RURAL ENTREPRENEURS: AN ANALYSIS OF ENTREPRENEURSHIP CHARACTERISTICS IN TWO CITIES IN THE INTERIOR OF THE STATE OF PARANÁ - BRAZIL

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Summary:
The study of rural entrepreneurship has been a challenge for researchers, due to the difficulty of data collection and field, due to the incompatibility between the agendas of the entrepreneur and the researcher. The objective of the article is to present the results of a research carried out in the cities of Turvo-Pr and Pinhão-Pr, comparing the entrepreneurial behavior profile identified from the measurement of entrepreneurial characteristics. The data collection instrument was a questionnaire containing thirty questions on a scale of one to five points, to measure a total of ten entrepreneurial characteristics. The research universe consisted of 2,280 rural producers in the city of Turvo-Pr and 3,850 rural producers in the city of Pinhão-Pr. According to the results, the entrepreneurial characteristics highlighted, in both municipalities, they are BOI (search for opportunities and initiative), PRC (persuasion and network), EDM (goal setting) and EQE (quality requirement). In Pinhão, there was also the entrepreneurial characteristic BDI (search for information). In Turvo-Pr., The ten entrepreneurial characteristics were above 13.50 points defined as cut to accept that the characteristic is developed, in Pinhão-Pr., Three of them did not exceed 13.50 points (EDM, EQE and BDI).

Keywords: Entrepreneurship. Rural Entrepreneur. Entrepreneurial Characteristics.

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Introduction

This article aims to present the result of the research carried out in the cities of Turvo-Pr and Pinhão-Pr, comparing the entrepreneurial behavior profile identified from the measurement of entrepreneurial characteristics. Competence, both from personality and enhanced by knowledge, is the basis of entrepreneurship for business performance. As Filion (1999, p. 64) reinforces, “the entrepreneur is someone who conceives, develops and realizes visions”. The individual who fulfills his dreams takes his projects from paper and puts them into practice, turning them into reality. In such a way that it contributes to the initial understanding of the entrepreneurial characteristics, filling in the initial gaps to later advance to studies applied to innovation through IGs - Geographical Indications. It is understood that rural entrepreneurship represents a link between development and regional innovation, despite all the barriers and difficulties caused by climatic changes that influence productivity. In such a way, that this requires diversified strategies and skills from the rural man, adapted to the reality experienced, since a significant part of the family income arises from these activities. For this, the rural entrepreneur must be aware of new cultivars, projects, and other ways to generate income and mainly contribute to sustainable development (BELDMAN, LAKNER, SMIT, 2014).

The geographical location and cultural and artisanal traits are tools for generating income and adding value to what is produced on the property (MENEGAZO, 2015). These regional differentials result in competitive advantage, but all of these tools require the adoption of new technologies in family farming.

The article is divided into an introduction, theoretical framework, methodology, results, conclusions and recommendations, in addition to the pre and post textual parts.

Family farming and sustainability

The importance of family farming in the economies of nations is unquestionable for local and regional development, its value is recognized by United Nations Organizations, which in 2014 discussed the role of small family farmers, their performance in agricultural, environmental and social policies , with strategies in order to leverage the equitable and balanced development of this sector (BOJANIC, 2019).

In this way, family farming is highlighted by Buainain et al (2003), who uses data from IBGE as arguments, in which 85.2% of the total establishments in 2003 were family farmers and occupied 30.5% of the total area of national agricultural production, being responsible for 37.95% of the gross value of national agricultural production.

The National Council for Scientific and Technological Development has also helped in the development of family farming, as in the rural extension project that proposes a management structure of a managerial character in which the diagnosis of rural producers in the region is made, the selection of groups, the development of the course modules and the elaboration of didactic material, to train family farmers and, thus, promote development, sustainability and the improvement of the quality of life in the countryside (LORENZANI, 2006).

Family farming needs sustainable bases, with practical means of adding value to its processes and services, since “it is not enough to achieve expressive results alone in a link in the chain; the increase in productivity because it is easily canceled by the improper handling of the product [...], reducing its price and affecting the competitiveness of the entire chain ”(BATALHA; BUAINAIN; SOUZA FILHO, 2005, p.3). Exposed to a competitive market, family farming needs to seek new ways of marketing, adding value to the specific characteristics of these products making it attractive for its representativeness due to the social and economic character, cultural and regional effect from which this product is produced, differentiated flavor, shaped which is manufactured, its potential income generator for the family,

According to Saraiva et al. (2013), the National School Feeding Program (PNAE) is the largest and oldest public policy in Brazil, being a student right and a strategy for Food and Nutritional Security (SAN); about half of the Brazilian municipalities (47.4%) purchased food from family farming and the southern region is the one that supplied the most, with 35.3%. Providing for the PNAE Program is one of the possibilities for family farming to remain sustainable.

These transformations in the rural environment cooperate with social, economic development and regional growth, providing improved quality of life, with a healthy diet, free from contamination and higher income for the families of these family farmers, with

the intensification of the use of natural resources, using clean sustainable means (SACHS, 1993).

