Chapter 211

The relations between entrepreneurship and Brazilian poverty: Empirical evidences of panel data for the period to 1994 to 2014

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Omar Eduardo Velasquez Rojas
Bachelor in Economics, from the University of the State of Amazonas Samsung Ocean Center Manaus
Av. Darcy Vargas, 1200, Parque Dez de Novembro, Manaus, Amazonas, 69055-035
E-mail: omar.velasquez@oceanbrasil.com

Luciano Balbino do Santos
PhD in Economics, from the Catholic University of Brasilia University of the State of Amazonas
Av. Leonardo Malcher, 1146, Centro, Manaus, Amazonas, 69010-150
E-mail: lbsantos@uea.edu.br

ABSTRACT
This work investigates the relationships between poverty and entrepreneurship from panel data with annual frequency for the twenty-seven federative units of Brazil, comprising the period from 1999 to 2014. The methodological procedures adopt the estimation of two sets of fixed and random effects models including regional dummy's, establishing entrepreneurship as a dependent variable as a function of poverty, regional states revenue, illiteracy, unemployment and other control variables. The results show that Brazilian entrepreneurship is closely related to unfavorable socially conditions, but also acts as an important mechanism to fight the deepening of poverty in all regions of the country.

Keywords: Entrepreneurship, Poverty, Self-employed, Employers.

1 INTRODUCTION

The study of the relationship between entrepreneurship and economic growth has attracted the attention of the most varied sectors of societies, both in developed countries and in those outside this classification. In the search for economic and social development, the public and private sectors have launched a new look at the strength that comes from entrepreneurship, seeking to understand what kind of relationship is established between it and the social problems such as poverty, inequality, unemployment and other variables associated with growth.

The economist responsible for making the first associations between entrepreneurship and economic development was Schumpeter (1942), even stating that if capitalism continued to repeat its good performance, poverty only it would continue to exist in exceptional cases. Unfortunately, this realization has not survived the time, and even in developed countries such as the United States, poverty is still a reality.

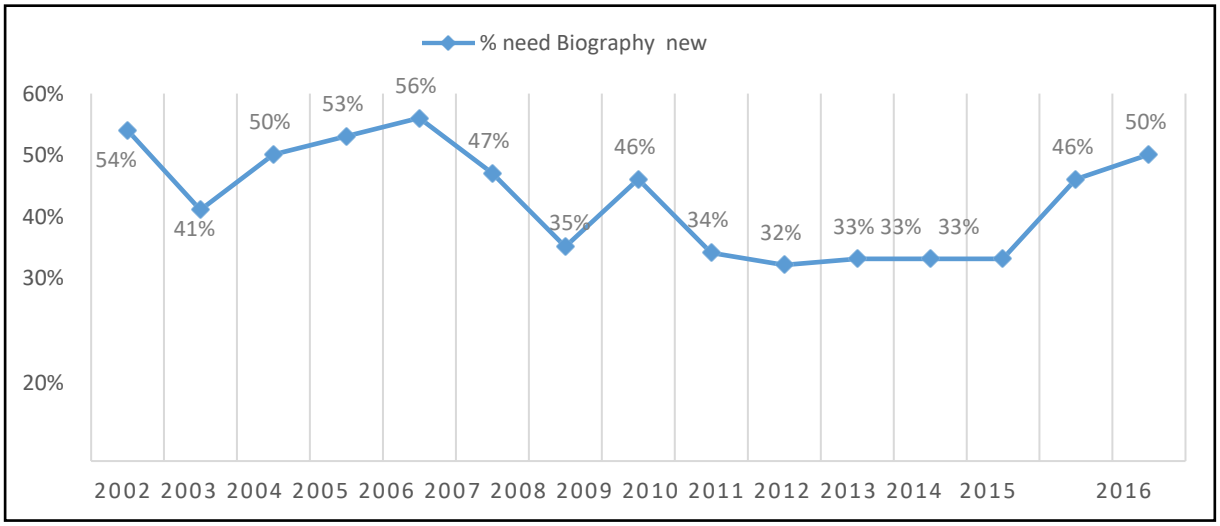
Although the literature is not consensual, it divides entrepreneurs into two groups according to their motivations: by necessity and by opportunity. The firstgroup undertakes seeking to escape from unfavorable

conditions such as unemployment and poverty, while the second creates a company based on observations of market opportunities.

Poverty in Brazil has been combated preferentially through welfare policies, such as the Bolsa Família Program implemented in 2003. In this context, entrepreneurship by necessity has proved to be a promising alternative, especially among new entrepreneurs[1], as can be observed in graph 1, revealing that the effort and dream of a significant contingent of people, who see in entrepreneurship a way to escape unemployment and overcome the reality of poverty, marks the life of so many Brazilians.

