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THE ENTREPRENEURIAL ORIENTATION (EO) AT THE PUBLIC UNIVERSITY: A CASE STUDY

A ORIENTAÇÃO EMPREENDEDORA (OE) NA UNIVERSIDADE PÚBLICA: UM ESTUDO DE CASO

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ABSTRACT

This study aims to analyze how Entrepreneurial Orientation (EO) happens in public universities, and in what circumstances it contributes to local and regional development. This is a case study of a qualitative and descriptive essence that was based on the dimensions of the EO using two categories of analysis: (i) university introduces new products to the market, (ii) to evaluate the financial or technological risks of the projects. The research instrument was built based on Fernandes and Santos (2008) and applied to managers and researchers at a public university. The methodological technique was snowball, which uses an initial social network of participants to gain access to the collective (OCHOA, 2015). 17 managers and researchers were interviewed. The results show that the university has leadership characteristics with an entrepreneurial profile, encouraging the creation of Junior Companies in undergraduate courses, and supporting the University's Technological Incubator and the city's Technological Park, in partnership with the City Hall. In addition, it contributes to technological innovation, with collaborative environments and provides infrastructure for the development and interaction between companies and the university.

Keywords: Entrepreneurial Orientation. Entrepreneurship. Public University. Technological Incubator.

RESUMO

Este estudo teve por objetivo analisar como a Orientação Empreendedora (OE) acontece na universidade pública, e em que circunstâncias contribui para o desenvolvimento local e regional. Trata-se de um estudo de caso de essência qualitativa e descritiva que se baseou nas dimensões da OE utilizando duas categorias de análise: (i) universidade introduz novos produtos no mercado, (ii) avaliar riscos financeiros ou tecnológicos dos projetos. O instrumento de pesquisa foi construído com base em Fernandes e Santos (2008) e aplicado a gestores e pesquisadores de uma universidade pública. A técnica metodológica foi a *snowball* que utiliza uma rede social de participantes inicial para ter acesso ao coletivo (OCHOA, 2015). Foram entrevistados 17 gestores e pesquisadores. Os resultados evidenciam que a universidade apresenta características de liderança, com perfil empreendedor; incentivo a criação de Empresas Juniores nos cursos de graduação; apóia a Incubadora Tecnológica da Universidade e o Parque Tecnológico do município, em parceria com a Prefeitura Municipal. Além disso, contribui para a inovação tecnológica, com ambientes colaborativos e fornecendo infraestrutura para o desenvolvimento e interação entre empresas e a universidade.

Palavras-chave: Orientação Empreendedora. Empreendedorismo. Universidade Pública. Incubadora Tecnológica.

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1 INTRODUCTION

Entrepreneurship at the university is the most present topic today. If on the one hand there are those who stimulate the insertion of this topic in the curriculum, on the other hand, there's the criticism of bringing into the university a market conception (NASSIF et al, 2009).

Public universities are undergoing a process of transformation and new social demands, as well as the inclusion of new technologies, being forced to debate the topic of entrepreneurship and its developments. So, education goes beyond that university's original role of providing skilled labor and basic research by stimulating entrepreneurship (ETZKOWITZ and ZHOU, 2007).

Currently, the university deals with innovation, whether it's in the field of teaching, research, or extension, or even in the promotion through incubators. When analyzing the University in the society, Etzkowitz (2010) considers it as an economic spring that tends to be entrepreneurial, in which the change of model is reflected between the developers and the users of knowledge. According to the author, entrepreneurial orientation based on learning and knowledge, and resulting from the interactions between university, industry, and government, referring to the "triple helix" model, are fundamental for regional and innovative economic development. So, such interactions among the three sectors form a triple helix of innovation and entrepreneurship transforming into the key to economic growth and social development based on knowledge. (ETZKOWITZ and ZHOU, 2017).

In a way, the entrepreneurial education can be considered as responsible for the success of the entrepreneur and for supporting the region's development (GEN, 2005). At this juncture, the entrepreneur is the agent who causes economic changes through new products and services in the market, providing better development with new companies, new products, and more jobs.