To achieve the objectives and a lasting productivity, the connection between productivity and the preservation of natural resources is necessary, these acts of preservation are a link to guarantee the conscious use of natural resources and contributing to the environmental and socioeconomic preservation for future generations. Thus, sustainability contributes to minimizing environmental disasters, as currently they have been frequent and environmental risk has been the subject of studies.

Rural entrepreneur, innovation and risk

It is important to reflect on the definition of rural entrepreneur, are rural entrepreneurs, rural producers and rural entrepreneurs synonymous? Likewise, are large farmers and small farmers entrepreneurs? The literature clarifies these issues.

Initially, it is important to remember the history of entrepreneurship, how and where it all started. It can be said that, around the 17th century, the figure of the rural entrepreneur was already present. In the evolution of the concept, it was understood that the one that transformed raw material into finished product is the industrial one, having as suppliers the people who planted and sold the products*in natura*. According to Schumpeter (1982, p. 10), it is up to the family farmer to start the transformations in his property for the eventual “economic change, and consumers, if necessary, are 'educated' by him; they are, so to speak, taught to desire new things, or things that differ in some way from those that are in the habit of consuming ”.

In the interpretation of Filion (1999), the managing partner owners are those who create a business and manage it, these are the entrepreneurs; this definition is different from the definition of capitalist, because the entrepreneur puts his own resources and is ahead of the business, in his management, being, therefore, managing partner.In the rural scope, it is understood that this entrepreneur is represented by the rural producer that operates in family farming.

Nevertheless, the small rural producer may not be an entrepreneur, because what he needs to characterize him as a rural entrepreneur is to demonstrate some innovation. Produce products*in natura*, using the same methods as other farmers does not characterize him as a rural entrepreneur.

So, adopting the concept of Schumpeter (1982), the rural entrepreneur needs to innovate, and this innovation needs to come from some product, differentiated work method or differentiated business model.

According to Akgün et al. (2011), entrepreneurship is one of the main instruments for the development and exploitation of rural capital. However, rural producers tend to have conservative thoughts and attitudes, creating a barrier to change.

On the other hand, in rural areas, rural entrepreneurs are those who add value to their product, to their work process, to their business. The agribusiness literature has shown that many entrepreneurs are dedicating themselves to agribusiness, transforming their natural products, processing and adding value, avoiding the figure of the middleman.

Agribusiness incubators have also played an important role in development, as well as government agencies, with the organization of business networks, producer associations and even the organization of the production chain, certifying with the Regional Geographical Indication Seal.

In agribusiness, entrepreneurship is combined with regional brands, with products processed in family agro-industries, which helps in the sustainability of family farming, holding man in the field. For Hosseinzade*et. al* (2018, p. 235), "entrepreneurs, especially rural entrepreneurs, can provide opportunities for the realization of their ideas by understanding the opportunities and allocating the necessary capital in the rural community, organizing the necessary resources."

Bearing in mind that rural entrepreneurship must be exercised through innovation, it is necessary to talk about the development of regional brands, in this way, Geographical Indications are part of the theme under study, and this is how the process is concluded in Brazil and explored in the study by Faria (2010), these indications serve to promote the development of the region where the product is produced and increase competitiveness in the national and international market, but the respondents express frustration with the bureaucracy and delay in the process of obtaining the Registration of an Indication Geographic in Brazil.

The Geographical Indication is linked to entrepreneurship by providing innovation through offering a competitive differential to the consumer. According to

Alves*et al*(2016, p. 8), “the wines produced based on Goethe grapes supported by an IG, are used as a competitive differential in the wine market”, that is, it is possible to perceive the importance that IG has in standardizing processes and by bringing differentiation to Goethe sparkling wine; this differentiation provided increased competitiveness to the product, evidenced by the increase in sales and consumer recognition, as a quality product.

Other examples of Geographical Indication in the wine sector are presented by Nierderle (2011), who researched five GI projects in Brazil (Vale dos Vinhedos, Pinto Bandeira, Monte Belo do Sul, Farroupilha and Garibaldi) and two projects in France (Beaujolais and Langue doc), his study concluded that: more than reconciling tradition and innovation, IGs are creating new valuing principles (conceptions of quality), which materialize in practices that involve the entire production chain.

Returning to the reflection on who the rural entrepreneur is, in the context of this research, it is necessary to verify if he is the one who has the entrepreneurial characteristics.

Entrepreneurial characteristics

The model adopted in this research is that of McClelland. In this model, the entrepreneur is one who has the necessary characteristics developed. There are ten characteristics found in the literature that are part of the studies of motivation to undertake.

According to Mansfield et al (1987), David McClelland was one of the pioneers to study human motivation to undertake and, in one of his partnerships with the American Government, he developed a study aimed at identifying entrepreneurial behavioral characteristics in emerging countries. McClelland developed a questionnaire that provides efficiency in use in training in favor of entrepreneurship.

