide opportunities not only for advances in data but may also be configured as a basis for other studies.

3 Hypotheses

Hypothesis 1: demographic dimension

The demographic census carried out in 2000 indicated that the population of the North Region corresponded to 12,893.561 million inhabitants. A decade later, in 2010, the number increased to 15,864,454 million inhabitants. This occurred due to the growth of large metropolises in the region, such as Manaus and Belém, which were mainly responsible for the significant increase and population attraction, partly due to policies to encourage industrial activity.

In the last 10 years, there has been a breakthrough in the growth of urban areas and population in cities. The 2010 IBGE census pointed out that all states had an urban population greater than the rural one. The report indicated that 64% of the Brazilian population lives in urban areas, while 36% live in rural areas, with this concentration occurring more frequently in capital cities.

The population's lifestyle, as well as their way of relating, either through their culture or due to social and economic factors, tend to change depending on the worker's profile (Baumot, Litan, & Schramm, 2007). The main characteristics of a society, which can affect its socioeconomic dynamics, are population size, household structure, spatial distribution, per capita income distribution, educational background and guarantee of employability (Silva, Barbieri, & Monte-Mór, 2012).

One of the challenges for small municipalities is to look for ways to keep their residents economically active, with the aim of reducing the migration of their population towards large centers, which are usually more commercially attractive. These municipalities are interesting for franchise chains, since they have a growing economy and attractive organizational structures for investors, commonly in the form of tourist spots.

Franchising chains seek municipalities and regions that have a higher concentration of economically active people, that offer a potential consumer market for their products and services (Cruz, 2014; Prahalad, 2006, 2012). Based on this information, the following hypothesis was formulated:

H1: The higher the demographic indicators, the greater the attraction of franchise chains for municipalities in the North of Brazil.

Hypothesis 2: economic dimension

The main characteristics of an economically active society can be affected by the following factors: age structure, income distribution, household structure, educational attainment, and average proportion of adults in families (Silva *et al.,* 2012).

Family income is an especially important factor for franchise chains, as it directly impacts families' disposable income for consumption. This factor can also influence the pricing strategy for products and services and market segmentation (Cordeiro *et al.*, 2017; Cruz, 2014; Prahaland, 2006, 2012). Considering the exposed information, the following hypothesis was formulated:

H2: The higher the economic indicators, the greater the attraction of franchise chains for municipalities in the North Region of Brazil.

Hypothesis 3: human resources dimension

The dimension of human resources deals with the workforce of a given population, with the potential to generate and produce wealth.

Education is essential for the development of human resources, as it increases performance and productivity, and, consequently, competitiveness (Fonseca, Beltrão, & Prado, 2013; Pascholino, Caldarelli, & Da Camara, 2016). Human resources, as well as understanding and applying knowledge to business, are important for business development (Kamakura & Mqzzon, 2016).

In small and medium-sized municipalities it is difficult to find qualified human resources. This occurs because there are no incentives or attractiveness for companies to settle in these regions and generate employment and income. As a result, people do not feel encouraged to invest in professional training and, in most cases, they move to large centers in search of new job opportunities.

These municipalities need to innovate and seek alternatives for sustainable economic development for their residents (Félix & Júnior, 2013). Once the region has a workforce with a higher level of professional training, it has greater potential to attract entrepreneurs. Franchise chains are looking for qualified people to become franchisees, so that they can meet their demand for quality services and promote customer satisfaction and maintenance of the brand image (Eberhardt; & Lima, 2012; Fonseca, Beltrão, & Prado, 2013; Haddad, 2009).

Supporters of the human capital theory refer to education as a variable that can change according to educational policies, different from the innate abilities that each individual has, social class, or geographic origin. The improvement of education, in turn, depends on investments in public and private educational networks (Paschoalino, Caldarelli, & Da Camara, 2016). Considering the above information, the following hypothesis was formulated:

H3: The higher the human resource indicators, the greater the attraction of franchise chains for municipalities in the North Region of Brazil.