All things considered, Casado et al. (2012) emphasize that the entrepreneurial university should define a strategic direction that seeks not only research, education, and extension, but also the interaction among companies and responsibility for economic and social development. For Ferreira et al. (2009), the benefits of entrepreneurship go beyond the increase of production and wealth, as it manifests in modifications in business scenarios and in society itself.

Thus, the reality has changed and Brazilian universities have become important institutions on the national scene, since the relevance of technological innovation is

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increasingly perceived. One of the fundamental arguments that has been built in the academy defends the idea of the development of technological innovations. Alongside, cooperation between the university and company needs to be promoted (NOVELI and SEGATTO, 2012).

The Entrepreneurial Orientation (EO), present in the context of innovation, accelerates the adaptations to the environment and it's considered an important topic within the entrepreneurship study because it's related to the formulation process of the manager's strategy. For Martens and Freitas (2007), EO is interpreted as entrepreneurship on the organization level, seen as the ability to assume risks and responsibilities in the space of new business or in the release of an existing one, with innovation as its essential characteristic.

The Global Entrepreneurship Monitor (GEM) research report (2010) confirms that entrepreneurial attitudes reveal people's disposition towards entrepreneurship and entrepreneurs. Therefore, entrepreneurial actions are carried out in order to transform all knowledge into new enterprises (JOHANNPETER, 2008). The problematization of this study, in this sense, seeks to know through descriptive qualitative research what's being developed in terms of research in Brazil about academic entrepreneurship and what are the contributions of entrepreneurial orientation from the university to the territorial development. The following research question arises: how the entrepreneurial orientation (EO) of a Brazilian public university can contribute to territorial development?

This problematization will serve to support and to increase knowledge on entrepreneurial orientation and entrepreneurial actions in the face of many transformations and needs of society that are in search of new accomplishments and achievements.

That being said, this study aims to analyze how entrepreneurial orientation happens in a public university in southern Brazil and in what circumstances it contributes to local and regional development. Therefore, the article is structured into four sections. The literature review follows this introduction. Subsequently, the methodology describes the research paths, as well as the research techniques used. Thereafter, the results are presented concluding with final considerations and references used.

2 ENTREPRENEURIAL ORIENTATION

Throughout history, several authors have studied and defined entrepreneurship in different aspects. Schumpeter (1982) identified entrepreneurship with innovation. Morris (1987) considered entrepreneurship as a phenomenon involving people, organization, and society. Some authors consider entrepreneurship as a transient behavioral phenomenon.

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The Entrepreneurial Orientation (EO) derives from entrepreneurship, emerging as a subject of study in the 80s (LAZZAROTTI et al. 2015). Entrepreneurial Orientation is characteristic of an entrepreneurial organization, as it involves the ideas and actions of a dynamic process manager, aiming the creation of a new business and taking advantage of the situation and opportunities of the environment (LUPKIN and DESS, 1996).

In addition, EO is the result of strategy and entrepreneurship concepts in an organizational dimension. Today, the theme has been more explored as it refers to the undertaking process and how entrepreneurship develops itself in decision-making to manage a company in an entrepreneurial way (MARTENS and FREITAS 2012).

But for other authors, EO is equivalent to the entrepreneurial attitude and comprehend organizations in which there's standard behavior involving all organizational levels and reflecting managerial practices (COVIN and SLEVIN, 1991).

Grégoire et al. (2006), even identifying several axes or dimensions, consider that the main axis is entrepreneurship at the organization level. Regarding the school of entrepreneurial thought, Cunningham and Lischeron (1991) highlight the classical one, which presents innovation as a central characteristic of entrepreneurial behavior. Within the categories of the school of entrepreneurial thought, Stevenson and Jarillo (1990) consider the category “how”, which refers to how entrepreneurs act, focusing on the characteristics of entrepreneurial management, as well as how the goals are achieved. So, the entrepreneurial management reflects the organizational processes, methods, and styles an organization uses to act in an entrepreneurial way.