But it was Cooley (1990) who, after reviewing it, adapted McClelland's model and introduced it to the United Nations Development Program (PNDU), and which started to be used by that Program.

McClelland was one of the greatest representatives of the study of the characteristics of entrepreneurial behavior, whose approach *behaviorist*was systematized by his research team. Cooley (1990) was the one who managed to give greater visibility

when presenting the model developed to the United Nations Program, which was composed of the combination of entrepreneurial characteristics divided into three blocks: set of achievement, set of planning and set of power. Altogether, ten characteristics were organized, which became part of research and training on entrepreneurship in the world, including Brazil (GEM, 2019; SEBRAE, 2019).

Naumann (2017) shows an overview of the state of the art in entrepreneurial thinking research. The article identifies research in the area and the contribution to the concept of entrepreneurial thinking. In the literature review, McClelland appears as a representative of the Theory of Traces, alongside Brockhaus (Chart 1).

Chart 1 - Studies in entrepreneurial thinking and McClelland's contribution

Author	**Study focus**	**1. Sample, 2. Method, 3. Geography**	**Conclusion**
McClelland (1961)	What differentiates entrepreneurs from non-entrepreneurs in their fulfillment needs.	1. Middle management level 3. United States, Turkey, Italy, Poland, India	The need for achievement is related to risk moderation - people who are in great need prefer to work on challenges with moderate risk. The need for fulfillment is also related to the preference for responsibility. It points out the relationship between the need for achievement and entrepreneurial success.
McClelland (1967)	Characteristics of successful entrepreneurs.	1. 24 small business owners (12 successful, 12 average) 3. India, Malaysia, Ecuador	For successful entrepreneurs, the characteristics of self-confidence, experience, persuasion and persistence were not identified.
Brockhaus (1980)	Comparison between entrepreneurs and managers, of the propensity to take risks.	1. 3 groups: started their business in the last 3 months; 2. Managers who have changed organizations in the past three months; 3. Managers who have changed positions within the organization in the last 3 months. 2. quantitative, questionnaire 3. United States	It was not possible to prove that this characteristic is special for entrepreneurs.

Source: Naumann (2017)

In the 1990s, Harvard University, together with David McClelland, developed the methodology of the EMPRETEC program, based on the study already carried out by McClelland (UNCTAD, 2010); in this formulation the three major constructs (Need for Achievement, Planning and Power) were still used; there was an adaptation and the 13 characteristics became 10; concomitantly, the 70 statements were reduced to 55 (5 for

each of the 10 characteristics and the remaining five for use as a scale correction factor); due to the fact that the five-point Likert scale was maintained, each characteristic varied from 5 to 25 points, which the author considers that, from 15 points on, the participant already has a propensity to undertake.

In Sánchez-Escobedo *et al*(2016), the development of research in entrepreneurship from GEM data from 1999 to 2015 is analyzed; they conclude that studies using GEM data have advanced in recent years, however there is a need for research to analyze the gap between macro analyzes and the use of general GEM data, for comparisons and analyzes at the regional level.

This gap in the study of entrepreneurship for regional studies was partially filled by Bracht and Werlang (2015), who used the EMPRETEC model, adapted for their scientific work, and conducted a survey with rural entrepreneurs in the city of Itapiranga-Sc; the questionnaire used by the authors consisted of 30 statements and an entrepreneurial characteristic was measured for each 3 statements. The propensity to undertake, according to Bracht and Werlang (2015), would occur when the result of a given characteristic was equal to or greater than 12 points, on the ordinal scale of 1 to 5 (attributed to never, rarely, sometimes, almost always and always) in the applied questionnaires.

It is important to remember that having entrepreneurial characteristics defines the propensity to undertake, and is not a guarantee that the entrepreneur will succeed. In research byCella (2002), from the University of São Paulo, the author describes the successful rural entrepreneur; the research was carried out with three groups from Rio Grande do Sul and the author concluded that farmers “form a differentiated group when considering farmers in Brazil in general” (CELLA, 2002, p. 126).

Returning to the reflection on who the rural entrepreneur is, it is important to highlight that the one who has the entrepreneurial characteristics has the potential, the propensity to undertake, however, the rural entrepreneur is the one who creates, performs, who is successful, overcomes risks and innovates, resulting in a successful venture.

Methodology

As for the type of research, it was characterized as exploratory, with a single occasional collection of two samples from different municipalities. As for the universe, it

was composed of all rural producers in the cities of Turvo - Pr. And Pinhão - Pr. Registered in Cad Pro (total of 2,280 Rural Producers in the city of Turvo - Pr. And 3,850 Rural Producers in the city of Pinhão - Pr.). As for the type of sample, it was characterized as a stratified probabilistic random, being, therefore, composed of rural producers residing in the cities of Turvo and Pinhão, in the Midwest region of Paraná.