Considering the economic scenario and knowing that poverty is related to factors such as income inequality, unemployment, illiteracy and other social ills, not it is inappropriate to state that the appeals to entrepreneurship of the masses come from the need to survive these conditions (NASSIF, GHOBRIL AND AMARAL, 2009).

Graph 1 - Entrepreneurs by need: 2002 a 2016



Source: Silva and Silva (2019) based on GEM (2016), adapted by the authors.

In this line, a series of researches were developed seeking to find empirical relationships between entrepreneurship and economic development. Investigations such as those of Fontenelle (2010) were able to find that for countries with per capita income below US$ 30,000.00 the entrepreneur increased as the income decreased, i.e. this would indicate primary evidence that higher levels of poverty would lead to increases in entrepreneurship, with precisely the opposite happening in developed countries. However, there is still no clear evidence that entrepreneurship is capable of affecting the performance of the economy (BECK, DEMIRGUÇ-KUNT and Levine, 2005; AUDRESTSCH AND KEILBACH, 2004; WENNEKERS AND THURIK, 1999).

It is not identified a number of significant studies relating the variables entrepreneurship and poverty, indicating that in this field research is still rare, especially in Brazil. However, it cannot be denied

[1] New entrepreneurs are those who pay salaries and remunerate their partners for more than three and less than 42 months

that the act of undertaking has always constituted itself as an instrument capable of generating employment and income, regardless of the quality of jobs and the volume of income.

In this sense, the importance of all this is in the possibility of broadening the understanding of the variables entrepreneurship and poverty, clarifying under what conditions entrepreneurship can constitute a mechanism to combat poverty rates and if in any way, it brings any impact in regional inequalities.

Given this scenario, this article seeks to understand the mechanisms that are associated with this dynamic and seeks to answer the central question: what is the relationship between entrepreneurship and poverty in Brazil?

To answer this question, we take as a methodological strategy the estimation of two sets of econometric models of fixed and random effects with the inclusion of regional dummys, taking entrepreneurship as a function of poverty, government revenue, illiteracy, unemployment, inequality, inflation, violence and informality.

The results indicate that Brazilian entrepreneurship is strongly associated with socially unfavorable conditions, but also acts as an important mechanism in combating the deepening of poverty in all regions of the country, bringing primary evidence that this strategy can be constitute a tool to reduce regional inequalities .

2 BIBLIOGRAPHIC REVIEW

The relationship between entrepreneurship and poverty is not often dealt with by economists. The academic world has focused its efforts and resources on investigations into the consequences and impacts of entrepreneurial activity on the process of performance, growth and economic development, such as the works of Barros and Pereira (2008) and Schumpeter (1911), who consider poverty as an exogenous variable in their models, as a result, the literature on the topic is rich, vast and non-consensual when it comes to analyzing the impacts of entrepreneurship on contemporary economies.

It is only with the works of Schumpeter (1911) that the innovative entrepreneur begins to have a more participatory and transformative role in economic theory. For him, if there are no entrepreneurs, who are the creators of firms of all kinds, there will be no capital to invest and reinvest, and consequently there will be no profits, interest and savings.

It is noted that the one who drives and creates the innovations is raised to a new level of importance in the scope of the economy, going from manager to main promoter of development, given his ability to use resources to create things New. The author uses the figure of the entrepreneur as the central point of the generation of innovation, because he concludes that this arises from new companies that start to compete with the old ones that, usually, are not born from the old ones.

According to Oliveira (2014), Schumpeter was a great enthusiast of the capitalist mode of production and credited it with the ability to significantly reduce poverty, even stating that:

> [...] if, from 1928 onwards, capitalism repeats its past performance for another half a century [or if it has, until 1978], it will eliminate anything that resembles what, by today's standards, we call poverty, even in the lower strata of the population, except only pathological cases. (SCHUMPETER, 1942, p. 92-3).

His emphatic prediction did not survive the time, although economies experienced high levels of growth in most developed and developing countries , this was not accompanied by an "elimination" of poverty. In this line, the common sense view of entrepreneurship resembles a way out, an escape route in the face of the lack of jobs and other social difficulties, added to this. the lack of capacity of capitalism to generate jobs in the same way that it generated it until 1975 (SILVA AND BASSANI, 2007).