4 Methodology

This research is quantitative, with descriptive characteristics, and it uses secondary data. The sample comprised 120 municipalities in the North of Brazil. The dependent variable is represented by the number of franchise chains present in the region. This data was extracted from the Franchising Performance Report for the year 2018 and 2019 published by ABF (2019).

Table 1 – Number of franchises in the states of the North Region

STATE	STATE INICIALS	BRAND	UNITS
ACRE	AC	12	267
AMAPÁ	AP	127	179
AMAZONAS	AM	243	729
PARÁ	PA	748	1431
RORAIMA	RR	97	132
TOCANTINS	TO	272	390
RONDÔNIA	RO	342	481

Source: ABF (2019)

The independent variables are the variables related to the analyzed institutional dimensions, namely: (1) Demographic dimension: estimated population and demographic density; (2) Economic dimension: employed persons, employed population, Gini index, GDP per capita, average salary, nominal income, and number of bank branches; and (3) Human resources dimension: High School Units and HDI. These data were extracted from the IBGE (2015), as shown in Table 2.

Table 2 - Dimensions, variables, date, publication, and publication sources

Dimensions	Variables	Year	Source
Franchises	Number of franchises units	2020,2021	ABF
Demographic	Estimated population	2010	IBGE
Demographic	Demographic density	2015	IBGE/ABF
Economic	Employed persons	2015	IBGE/ABF
Economic	Employed population	2015	IBGE/ABF
Economic	Gini index	2015	IBGE/ABF
Economic	GDP per capita	2015	IBGE/ABF
Economic	Average salary	2015	IBGE/ABF
Economic	Nominal income	2015	IBGE/ABF
Economic	Bank branches	2015	IBGE/ABF
Human resources	High School Units	2015	IBGE/ABF
Human resources	HDI	2015	IBGE/ABF

Source: authors.

Initially, a descriptive analysis of the data was performed, followed by the analysis of the correlations of the variables. After performing the correlation analysis, the multiple regression analysis of the number of franchised chains was performed with the variables not eliminated by the VIF. The AIC and BIC criteria were used to select the best model. Statistical analyzes were performed using the R software (R Core Team, 2021).

5 Results

Descriptive analysis of variables

Analyzing the data collected, it appears that 38.0% of franchise chains are in the state of Pará, 18.0% in the state of Rondônia, 14.0% in Tocantins, 12.0% in Amazonas, 7 .0% in Amapá, 6.0% in Acre and 5.0% in Roraima.

By analyzing the Estimated Population index, it is possible to identify a trend towards an increase in the region's population, mainly in the states of Pará and Amazonas. It is estimated that these states will grow 49.0% and 20.0%, respectively. This population growth can, to a certain extent, be influenced by the number of franchise chains present in these states, because with a greater number of franchise chains in a location, the greater the demand for labor, which, consequently, can generate a populational increase.

The state with the highest demographic density is the state of Pará, which concentrates 85.0% of the population in the North Region. The states with the lowest demographic densities are Roraima and Acre, with only 1.0% of the population. Population size can be considered an essential aspect for sizing the market in each region.

The states of Pará and Rondônia are the ones with the largest employed population, with 37.0% and 32.0%, respectively. These states, due to their larger population, have a higher concentration of franchise chains, due to the larger potential consumer market.

The regions with the highest GDP per capita are the most desired by franchise chains, as their population will have greater purchasing power, which is of great importance for the maintenance of franchises. Once again, Pará (49.0%) and Rondônia (22.0%) are the states with the highest GDP per capita, followed by Tocantins.

The states with the highest number of bank branches are: Pará (51.0%), Amazonas (19.0%) and Rondônia (17.0%). The presence of bank branches reinforces the idea that, in these places, there is sufficient demand and concentration of income to maintain local activities. Regarding the economic issue, it helps to identify the consumption power of the population, constituting a relevant indicator of market potential. The better the indexes of the economic dimension of the municipalities, the more attractive the region will become for the franchise chain market.

Most of the municipalities in the sample (69.77%) have from zero to 5 bank branches, and, of these, 19.5% do not have any branches in the municipality. As for the rest, 21.71% of the municipalities have 5 to 10 branches and 6.21% have more than ten branches.