At sample collected, in the cities of Turvo-Pr and Pinhão - Pr, it was not possible to obtain representation from all communities (13% of them were not represented in the city of Turvo-Pr and 33.33% in the city of Pinhão - Pr), in due to limited time in the period of data collection and the difficulty of geographic access.

As for the data collection instrument, a questionnaire with thirty closed questions was used, on a scale of 1 to 5 points, based on a Likert scale. Each characteristic was measured by three questions, and the elements of the construct were a total of three: power set, planning set, achievement set (COOLEY, 1990, BRACHT; WERLANG, 2015).

As for the methodological procedures, it consisted of literature analysis, identification of the research instrument, data collection in the field, meetings with the research team and definition of the form of tabulation of the data, analysis of the data in group and writing of the final article in form shared and participation of all team members with rounds of revisions to the text.

Results

The results of the research are presented below. First, respondents are profiled, then the general analysis of entrepreneurial characteristics is made, and finally, the level of education and entrepreneurial characteristics are analyzed.

Still, this same section presents the statistical validation of the samples using the T test for independent samples, which aims to compare the similarity between the two samples.

Sample profile description

The profile of the respondents in the two samples is presented below, using the variables: age, sex, education and size of properties. In the profile of rural producers, in the city of Turvo-Pr, the age group that stood out the most is 41 to 50 years old, which represents 37% of the sample. In the city of Pinhão-Pr, the highest concentration was in

the age brackets between 31 and 40 years old, with 29.3%, and then 41 to 50 years old, with 27.6%.

As for gender, it was found that in the city of Turvo-Pr, a total of 52% of the producers are male, while 45% are female and those who declare themselves another add up to a total of 3%.

It was observed that in the city of Pinhão-Pr, there is a predominance of males, with 66.7% in this category. In the female gender, a total of 31.7% was identified and those who declared themselves another totaled 1.6%.

In the city of Turvo-Pr, the majority of the surveyed producers are between Incomplete Elementary School (51.72%), Complete Elementary School (12.07%), Incomplete High School (24.14%) and Complete High School (5 , 17%). In other words, the survey shows that approximately 63.8% of respondents have completed Elementary School.

Thus, the trend regarding the profile of the sample in the municipality of Turvo / Pr was schooling with no more than Complete Elementary School.

With regard to the education of rural producers in Pinhão-Pr, it was found that just over half of the respondents have completed Elementary School (30.08% have incomplete Elementary Education and 21.95% have Complete Elementary Education). It is also noteworthy that 29.27% of the producers have finished high school and that none of the producers have completed a postgraduate course (Graph 2).

Thus, the trend regarding the profile of the sample in the municipality of Pinhão / Pr was education divided into Incomplete Elementary School, Complete Elementary School and Complete High School.

Regarding the size of the properties, in the city of Turvo-Pr, a predominance of properties ranging from 0 to 10 hectares (62.07%) and 11 to 20 hectares (15.52%) was identified, based on the responses of the participants. of research.

In the city of Pinhão-Pr, there was a predominance of properties that measure 0 to 10 hectares (55.28%), 11 to 20 hectares (19.51%) and 21 to 30 hectares (13.01%) .

In Turvo-Pr, the tendency of the respondents' profile was: age from 41 to 50 years old, predominance of the male gender (52%), education level not higher than the Complete Elementary School and properties with no more than 10 hectares.

The profile trend in the municipality of Pinhão-Pr was: age from 31 to 50 years old, predominantly male (66.7%). Level of education ranging from Incomplete Elementary School to Complete High School and properties with no more than 10 hectares.

In comparison with the profile of the Turvo-Pr sample, the most evident differences were the age range and education of rural entrepreneurs, since in Pinhão there is a considerable number of landowners between the ages of 31 and 40 and education, who completed high school (29.27% of respondents).

Analysis of entrepreneurial characteristics

For the analysis of the data of the present research, ten entrepreneurial characteristics were considered, as shown in table 2.

Table 2 - Entrepreneurial Characteristics

ACHIEVEMENT SET	BOI: Search for opportunity and initiative
	CRC: Taking calculated risks
	EQE: Quality requirement
	PER: Persistence
	COM: Commitment
PLANNING SET	BDI: Information search
	EDM: Goal setting
	PMS: Systematic planning and monitoring
SET OF POWER	PRC: Persuasion and networking
	IAC: Independence and self-confidence

Source: Adapted from Cooley (1990); Lenzi (2008); Bracht and Werlang (2015)

To measure each of the ten entrepreneurial characteristics, the present study used the same questionnaire applied in the research by Bracht and Werlang (2015), in which each characteristic would be evaluated in a set of 3 questions, whose intensity of responses would be verified by a scale of 5-point Likert. Thus, each entrepreneurial characteristic would vary from 3 to 15 points.