In an econometric analysis of the variables that influence entrepreneurship in 64 countries, it was found that in nations with per capita income below US$ 30,000.00 there was a negative relationship with entrepreneurship, that is, in countries considered poor or developing, as income decreased entrepreneurship increased and vice versa (FONTENELLE, 2010). Fontenelle also finds that for countries with incomes above $30,000 the effect is just the opposite, indicating that in developed countries as income increases, entrepreneurship also grows.

Their study corroborates the conclusions of others, such as that of Stel et al (2005) and Carree and Thurik (1999), indicating that the variables when observed in a global analysis, affect developed, developing and poor countries differently.

In a more regional perspective, Barros and Pereira (2008) analyze the relations of entrepreneurship with the unemployment rate and economic growth in the 853 municipalities of Minas Gerais. They conclude that although entrepreneurship is able to reduce unemployment, it does not cause strong impacts on economic performance and even has a negative relationship. Their results are in line with the authors cited above. If on the one hand the least developed countries have a negative relationship between entrepreneurship and per capita income, which is a proxy for economic growth, and the GDP growth rate of their cities is expected to behave in the same way.

On the other hand, in the studies of Beck, Demirguç-Kunt and Levine (2005); Audrestsch and Keilbach (2004); Wennekers and Thurik (1999) are notorious that there is no clear evidence on the relationship between entrepreneurship and economic growth.

The differences found in these studies may originate from different understandings of what entrepreneurship is, how it should be measured and may even be a result of the stage of development of the region analyzed.

Sarfati (2013), complementing the Schumpeterian approach, of course that entrepreneurship that contributes to economic development is linked to innovative and fast-growing companies, as well as traditional small and small companies. medium-sized are associated with an attempt to maintain or increase the low quality of life of their owners, which would have little to add to economic development.

The empirical economic literature usually uses two classifications: the entrepreneur by need and by opportunity. Much has been said about the second when Schumpeter's conclusions are analyzed , that is, the entrepreneur by opportunity is usually the same Schumpeterian entrepreneur.

Considering the Brazilian economic scenario, in which income inequality, unemployment, precarious education and poverty are a reality, it is not unreasonable to say that the appeals to entrepreneurship of the masses come from the need to survive these conditions (NASSIF, GHOBRIL E AMARAL, 2009).

For its part, the renowned Global Entrepreneurship Monitor (GEM), conductor of surveys on entrepreneurship since 2000 in Brazil, makes equally pertinent classifications in his studies, dividing them into:

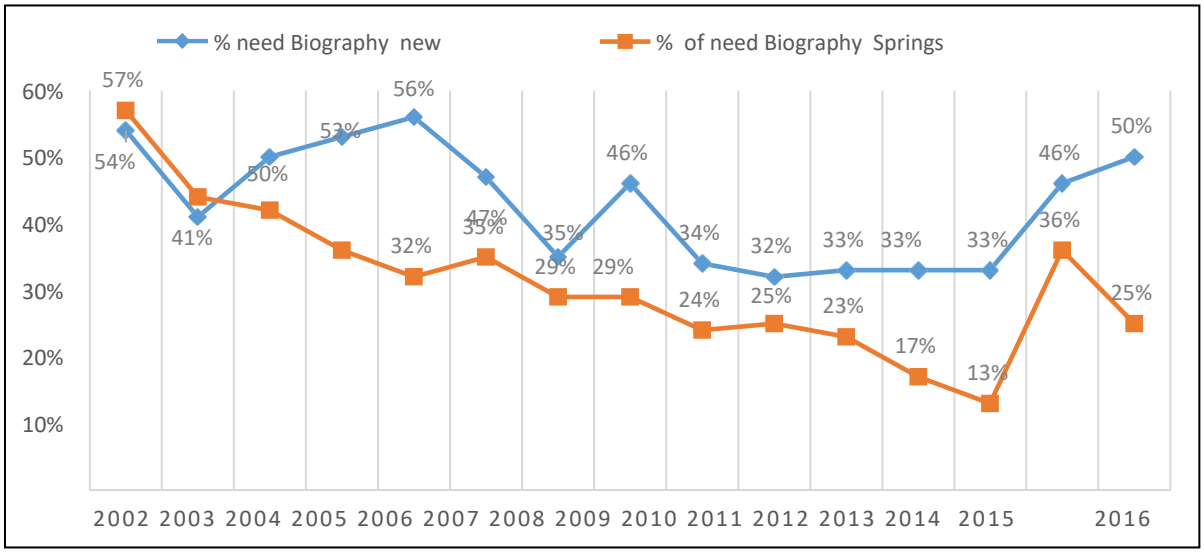
- **Nascent entrepreneurs:** do not pay any kind of remuneration to the partners and salaries for a period of three months or more;
- **New entrepreneurs:** pay salaries and remunerate their partners for more than three and less than 42 months;

Graph 2 highlights the main results obtained by Da Silva and Silva (2019) when they analyzed the growing decline of entrepreneurship in Brazil from 2002 to 2016, using the GEM data.