Figure 1 presents some definitions of Entrepreneurial Orientation throughout history from 1983 to 2006.

Entrepreneurial Orientation can influence in a positive way the organization's performance, according to some studies about the subject. Miller (1983); Morris and Paul (1987); Stevenson and Jamillo (1990); Covin and Sleven (1991); Lumpkin and Dess (1996); Zhara and Neubaum (1998); Covin, Green, and Slevin (2006) are unanimous in their studies when considering that entrepreneurial organizations have a positive position in relation to the financial performance. For them, such effects tend to be skimpy at first, but evolve over time.

Thus, EO can represent the entrepreneurial activity of organizations, creating opportunities and breaking organizational inertia looking for competitiveness (DE CLERCQ *et al*, 2013). However, it’s likely that each organization requires different types of forces to stimulate entrepreneurship, thereby facilitating the EO of a certain organization sector, thus

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processing, through the dimensions, the most important elements of these organizations, so that they have a better EO. Based on the authors studied, it's considered that organizations need to have the knowledge and practice of how to be entrepreneurs and how to innovate, only in this way the EO will consolidate. Miller (1983) and Covin and Slevin (2006) present a conceptual model of organizations' EO as a construct that reveals itself through three dimensions: innovativeness, risk-taking (or risk rising) and pro-activity.

Figure 1 Definitions of Entrepreneurial Orientation throughout history

Miller (1983)	An entrepreneurial organization is the one that engages in product and/or service innovation, that also undertakes risky situations and acts proactively in front of its competitors.
Morris and Paul (1987)	A company is entrepreneurial with decision-making norms that emphasize proactive and innovative strategies that contain an element of risk.
Stevenson and Janillo (1990)	Entrepreneurial management reflects the organizational processes and the methodology the organization uses to act as an entrepreneurial one.
Covin and Slevin (1991)	Entrepreneurial organization presents a posture with a behavior pattern that permeates all organization levels, reflecting the strategic philosophy of managers in managerial practices. They are risky, proactive, and innovative companies.
Lumpkin and Dess (1996)	Entrepreneurial orientation refers to the methods, practices, and style of management decision-making used to act in an entrepreneurial manner.
Covin and Slevin (1998)	Entrepreneurial companies are those in which top managers have business management styles. It's evidenced by strategic decisions of companies and operational management philosophies.
Zahrae Neubaum (1998)	Entrepreneurial Orientation is the total sum of a company's radical innovations, like a proactive strategic action, taking risks and activities that manifest themselves in support of projects with uncertain results.
Covin, Green and Slevin (2006)	Entrepreneurial orientation is a construct of strategy that includes some results at the organization level related to the preferences and behaviors expressed among the managers of the organization.

Source: Martens and Freitas (2008).

The innovativeness dimension comprises the organization, sharing and support of new ideas, which may result in new products or services (LUMPKIN and DESS, 1996; FREITAS et al., 2012). In this way, innovativeness points to the innovative attitude of the organization. The risk-taking dimension is related to the acceptance of the uncertainty and the risks of the associated activities, as well as the possibility to be associated with the commitment of resources and uncertain activities. However, the pro-activity dimension refers to companies that actively seek to use opportunities and to introduce new products or services to the market aiming obtaining advantages (MILLER, 1983).

Pro-activity appears as a differential in this context. For Lumpkin and Dess (1996), it refers to the initiatives of anticipation and search for new opportunities, along with participation in markets. For the authors, proactive organizations follow trends, find the needs

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of their customers, perceive changes in demands, and try to reach new opportunities. The EO, in this case, represents the entrepreneurship process, covering its dimensions and characteristics, also admitting the evaluation of the organization's entrepreneurial behavior.

Further, Lumpkin and Dess (1996) expand the debate and consider the EO construct in five dimensions: innovativeness, risk-taking, pro-activity, autonomy, and competitive aggressiveness. Therefore, two new dimensions appear, in which autonomy refers to the independent action of an individual who puts into practice an idea, a vision. It's when organizational individuals, in the course of the process, have the freedom to act independently and make important decisions to turn ideas into reality. Competitive aggressiveness, in its turn, is related to the organization's ability to directly challenge its competitors to obtain a better position in the market, either through changing the context, redefining services and/or products, or even changing the market itself (LUMPKIN and DESS, 1996). Figure 2 conceptualizes the EO's dimensions.