In their study, Bracht and Werlang (2015) used the same method of analysis as Lenzi (2008), in which the entrepreneurial characteristic is considered present when it reaches a score equal to or greater than 12 points

When considering the McClelland model, which was developed in a work team together with Cooley (1990) and adapted by Bracht and Werlang (2015) for the rural area, the authors of this study reached another analysis criterion, in which the characteristic

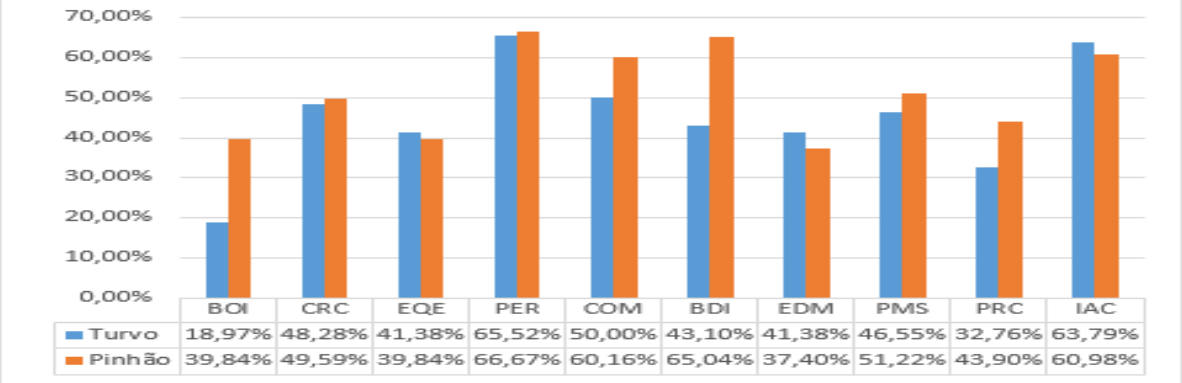
entrepreneurial would be considered developed if, and only if it reached 13.50 points or more, Chart 4 explains synthesizes the models and the acceptance parameters to consider the developed entrepreneurial characteristic.

Table 3 - Criteria for analyzing entrepreneurial characteristics

McClelland / Cooley (1990)	Bracht and Werlang (2015)	This study (2019)
McClelland's model, developed with Cooley and adapted for use in the United Nations Program, contained 10 entrepreneurial characteristics and 55 questions structured on a 5-point Likert scale, so that each characteristic varied from 5 to 25 points. McClelland and Cooley accepted that the characteristic would be developed if it reached 15 points, that is 60%.	The Bracht and Werlang model is adapted from the McClelland / Cooley model and is applied in rural areas. The model contains the same 10 characteristics proposed by McClelland / Cooley, however, it uses 30 questions, 3 for each characteristic, it uses a 5-point Likert scale, so that each characteristic varies from 3 to 15 points. Bracht and Werlang accept that the characteristic is developed if it reaches 12 points, that is, 80%, the same criterion used by Lenzi (2008).	The authors of this study use the same model as Bracht and Werlang (2015), however, they accept that the characteristic is only satisfactorily developed if it reaches 13.50 points or more, that is, a minimum of 90%.

Source: Prepared by the authors.

Graph 1 shows the results obtained in the municipalities of Turvo and Pinhão, from the collected questionnaires, 58 for the first and 123 for the second, considering only the characteristics with scores from 13 points, the questionnaires with scores below that number have been disregarded.



	BOI	CRC	EQE	PER	COM	BDI	EDM	PMS	PRC	IAC
Turvo	18,97%	48,28%	41,38%	65,52%	50,00%	43,10%	41,38%	46,55%	32,76%	63,79%
Pinhão	39,84%	49,59%	39,84%	66,67%	60,16%	65,04%	37,40%	51,22%	43,90%	60,98%

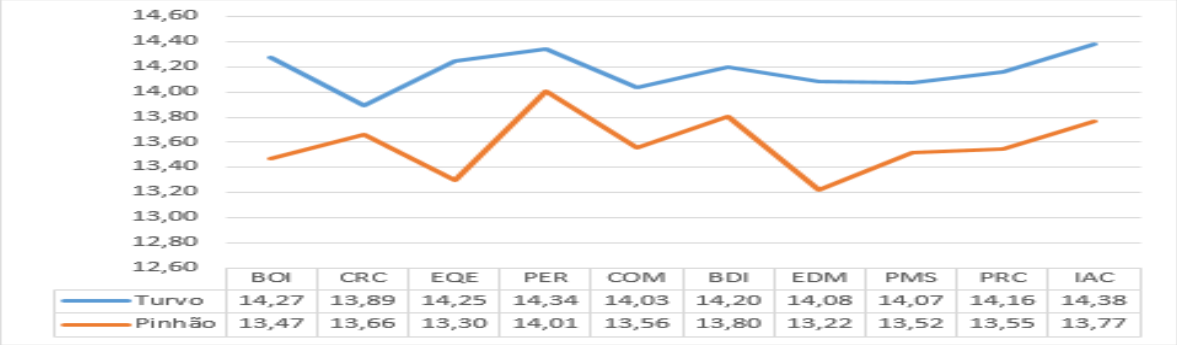
Graph 1 - Entrepreneurial Characteristics: Comparison between Turvo and Pinhão
Source: Prepared by the authors.