When looking specifically at the motivation of nascent and new entrepreneurs it is found that the influence of necessity as a motivator for new entrepreneurs is notorious, that is, a a considerable part of those who at least already pay wages, profits and pro-labor for more than three and less than 42 months open their enterprises with the aim of escaping unemployment, poverty or increasing income.

Therefore, entrepreneurship has been on a growth path from 2002 to 2016, but when observing the motivations of new and nascent entrepreneurs the presence of necessity prevails, especially among the former.

Graph 2 - Entrepreneurs Motivated By need from 2002 a 2016 between the New e Springs



Source: Silva and Silva (2019) based on GEM (2016), adapted by the authors.

Unemployment still prevails as an encouraging factor of entrepreneurial activity. In an exploratory and qualitative research Nassif, Ghobril and Amaral (2009) interview 12 entrepreneurs and come to the conclusion that the need to escape unemployment drives entrepreneurship, either by emotional or financial factors. Its results converge to the econometric analysis of Barros and Pereira (2008), who identify a negative relationship between entrepreneurship and unemployment, its results are not contradictory when placed in a temporal perspective, since first one loses one's job, then one undertakes and finally one loses one's status as unemployed.

Clearly the differences between the entrepreneur by necessity and opportunity are born from the motivation of the creation of their businesses, but it must be made clear that even with this useful division there is still great heterogeneity within them, that is, the presence of income inequality is a factor that should be considered when analyzing entrepreneurship and poverty. An entrepreneur from the periphery may be creating his company based on the needs of earning his daily bread, while another from more advanced social conditions may be fleeing unemployment, but enjoys greater chances of winning in the market due to the environment that surrounds him.

When one analyzes the relations of per capita income and entrepreneurship, for example, one seeks to find out how different levels of income affect entrepreneurial activity, which includes ranges that classify people as poor, in the same way when dealing with unemployment one is implicitly relating a mass of poor people, which also applies to inequality and education.

3 METHODOLOGICAL PROCEDURES

To analyze the relationships between entrepreneurship and poverty over a 21-year horizon, from 1994 to 2014 for Brazilian states, ten variables were selected: entrepreneurship, poverty, government revenues, illiteracy, employment, inequality, inflation, violence. and informality. The data obtained come from the Brazilian Institute of Geography and Statistics (IBGE) and the Institute of Applied Economic Research (IPEA), being more specifically extracted from the National Household Sample Survey – PNAD.

The variables were organized in the form of a balanced panel. As a proxy for entrepreneurship, three variables were chosen, highlighted below , according to IBGE definitions:

- **Total number of self-employed**: Person who worked by operating his own enterprise, alone or with a partner, without having employed and counting or not on the help of an unpaid worker who is a member of the household unit;
- **Total de Employers**: Person who worked operating his own enterprise, having at least one employee and counting, or not, with the help of unpaid worker, member of the household unit;
- **Total entrepreneurship**: Result of the sum of the two previous variables.

Entrepreneurship is usually divided into two groups, by necessity and by opportunity, allowing a clearer and more precise view of the variable as a whole. However this division is relatively recent, in Brazil the uprisings using these definitions begin only from the 2000s.

In this context it is necessary to find variables that also allow a specific view and that encompass a longer period of time to reach a more accurate understanding of the object studied. The variables that offer these conditions are the self-employed, identified as more linked to the need, and the employers associated with the opportunity.

To analyze the relationships between entrepreneurship and poverty from the perspective of the self-employed and employers , the establishment of two sets of econometric models of fixed and random effects with the inclusion of regional dummys, estimated based on the Ordinary Least Squares (MQO) method.

Taking into account that one of the assumptions of the MQO states that there can be no discrepant values within the explanatory variables, to avoid that the results of the regression are dominated by these values (GUJARATI, 2011, p. 90), it was decided to soften the series by making them logarithms, highlighted by the subscript ln, obtain the two equations below:

$$\ln Trabempreg_{it} = \alpha_{it} + \beta_0 \ln Nudompobres_{it} + \beta_1 \ln Rectributest_{it} + \beta_2 \ln Illiterate_{it} + \beta_3 Taxadesemp_{it} + \beta_4 \ln Gini_{it} + \beta_5 \ln IPCA_{it} + \beta_6 \ln Taxahomic_{it} + \beta_7 \ln Grauinformit + \varepsilon_t \quad (1)$$

$$\ln Tracontpropria_{it} = \alpha_{it} + \beta_0 \ln Nudompobres_{it} + \beta_1 \ln Rectributest_{it} + \beta_2 \ln Illiterate_{it} + \beta_3 Taxadesemp_{it} + \beta_4 \ln Gini_{it} + \beta_5 \ln IPCA_{it} + \beta_6 \ln Taxahomic_{it} + \beta_7 \ln Grauinformit + \varepsilon_t \quad (2)$$