More than half of the municipalities (58.91%) have up to 5,000 people with formal work, followed by 16.28% of municipalities with 5,000 to 10,000 people, 8.53% with 10,000 to 15,000 people and 11.63% with more than 25,000 people with formal jobs.

In more than 90% of the municipalities (93.02%), inhabitants receive up to three minimum wages. Of these, 64.34% have an average monthly income between 1 and 2 minimum wages and 28.68% between 2 and 3 minimum wages.

The level of education and quality of the workforce is directly linked to the activity of the franchise chains. The state of Pará stands out with the presence of 87.0% of teaching units. Analyzing the distribution of secondary education units, more than half of the municipalities (53.49%) have up to 25 secondary education units. Of these, 49.27% have up to five units and approximately 68% have up to ten units. This information is important in the attractiveness of franchise chains since the presence of teaching units directly reflects on the level of education and qualification of the labor force in the market.

The Gini index is a mechanism to measure the degree of income concentration in a group. He points out the difference between the income of the poorest and the richest, ranging

numerically from zero to one. The value zero represents the situation of equality, that is, everyone has the same income. The value one is at the opposite extreme, that is, one person owns all the wealth. Based on the results of the data obtained, most municipalities have a Gini index of up to 0.40 (95.5%). In 55.86% of the municipalities, the index is between 0 and 0.30 and in 39.64% it is between 0.30 and 0.40. This information implies that, in most municipalities, there is an equality situation in relation to income.

The GDP per capita variable is related to the attraction of franchise chains, as the increase in GDP per capita of the municipality or region leads to a possible increase in franchise chains. Of the evaluated municipalities, 62.79% have a GDP per capita of up to 20,000, with most of them (49.61%) having a per capita GDP of 10,000 to 20,000. 13.18% are between zero and 10,000 and 27.91% with 20,000 to 30,000 and 3.88% with GDP per capita greater than 50,000.

The HDI index considers three dimensions of human development: longevity, education, and income. Schooling and income directly influence the development and creation of a favorable environment for local businesses. These two aspects especially influence consumers' attitudes towards products and brands and can be used to segment markets. More than half of the municipalities (56.59%) have an HDI between 0.60 and 0.70; 24.03% values between 0.50 and 0.60 and 17.83% with indices greater than 0.70.

Multiple regression analysis

Initially, Pearson's correlation analysis of the twelve variables was carried out.

Table 3: Perason's Correlation

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
V1	1											
V2	0,89**	1										
V3	0,29**	0,40**	1									
V4	0,88**	**0,98****	0,36**	1								
V5	0,58**	0,41**	0,15**	0,47**	1							
V6	0,07	0,15	0,03	0,16	0,17*	1						
V7	0,13	0,05	-0,04	0,08	0,52**	-0,03	1					
V8	0,45**	0,40**	0,09	0,43**	0,53**	0,27**	0,34**	1				
V9	-0,28**	-0,16	-0,08	-0,20*	-0,42**	0,10	-0,03	0,02	1			
V10	0,87**	**0,97****	0,37**	**0,99****	0,46**	0,22*	0,06	0,44**	-0,18*	1		
V11	0,49**	0,56**	0,46**	0,54**	0,16	0,21*	-0,08	0,27**	0,18*	0,58**	1	
V12	0,39**	0,27**	0,17	0,26**	0,54**	-0,09	0,23**	0,36**	-0,01	0,25**	-0,01	1

** Correlation is significant at the level 0,01
* Correlation is significant at the level 0,05

Source: authors.

Variables V2, V4 and V10 showed high correlations in relation to the response variable and between them. This indicates that, if the attraction of franchise chains is high during a period, the estimated population, employed persons and the number of bank branches will also have a high value during that period. This is because these variables are highly positively correlated.

Next, the VIF analysis was performed, and the variables with VIF > 5 were removed. The variables were removed one at a time, and at each removal, the test was redone to verify whether the new VIF values were within the established limit.