In Turvo, the characteristics that stood out the most were: PER (persistence), IAC (independence and self-confidence) and COM (commitment), in which the characteristic is developed in at least 50% of the respondents (who scored above 13 points). While in

Pinhão, the characteristics that stood out the most were: PER (persistence), BDI (search for information), IAC (independence and self-confidence) and COM (commitment).

Regarding the characteristics that presented the lowest percentage, BOI (search for opportunity and initiative), PRC (persuasion and network of contacts), EDM (goal setting) and EQE (quality requirement) stood out in both municipalities (Graph 3), which indicates that, even if the characteristics are developed (with a score above 13 points), it is not adequately represented (the entrepreneurial environment is considered favorable if it is represented by 50% of the sample). In other words, it could be inferred that, in both municipalities, there was a similarity between the entrepreneurial characteristics perceived by rural entrepreneurs, with the exception of the BDI identified in Pinhão.

Under these criteria, three characteristics of Turvo and four characteristics of Pinhão are satisfactorily developed in terms of general entrepreneurial behavior.



	BOI	CRC	EQE	PER	COM	BDI	EDM	PMS	PRC	IAC
Turvo	14,27	13,89	14,25	14,34	14,03	14,20	14,08	14,07	14,16	14,38
Pinhão	13,47	13,66	13,30	14,01	13,56	13,80	13,22	13,52	13,55	13,77

Graph 2 - Comparison between the average scores in the municipalities of Turvo and Pinhão
Source: Prepared by the authors.

As shown in Graph 2, when surveying only the characteristics with 13 points or more, the average scores obtained in both samples showed a similar pattern, with the exception of the CRC, EQE and PMS characteristics. In Turvo, CRC, EQE and PMS presented averages of 13.89, 14.25 and 14.07, while in Pinhão, the averages were 13.66, 13.30 and 13.52, respectively.

With regard to the characteristics of the two municipalities, it is observed that, in Turvo, all the average scores of the ten entrepreneurial characteristics were above 13.50, which would be the average score in which that characteristic is considered developed, whereas, in the case of municipality of Pinhão, three characteristics were below average, being EDM with 13.22, EQE with 13.30 and BOI with 13.47 (Graph 4).

In order to identify entrepreneurial characteristics in rural properties, the education of producers can influence how they perceive these characteristics. Thus, Table 4 shows a relationship between the level of education and each of the ten characteristics in both cities surveyed.

Table 1 - Relationship between education level and entrepreneurial characteristics

Grau de Escolaridade x Características Empreendedoras		BOI	(%)	CRC	(%)	EQE	(%)	PER	(%)	COM	(%)	BDI	(%)	EDM	(%)	PMS	(%)	PRC	(%)	IAC	(%)
Ensino Fundamental Incompleto	Turvo	5	45%	15	54%	10	42%	19	50%	16	55%	12	48%	12	50%	13	48%	8	42%	18	49%
	Pinhão	12	24%	17	28%	12	24%	20	24%	19	26%	21	26%	17	37%	17	27%	16	30%	21	28%
Ensino Fundamental Completo	Turvo	1	9%	3	11%	3	13%	4	11%	2	7%	2	8%	2	8%	1	4%	3	16%	3	8%
	Pinhão	14	29%	15	25%	15	31%	20	24%	20	27%	16	20%	17	37%	20	32%	15	28%	20	27%
Ensino Médio Incompleto	Turvo	3	27%	7	25%	9	38%	11	29%	8	28%	8	32%	7	29%	9	33%	4	21%	10	27%
	Pinhão	1	2%	2	3%	2	4%	3	4%	2	3%	4	5%	3	7%	3	5%	1	2%	1	1%
Ensino Médio Completo	Turvo	0	0%	1	4%	0	0%	1	3%	1	3%	1	4%	1	4%	2	7%	2	11%	2	5%
	Pinhão	17	35%	22	36%	17	35%	28	34%	24	32%	28	35%	7	15%	18	29%	20	37%	25	33%
Ensino Superior Incompleto	Turvo	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	Pinhão	3	6%	2	3%	1	2%	5	6%	3	4%	5	6%	0	0%	0	0%	0	0%	1	1%
Ensino Superior Completo	Turvo	1	9%	0	0%	0	0%	1	3%	0	0%	0	0%	0	0%	0	0%	0	0%	1	3%
	Pinhão	1	2%	2	3%	1	2%	3	4%	3	4%	5	6%	2	4%	5	8%	1	2%	6	8%
Pós-Graduação Incompleta	Turvo	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	Pinhão	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Pós-Graduação Completa	Turvo	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	3%
	Pinhão	0	0%	0	0%	0	0%	1	1%	1	1%	1	1%	0	0%	0	0%	0	0%	0	0%
Outro	Turvo	1	9%	2	7%	2	8%	2	5%	2	7%	2	8%	2	8%	2	7%	2	11%	2	5%
	Pinhão	1	2%	1	2%	1	2%	2	2%	2	3%	0	0%	0	0%	0	0%	1	2%	1	1%
Total	Turvo	11	100%	28	100%	24	100%	38	100%	29	100%	25	100%	24	100%	27	100%	19	100%	37	100%
	Pinhão	49	100%	61	100%	49	100%	82	100%	74	100%	80	100%	46	100%	63	100%	54	100%	75	100%

Source: Elaborated by the authors

Table 1 shows the relationship between education level and the ten entrepreneurial characteristics of each of the municipalities, considering the positive scores obtained (above 13 points) in the applied questionnaires, as explained in the previous analyzes. In Turvo, it is noticed that there is a greater concentration of these characteristics in Incomplete Elementary Education.