Equations 1 and 2 consider the same explanatory variables, the difference is in the dependent variable, while Equation 1 considers workers as employers, Equation 2 considers the self-employed. The table below describes the variables present in the equations.

Table 1- Description of Variables

Variable	Caption	Description	Source
Self-employed	Trabcontpropria	Person between 15 and 60 years or more, who worked exploring his own enterprise.	IBGE/ PNAD
Workers as employers	Traempreg	Person between 15 and 60 years or older who worked exploring their own enterprise, having at least one employee.	IBGE/ PNAD
Total entrepreneurship	Empreet	Represents the result of Trabcontpropria+ Traempreg	Own action elaboration
Number of poor households	Nudompobres	Number of households with per capita household income below the poverty line.	IPEA/IBGE
State tax revenue	Rectributest	It includes taxes under the competence of the state: taxes, fees and improvement contribution	IPEA
Illiterate	Illiterate	Percentage of people 15 years of age or older who cannot read or write	IPEA
Unemployment Rate	Ratesin p	Percentage of people who searched but did not find paid professional occupation.	IPEA/IBGE
Income Inequality	Gini	It measures the degree of inequality of a household per capita income distribution.	IPEA/IBGE
IPCA	IPCA	It currently measures the change in household consumption basket prices	IPEA/IBGE
Homicide Rate	Taxahomic	Death from external or unnatural causes	IPEA/IBGE
Degree of informality	Grauinform	Ratio between the total number of informal workers and the total number of employed persons.	IPEA/IBGE

Source: Own elaboration based on IPEA and IBGEA

In the case of panel data it is possible to estimate econometric models POLS – Pooled ordinary Least Square, fixed or random effects models. The first is the most simple, it's just an MQO model based on the dashboard data. In the POLS the unobserved characteristics of each UF are disregarded, that is, the unobservable effects that impact entrepreneurship in each UF are not specified and therefore are absorbed in the error term of the model, which may lead to heterogeneity.

To control for unobserved heterogeneity, dummy variables are assigned as intercept for each unit (UF's), with the result we obtain a least squares model with dummy variables for fixed effects (MQVD), this allows the unobserved effects to be obtained. of each unit remain constant over time and, therefore, its impact on the model is mitigated.

Random effects models embed heterogeneity in the regression error term, so the main differences between fixed and random effect models lie in the conception of how to capture heterogeneity, the first captures in the constant part, while the second captures in errors.

Having highlighted the difference between the possible methods, it is necessary to decide which one best relates poverty and entrepreneurship, using the Hausman test. The null hypothesis of the test states that the random effects model is more suitable, so if it is rejected, the fixes effects model will be the most suitable. In this work the results of the tests point to the use of the model with fixed effects. Table 1 highlights the Correlation Matrix of the variables used.

Table 1 - Correlation matrix (1994 – 2014)

	NUDOMPOBRES	RECTRIBUTEST	ILLITERATE	TAXADESEMP
NUDOMPOBRES	100,00%	34,38%	20,92%	9,21%
RECTRIBUTEST	34,38%	100,00%	-34,88%	-5,34%
ILLITERATE	20,92%	-34,88%	100,00%	-12,25%
TAXADESEMP	9,21%	-5,34%	-12,25%	100,00%
GINI	18,43%	-33,87%	59,46%	17,50%
IPCA	2,20%	-9,32%	13,22%	-12,74%
HOMICID TAX	-6,81%	-2,65%	-25,28%	33,52%
GRAUINFORM	5,61%	-50,46%	77,16%	0,55%

Source: Own elaboration based on IBGE and IPEA data

The literature considers that the high correlation between the explanatory variables within a model can generate problems of multicolienarity, which makes it difficult to perform accurate estimates . Among the explanatory variables only the degree of informality (GRAUINFORM) presented a correlation above 70% with the illiterate, value expected since illiterate people tend to occupy jobs in the informal economy.