Table 4: Models

	Model 1	Model 2	Model 3
Estimated population (V2)	28,976	18,033	1,960
Population density (V3)	1,459	1,458	1,439
Employed persons (V4)	140,755	-	-
Employed population (V5)	4,805	4,438	4,279
Gini Index (V6)	1,785	1,366	1,314
GDP per capita (V7)	1,854	1,844	1,821
Average Salary (V8)	1,737	1,733	1,710
Income (V9)	2,195	2,162	-
Bank branches (V10)	99,35	20,153	2,155
High School Units (V11)	2,782	2,389	2,301
HDI (V12)	2295	2,165	2,140

Source: authors.

To verify the most appropriate model, the Akaike (AIC) and Schwarz Bayesian (BIC) criteria were used.

Table 5: Suitability of models

Model	AIC	BIC
Model 1	122,714	159,891
Model 2	123,664	157,982
Model 3	121,667	153,124

Source: authors.

The model with the lowest BIC and AIC values is considered the most suitable model. Therefore, model 3, that is, the reduced model, better describes the data set. Table 6 presents the results for the variables selected for the composition of the regression model.

Table 6: Regression model

	Standardized Coefficients	T	Sig.	VIF
Estimated population (V2)	0,752	16,340	<0,01**	1,983
Population density (V3)	0,115	-2,932	0,004**	1,426
Employed population (V5)	0,181	2,708	0,007**	4,057
Gini Index (V6)	-0,024	-2,253	0,026*	
GDP per capita (V7)	-0,042	-0,970	0,334	1,907
Average Salary (V8)	0,028	0,706	0,481	1,534
Income (V9)	-0,086	-2,224	0,028*	3,526
High School Units (V11)	0,118	2,383	0,018*	2,314
HDI (V12)	0,072	2,080	0,039*	2,414

R^2 adjusted = 0,8714

** Significant at the level 0,01

[*] Significant at the level 0,05

Source: authors.

The regression model had an explanatory power of approximately 87%. Regarding hypothesis 1, which analyzes the impact of the demographic dimension on the attractiveness of municipalities to franchise chains, (The higher the demographic indicators, the greater the attraction of franchise chains to municipalities in the Northern Region of Brazil), it is verified that the variables Estimated population (V2) and Population density (V3) are significant at $p < 0.01$ and are positively associated with the model. This means that the higher the estimated population and demographic density indices, the greater the attractiveness of municipalities for franchise chains. This is because regions with higher population and demographic density have a larger potential consumer market (CRUZ, 2014; PRAHALAD, 2006, 2012). Therefore, hypothesis 1 was confirmed.

Hypothesis 2 refers to the impact of the economic dimension on the attractiveness of franchise chains (The higher the economic indicators, the greater the attraction of franchise chains for municipalities in the North of Brazil) and is represented in the model by the variables Employed population (V5), Gini Index (V6), GDP per capita (V7), Average Salary (V8) and Income (V9). Analyzing the model, it is verified that the variable Employed population is significant at the level $p < 0.01$ and is positively related to the model, while the variables Gini Index and Income are significant at the level $p < 0.05$ and are negatively related to the model. This means that the larger the employed population and the smaller the Gini index and income, the greater the attractiveness of the municipality for franchise chains. The GDP per Capita and Average Wage variables were not significant in the model.

The result of the variable Employed population corroborates the results found by Melo, Delgado, Correa, Borini (2020), who state that the higher the population's occupancy rate, the higher the municipality's income will tend to be, generating greater consumption and making the more attractive municipality for the franchise chain market.

The Gini index ranges from zero to one, with zero representing total income equality while one representing total inequality. Thus, the model indicates that the lower the Gini index, that is, the lower the income inequality, the greater the attractiveness of the municipality for franchise chains. It is understood that this occurs because this index reflects the income distribution of a region and, therefore, the purchasing power of the population, impacting the size of the potential consumer market.