While, in the municipality of Pinhão, the characteristics are concentrated in Incomplete Elementary School, Complete Elementary School and Complete High School, with little variation, except for the EDM characteristic, which focuses more on Elementary School (Table 1).

Thus, it was found that there is a divergence between the concentration of entrepreneurial characteristics between the two municipalities analyzed, due to the level of education of the rural owners.

As with education, we sought to relate the characteristics with the size of the property, in order to verify the perception and development of these characteristics in both cities surveyed, as shown in table 5.

Table 2 - Relationship between size of properties and entrepreneurial characteristics

Tamanho da propriedade x Caracteristicas Empreendedoras		BOI	(%)	CRC	(%)	EQE	(%)	PER	(%)	COM	(%)	BDI	(%)	EDM	(%)	PMS	(%)	PRC	(%)	IAC	(%)
0 a 10 hectares	Turvo	8	73%	16	57%	15	63%	23	61%	17	59%	13	52%	17	71%	17	63%	12	63%	24	65%
	Pinhão	23	47%	27	44%	24	49%	46	56%	38	51%	44	55%	24	52%	31	49%	27	50%	41	55%
11 a 20 hectares	Turvo	0	0%	3	11%	4	17%	8	21%	3	10%	5	20%	3	13%	3	11%	1	5%	5	14%
	Pinhão	11	22%	16	26%	11	22%	13	16%	14	19%	14	18%	7	15%	14	22%	11	20%	12	16%
21 a 30 hectares	Turvo	0	0%	3	11%	0	0%	2	5%	2	7%	2	8%	1	4%	2	7%	2	11%	1	3%
	Pinhão	8	16%	9	15%	8	16%	12	15%	11	15%	12	15%	11	24%	12	19%	9	17%	11	15%
31 a 40 hectares	Turvo	1	9%	2	7%	2	8%	3	8%	3	10%	1	4%	0	0%	1	4%	1	5%	2	5%
	Pinhão	1	2%	1	2%	0	0%	1	1%	1	1%	1	1%	0	0%	1	2%	1	2%	1	1%
41 a 50 hectares	Turvo	0	0%	1	4%	1	4%	1	3%	1	3%	0	0%	1	4%	1	4%	0	0%	2	5%
	Pinhão	2	4%	2	3%	2	4%	2	2%	2	3%	2	3%	0	0%	2	3%	2	4%	3	4%
51 hectares ou mais	Turvo	1	9%	2	7%	1	4%	1	3%	2	7%	3	12%	2	8%	2	7%	2	11%	2	5%
	Pinhão	4	8%	6	10%	4	8%	8	10%	8	11%	7	9%	4	9%	3	5%	4	7%	7	9%
Não respondeu	Turvo	1	9%	1	4%	1	4%	0	0%	1	3%	1	4%	0	0%	1	4%	1	5%	1	3%
	Pinhão	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Total	Turvo	11	100%	28	100%	24	100%	38	100%	29	100%	25	100%	24	100%	27	100%	19	100%	37	100%
	Pinhão	49	100%	61	100%	49	100%	82	100%	74	100%	80	100%	46	100%	63	100%	54	100%	75	100%

Source: Elaborated by the authors.

When relating the entrepreneurial characteristics to the size of the properties, it is noticed that, in Turvo, the entrepreneurial characteristics are concentrated in properties with up to 20 hectares, while in Pinhão, in properties with up to 30 hectares (Table 2), , in both municipalities, the characteristics are represented in greater intensity in the properties of 0 to 10 hectares.

Total score and comparison between samples

In order to compare the two samples, in order to verify statistically whether both are similar, it was decided to use the strategy of Ching and Kitahara (2017), in which "a factor constituted by the 10 CCE variables, enable the formation of the multiple scale that it was called EMP_CCE, resulting from the unweighted sum of each of the ten variables "(CHING; KITAHARA, 2017, p. 305). Thus, we would have to:

EMP_CCE = BOI + PER + COM + EQE + CRC + EM + BI + PMS + PRC + IAC

In which, EM (Goal setting) and BI (Information search) are, in this research, represented by the acronyms EDM and BDI, respectively.

In SPSS v. 21, the T Test for independent samples was performed, since the analyzed data came from two samples that corresponded to different communities, located in two different municipalities, therefore, they originate from different realities (FIELD, 2009).