Table 1 - Correlation matrix (1994 – 2014) – continued

	GINI	IPCA	HOMICID TAX	GRAUINFORM
NUDOMPOBRES	18,43%	2,20%	-6,81%	5,61%
RECTRIBUTEST	-33,87%	-9,32%	-2,65%	-50,46%
ILLITERATE	59,46%	13,22%	-25,28%	77,16%
TAXADESEMP	17,50%	-12,74%	33,52%	0,55%
GINI	100,00%	15,50%	-13,73%	48,76%
IPCA	15,50%	100,00%	-11,19%	6,76%
HOMICID TAX	-13,73%	-11,19%	100,00%	-26,52%
GRAUINFORM	48,76%	6,76%	-26,52%	100,00%

Source: Own elaboration based on IBGE and IPEA data

The other variables present a very weak, weak and moderate correlation, allowing us to conclude that the models presented in this study, if they have collinearity, are not accentuated. The Breuch-Pagan test was used to verify whether the estimated models presented heteroscedasticity, that is, whether the error term varied in function of the explanatory variables.

It was found that there is no evidence that heteroscedasticity considerably affects the model, especially when considering a significance of 1%, which leads to the acceptance that if the models are not homoscedastic, they are very close to this condition

To estimate the models were used all the variables described in the methodology of this study, the only difference at the time of application is the lag of the variables number of poor households and tax a unemployment. This strategy was chosen because it was noted the existence of a temporal precedence between these variables and entrepreneurship. Finally, a panel with the inclusion of regional dummys was used to assess the impact of poverty considering the regional aspect, in relation to total entrepreneurship.

4 PRESENTATION AND DISCUSSION OF RESULTS

Tables 2 and 3 highlight the estimates made with the use of fixed (PE) and random (EA) effects, aiming to find the most consistent model, also relying on the Hausman test, which indicated for the use of fixed effects. Table 2 takes employers as the dependent variable, while table 3 considers the self-employed.

Considering the results of table 2 it is possible to notice that whether with fixed or random effects, poverty presents a positive and significant correlation ship with workers as employers. The previous procedure was repeated, but this time the self-employed are considered as the dependent variable , their results are highlighted in table 3.

Table 2 - Models of random effects (EA) and fixed effects (PE), Trabempreg as variable

Variables	EA - Model 01	EF – Model 02	EA-Model 03	EF – Model 04
Constant	0,2039	3,0456	6,7340	9,2871
	(0,5657)	(0,8369*)	(1,2793*)	(1,7799*)
lnNudompobres (-1)	0,6681	0,376834	0,7320	0,4791
	(0,0416*)	(0,0576*)	(0,0435*)	(0,0624*)
lnRectributest	0,2080	0,189181	0,1043	0,0801
	(0,0294*)	(0,0342*)	(0,0343*)	(0,0435***)
lnIlliterate	-0,5271	-0,236764	-0,3609	-0,2714
	(0,0813*)	(0,1264***)	(0,0865*)	(0,1249**)
lnTaxadesemp (-1)	-0,2239	-0,032504	-0,1448	0,0174
	(0,0562*)	(0,0597)	(0,0570**)	(0,0602)
lnGini	-0,1378	-0,112834	-0,0607	0,1518
	(0,3100)	(0,3377)	(0,3076)	(0,3395)
lnIpca	0,0000	-0,00405	-0,0023	-0,0050
	(0,0031)	(0,0031)	(0,0030)	(0,0030)
lnTaxahomicid	-0,0996	-0,068757	-0,0777	-0,0406
	(0,0391**)	(0,0414***)	(0,0389**)	(0,0414)
lnGrauinform			-1,3823	-1,2437
			(0,2459*)	(0,3142*)
R2	0,6192	0,9613	0,6263	0,9624
R2 - Adjusted	0,6142	0,9587	0,6206	0,9599
F Data	123,5593	380,3863	111,224	380,3556
Probability F	0,0000	0,0000	0,0000	0,0000

Source: Own elaboration based on data from Ipea date

Note: Standard deviation values in parentheses. (*) p_valor < 0.01; (**) 0.001 < p_valor < 0.05; (***) 0.05 < p- value < 0.10

The relationship found between poverty and the self-employed is positive and significant, with both aleatóriand fixed effects. The results of the fixed effects models allow us to infer that poverty has a stronger relationship with workers as employers than with the self-employed.

Table 3 - Models of random effects (EA) and fixed effects (PE), Trabcontpropria as dependent variable.