Regarding the Income variable, the model indicates that the lower the income of a municipality, the greater the attractiveness of the franchise chain. At first, the result seems contradictory with that of the other variables of the economic dimension. However, as pointed out in the descriptive analysis of the variables, in more than 90% of the municipalities in the sample, the inhabitants receive up to three minimum wages. Hence, it is understood that this result should be appreciated considering the economic context of the sample of municipalities studied, so that it does not in fact reflect a preference of franchise chains, but rather the scarce economic condition of the population of most of the region. Considering this, hypothesis 2 was confirmed.

The variables High School Units (V11) and HDI (V12) are related to hypothesis 3, which analyzes the impact of the human resources dimension on the attractiveness of municipalities for franchise chains (The higher the human resource indicators, the greater the attraction of franchise chains to municipalities in the North of Brazil), both variables are significant at $p < 0.05$ and are positively associated with the model. This means that the greater the number of high school units and the HDI index, the greater the attractiveness of the

municipality for franchise chains. It is understood that this occurs because these indices reflect the quality of human resources available in the region, and the more qualified these resources are, the greater the performance and productivity, thus facilitating business development. In addition, the greater the accessibility to education, the more training the population will have, which leads to higher wages and income, which improves the market potential, thus increasing the attractiveness of franchise chains in the market. (Fonseca, Beltrão, & Prado, 2013; Pascholino, Caldarelli, & Da Camara, 2016; Kamakura & Mqzzon, 2016). Hence, hypothesis 3 was confirmed.

Finally, analyzing the coefficients, it is possible to identify that the demographic dimension represents a stronger predictor for the attractiveness of franchise chains than the human resources dimension, which may mean that, when expanding their businesses to the North Region, franchise chains are more interested in expanding their consumer market, including being able to enter regions where human resources are deficient, as long as the potential market is large enough to overcome the risks.

6 Conclusion

This research aimed to identify which dimensions of the institutional environment are related to the presence of franchise chains in the North of Brazil. The institutional environment shapes political, economic, and social issues, develops informal restrictions (norms, sanctions, culture, and codes of conduct), and formal rules (laws, socioeconomic rules, rights, duties, and contracts). In this context, the institutional environment provides a structure to minimize uncertainties and increase incentives (Bathelt & Gluckler, 2014; Biggart & Beamish, 2003; North, 1991; Peng *et al.*, 2009).

This study provided a better understanding of the characteristics of the institutional environment that contribute to the attraction of franchise chains to municipalities in the North of the country. Twelve variables were analyzed in the 450 municipalities to test the three hypotheses formulated, related to the demographic, economic and human resources dimensions.

The results of this research indicate that the characteristics analyzed are favorable to the attractiveness of the regional expansion of franchise chains. These indicators contribute to the development of new market niches and the formation of new shopping and consumer centers. (Carlos, 2001; Lee *et al*., 2015; Silva & Gonçalves, 2013).

The three hypotheses analyzed were confirmed. Thus, the better the indicators related to demographic, economic and human resources dimensions, the greater the attractiveness of franchise chains for the market in the region or municipality.

The theoretical contribution involves studies on (1) regional development; (2) institutional environment for entrepreneurship; and (3) internalization of franchise chains (Melo *et al.,* 2020; Melo *et al.,* 2022). Specifically, the markets in the North of Brazil and their attractiveness for franchise chains deserve to be highlighted. In addition, this study contributes to franchise chain expansion managers by highlighting markets to be developed in the North of Brazil that still do not have franchise units. This occurs since the analysis made it possible to identify municipalities with prominence in all indices. (Cabrera, Soto, & Herrera, 2016; Gillis & Castrogiovanni, 2012).

The limitations of the study were that this research was restricted to the variables proposed in this model, so that the following variables were not analyzed: employed persons, number of bank branches, distance between capitals, distance between points of sale, number of malls, logistics operation and entrepreneurial activity.

The suggestion for future studies includes research within the geographic scope of the Northern Region of Brazil. It is suggested to address the following topics: (1) analysis of the

expansion of micro franchises to small municipalities; (2) geographic dimension analysis; (3) analysis of logistical costs of distribution between units and headquarters; (4) analysis of other segments that want to expand their business to the North of Brazil; and (4) post-pandemic comparative analysis in relation to previous years.

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