Table 3 - Description of the EMP_CCE

Group statistics

	County	N	Average	Standard deviation	Mean standard error
EMP_CCE	Pinion	123	119.6911	23.43744	2.111328
	Cloudy	58	115.4138	20.94189	2.74980

Source: Elaborated by the authors

Table 3 presents the descriptive statistics of the EMP_CCE factor on the Pinhão and Turvo samples. These results indicated that the average score for both municipalities is similar, with 119.70 for Pinhão and 115.42 for Turvo, that is, a difference of approximately 4.2777 points.

The standard deviation also shows similarity, however, in order to verify the similarity, variance (which corresponds to the standard deviation squared) will be considered, that is, 549.31 for Pinhão and 438.56 for Turvo. If the variances of the two samples were equal, it could be said that there is similarity between them, which, in the case of this study, it would not be possible to state without the use of more specific statistical analysis techniques. Therefore, it was decided to use the T-student test for independent samples, in order to verify whether the samples are similar or not, according to table 7.

Table 4 presents the result of the Test *T-student*for independent samples. Levene's test (which indicates equality of variances) resulted in 0.682, that is, greater than the 0.05 degree of significance, indicating that there are no significant differences between the variances.

Table 4 - T test for comparison between Turvo and Pinhão samples

Teste de amostras independentes										
		Teste de Levene para igualdade de variâncias		teste-t para Igualdade de Médias						
									95% Intervalo de confiança da diferença	
		F	Sig.	t	df	Sig. (2 extremidades)	Diferença média	Erro padrão de diferença	Inferior	Superior
EMP_CCE	Variâncias iguais assumidas	,169	,682	1,184	179	,238	4,27726	3,61139	-2,84910	11,40363
	Variâncias iguais não assumidas			1,233	124,005	,220	4,27726	3,46805	-2,58698	11,14151

Source: Elaborated by the authors

The Turvo and Pinhão samples indicated that, in the EMP_CCE factor (total score of entrepreneurial characteristics), the difference in means was 4.2777, the standard error of the difference resulted in 3.61 and, therefore, the T test totaled in 1,184, which is greater than 0.05 and therefore indicates that there are no significant differences between the samples. It is known that the T test results from the fraction of the difference in the mean by the standard error of the difference.

Conclusions and recommendations

The present study presented the results of a research carried out in the municipalities of Turvo and Pinhão, located in the state of Paraná, comparing the profile of entrepreneurial behavior identified from the measurement of entrepreneurial characteristics.

Regarding the profile of the respondents, it was found that in Turvo, rural producers are between 41 and 50 years old, with a predominance of males, schooling no more than complete elementary school and properties with no more than 10 hectares.

In Pinhão, rural producers are between 31 and 50 years old, with a predominance of males, schooling between Incomplete Elementary School and Complete High School and properties with no more than 10 hectares.

Regarding the entrepreneurial characteristics identified, it was found that, in both municipalities, BOI (search for opportunity and initiative), PRC (persuasion and network of contacts), EDM (goal setting) and EQE (requirement of quality), and Pinhão also presented the characteristic BDI (search for information).

When analyzing the average score of 13.50, a necessary condition for the entrepreneurial characteristic to be considered developed, the municipality of Turvo had the ten characteristics developed satisfactorily (average score above 13.50), while in Pinhão, three characteristics did not meet this condition (EDM, EQE and BOI).

When comparing the characteristics with the educational level of rural producers, it was noticed that, in Turvo, the characteristics were concentrated in Incomplete Elementary Education. In Pinhão, they were concentrated in Incomplete Elementary School, Complete Elementary School and Complete High School and that had little variation between them, except for the EDM characteristic, which was more concentrated in Elementary School.

Also, the comparison of the entrepreneurial characteristics with the size of the properties was carried out, in which, in both municipalities, the characteristics were represented with greater intensity in the properties of 0 to 10 hectares.

To complement the analyzes, the Student T-Test was performed to compare two independent samples in order to identify similarities or differences between them. The survey data revealed that there are no significant differences between the Turvo and Pinhão samples, since no significant differences were identified between the variances (Levene's test resulted in 0.682, that is, it is greater than the 0.05 significance level) and the T test totaled 1.184 (higher than the 0.05 significance level).

As for the objective of the article, which was to present the results of a research carried out in the cities of Turvo-Pr and Pinhão-Pr, comparing the profile of entrepreneurial behavior identified from the measurement of entrepreneurial characteristics, it is considered that it has been achieved.

However, the limitations of the survey were the size of the samples, with part of the communities not being represented in the survey (13% in the city of Turvo-Pr and 33.33% in the city of Pinhão-Pr), due to limited time in the period of data collection and the difficulty of access to these communities, over long distances.

As suggestions for future studies, it is recommended to deepen the theme in the study of Regional Geographical Indications, in the two municipalities, this study may be carried out by visits to producer fairs, which take place regularly in both cities.

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