Variables	EA - Model 01	EF – Model 02	EA-Model 03	EF – Model 04
Constant	0,2429	2,6394	0,7591	2,2219
	(0,2870)	(0,4330*)	(0,6291)	(0,9348)
lnNudompobres (-1)	0,5844	0,2897	0,6117	0,2829
	(0,0212*)	(0,0298*)	(0,0211*)	(0,0328*)
lnRectributest	0,2700	0,2912	0,2572	0,2985
	(0,0151*)	(0,0177*)	(0,0173*)	(0,0229*)
lnIlliterate	-0,0095	0,2724	-0,0101	0,2747
	(0,0411)	(0,0654*)	(0,0421)	(0,0656*)
lnRatedesemp(-1)	-0,2467	-0,1187	-0,2497	-0,1220
	(0,0290*)	(0,0309*)	(0,0294*)	(0,0316*)
lnGini	-0,6811	-0,31823	-0,7139	-0,335928
	(0,1594*)	(0,1747***)	(0,1572*)	(0,1783***)
lnIpca	0,0051	0,0027	0,0041	0,0027
	(0,0016*)	(0,0016)	(0,0016*)	(0,0016***)
lnTaxahomicid	-0,1130	-0,0921	-0,1125	-0,0940
	(0,0202*)	(0,0214*)	(0,0200*)	(0,0218*)
lnGrauinform			-0,1439	-0,0832
			(0,1224)	(0,1650)
R2	0,8368	0,9861	0,8529	0,9861
R2 - Adjusted	0,8347	0,9852	0,8507	0,9851
F Data	389,719	1086,3	384,84	1052,8
Probability F	0,0000	0,0000	0,0000	0,0000

Source: Own elaboration based on data from Ipea date

Note: Standard deviation values in parentheses. (*) p_valor < 0.01; (**) 0.001 < p_valor < 0.05; (***) 0.05 < p- value < 0.10

Among the other explanatory variables, only state tax revenue and illiteracy are significant to explain both employers and the self-employed , but showing different signs. Tax revenue exerted a positive and more intense relationship on the self-employed, since government revenue tends to influence more those who depend more on services and public policies offered by state governments, which are the poorest.

Because of their, the illiterate have a negative relationship with employers and a positive relationship with the self-employed. The difference in signs points out that to undertake as an employer it is necessary to possess the minimum skills that education offers. On the other hand, the more people without the minimum education there are, the more they tend to undertake on their own.

The Gini index, together with unemployment and homicide rates have a negative relationship, while inflation measured by the IPCA has a positive relationship. These results were significant only to explain the self-employed, as unemployment, inequality and violence decrease, self-employed

entrepreneurship increases. The loss of value of the currency by the inflationary process deepens social ills and consequently increases the number of those on their own.

Finally, the degree of informality is only able to explain the employers, and this relationship is negative. The result points to the conclusion that although informality is higher among those who are self-employed, employers are the most affected by it, which they decrease as it increases.

To date, the relationships of entrepreneurship with poverty and other variables in a national context have been observed, without observing the regional impacts. Table 4 highlights the results obtained when considering the impact of the poverty of the regions on total entrepreneurship.

Table 4 - Random effects models using regional dummys, Understanding as variable dependent.

Variables	Model 01	Model 02	Model 03	Model 04	Model 05
lnNudompobres (-1)*north	-0,0491				
	(0,0090*)				
lnNudompobres (-1)*northeast		-0,0054			
		(0,0077)			
lnNudompobres (-1)*c.west			-0,0115		
			(0,0102)		
lnNudompobres (-1)*southeast				0,0783	
				(0,0100*)	
lnNudompobres (-1)*south					0,0762
					(0,0108*)
R2	0,6687	0,6541	0,6541	0,6834	0,6758
R2 - Adjusted	0,6637	0,6489	0,6489	0,6787	0,6709
F Data	133,9518	125,5233	125,5537	143,3016	138,3856
Probability of F-statistic	0,0000	0,0000	0,0000	0,0000	0,0000

Source: Own elaboration based on data from Ipea date

Note: Standard deviation values in parentheses. (*) p_valor < 0.01; (**) 0.001 < p_valor < 0.05; (***) 0.05 < p- value < 0.10

To enable these estimates, regional dummys were used. This strategy is relevant, mainly, in a country like Brazil, since regional inequalities generally lead to different behaviors of the same variables that are compared in national proportions. Similarly, national analyses tend to be influenced by more populous regions of the country, which leads to an omission of regional specificities.

Among the five regions analyzed, only the poverty of the North, South and South regions this presents a statistically significant result. At the same time, poverty in the Northeast and Midwest is of no significance.

The poverty of the North region compared to national entrepreneurship showed a negative correlation, indicating that poverty in this region goes in an inverse direction to national entrepreneurship. On the other hand, in the South and Southeast regions the correlation found is the same as in the previous models: as poverty in the South and Southeast increases, national entrepreneurship also grows.

5 CONCLUSION

This paper investigates the existing relations between entrepreneurship and poverty for Brazilian states covering a period of 21 years, from 1994 to 2014, using a panel of data. The methodological

strategy is based on the estimation of two sets of econometric models of fixed effects, random effects and with the inclusion of regional dummys. The methods consider as dependent variable employers, the self-employed and total entrepreneurship, incorporating explanatory variables representative of poverty, income. of government, illiteracy, unemployment, inequality, inflation, violence and informality.

It was noted that either with employers or with the self-employed, there is a positive relationship with poverty, but more significant with the former. It is natural to assume that an individual falling into poverty will undertake significant efforts to try to escape it, which may be reflected in the creation of more employers and the self-employed, which could explain the existence of a positive relationship.

And while the latter are treated as the entrepreneurship most tied to need, it is the employers who are most impacted by poverty. The reason why this relationship is more intense can be quite diverse, coming from factors such as labor and the consumer market.

If it is considered that employers are inserted in a context of poverty, it would not be unreasonable to think that the products and services offered by these enterprises would have as a consumer market poor people. Likewise, the workforce of these enterprises would be composed of people who have this characteristic. The sum of these factors could explain the presence of a more intense relationship between poverty and employers.

In turn, the control variables that represented stimuli associated with social ills such as unemployment, inequality, inflation and violence were not significant to explain the entrepreneurship of employers, but rather of those on their own. This denotes an association of entrepreneurship by necessity much more linked to those who undertake on their own, while employers would be further away from this condition, but not dissociated from it.

These associations reveal that entrepreneurship in Brazil would have little to contribute to economic growth, at least in the Schumpeterian context, but would play an important role in the lives of those who struggle for survival. In this context, cash transfer programs capable of reducing poverty, such as the bolsa família, have assumed an important role in reducing Brazilian entrepreneurial levels.

To illustrate this conclusion, it is enough to imagine an individual who finds himself in poverty facing a scenario of low educational level, scarce jobs. The only option to maintain or not lose quality of life is to undertake, these ventures should not be characterized by a robust organization or a long-life expectancy, since at the first sign of warming the labor market. this individual must abandon the risks intrinsic to the business and become an employee.

Similarly, cash transfer programs should be able to meet the first needs of these individuals, leading them to be more tolerant of a job search, abandoning the option to undertake and thus negatively affecting entrepreneurship.

This conclusion should not be taken as negative, on the contrary, as can be seen in this and other studies, Brazilian entrepreneurship is able to reduce the unemployment rate, but it does not need to generate economic growth. As poverty decreases, individuals leave aside the only option of work

occupation (entrepreneurship), and start to dedicate themselves to better paid activities that offer more stability, which should increase their quality of life.

In this context, Brazilian entrepreneurship cannot be observed by a romantic look, given its association with the terrible living conditions of its entrepreneurs. It has become common for national pride to see Brazil being singled out as one of the most entrepreneurial nations in the world.

It should not be concluded from this study that entrepreneurship is a bad thing, on the contrary, in developed countries it is demonstrated as a very useful mechanism of social mobility, but in a country like Brazil with latent inequality and poverty, entrepreneurship is not the result of a search to take advantage of market opportunities, but rather a mechanism of attempted escape, which can only guarantee a minimum standard of survival, sometimes provisionally.

Therefore, public policies aimed at reducing poverty should take as a positive consequence the reduction of entrepreneurship, especially on their own, to create policies to support the entrepreneur that favor both groups, enabling the creation of perennial, sustainable and innovative enterprises, which favors economic development, creating a virtuous cycle.

The presence of a negative correlation between poverty in the North and national entrepreneurship indicates that as poverty decreases, entrepreneurship increases, that is, the decrease in poverty in that region could be related to the creation of enterprises that would not only be successful in the role of maintaining the quality of life of their owners, but they would also be able to raise the quality of life to the point of lifting these people out of poverty, so entrepreneurship could exercise in this region an even more important social role than in other regions of the country, proving to be a possible mechanism for reducing regional inequalities.

On the other hand, the relations between poverty in the South and Southeast region with national entrepreneurship present a positive correlation, the same as found in previous models, so the national inferences already made apply mainly to these regions. Following the previous reasoning it is possible to conclude that these regions strongly influence national entrepreneurship.

This study is finalized with suggestions for future research that analyze the same relationships, but looking specifically at each state of the federation. In the same way it is necessary to delve into the relations between employers and poverty, so as to enable the creation of a joint policy to combat poverty, economic and social development, through entrepreneurship.

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