Figure 2 Five Dimensions of Entrepreneurial Orientation

EO's dimensions	Concept
Innovativeness	It's characterized as the organization's willingness to conduct novelties and innovation through experimentation and creativity, aiming at the development of new products and services, as well as new processes.
Risk Taking	This dimension refers to organizations that tend to make decisions and act without certain knowledge of likely outcomes. Some companies may make substantial resource commitments. It ventures into new and unknown products.
Productivity	It's characterized as a leader's perspective in seizing and seeking market opportunities, anticipating future demands.
Autonomy	Independent action carried out by an individual or a team that aims at a business concept or vision and leads it to its conclusion.
Competitive Aggressiveness	It's characterized by an intense effort of the organization to overcome its rivals. This dimension is characterized by a combative posture or an aggressive response aiming at improving the position or overcoming a threat in a competitive market.

Source: Dess and Lumpkin (2005).

Therefore, to put into practice these five dimensions of EO it's necessary to break down barriers in organizations, such as conservatism, that is practiced as a form of politics and can be outlined by ideas with the practical value of use, without defined principles, in which everything that works in political terms can be grouped to its functions and or activities (MATTOS, 2015).

According to Coutinho (2014), the historical trajectory of public education institutions includes moments of continuity and rupture from discussions with the historical conditionalities to which it was subjected, and the break of paradigms as the conservatism and the conservative tradition.

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Teaching and research were the main missions of the university. In the 19th century, the role of the university was exclusively to transmit knowledge. The purpose was education and the technical-scientific know-how. The first revolution in the university world happened in the 20th century and research became the student's second intention after education. In this way, the professor, in addition to transmitting knowledge, begins to generate it through experiences and discoveries. From then on, the university acquires a leading role in the institutional basis of an emerging mode of production based on continuous technological and organizational innovation. Therefore, universities are not only responsible for the transformation of skilled labor, but also provide knowledge for technological development (RAPINI, 2007).

3 METHODOLOGY

This section presents the research's paths, from its conception to the strategies of data collection and the procedures for the information collected analysis.

The study is of a qualitative essence, which guarantees the richness of the data, allowing us to see them in their entirety (VIEIRA and ZOUAIN, 2004). The choice for this approach consists of exploring and explaining the research problem by pointing out complex procedures, which seek the trend or confirmation of outcomes in different data sources. According to Godoy (1995), in a qualitative study you have descriptions of people, places, and processes through direct contact, bringing the perspective of the research participants.

In addition, the present study seeks to understand how the entrepreneurial orientation of a Brazilian public university can contribute to territorial development. In this sense, it corroborates with Godoy (1995) by being concerned with the process and not with the results or the product.

Regarding its content, the research is classified as descriptive, since data and characteristics related to the structure of the public university are analyzed, recorded, and interpreted. However, this description of the data does not suffer from external interference (PRODANOV and FREITAS, 2013). Thus, it's observed that the descriptive data the researcher seizes, through the events observed in the field research, as it was the case, reveals all the manifestations and information provided, directly and indirectly by the subjects (YIN, 2010). For the author, the qualitative character adopted for the research is very suitable to study events involving human beings and their social relations, as it’s the case of the university studied.

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In addition to the research being classified in this way – qualitative and descriptive – it's also necessary to deepen in relation to the reality of the study object. Therefore, this research is also classified as a case study. According to Yin (2010), it's an empirical investigation, which investigates a contemporary phenomenon in depth and in its real life context, especially when the boundaries in the context are not clearly evident.

The secondary data (BEUREN and SOUZA, 2007) comprise the collection of institutional data, such as university rules, statutes, and regulations, as well as documents presented by the interviewed managers.

The interview script was built based on the topic of Entrepreneurial Orientation of Fernandes and Santos (2008). The same was validated by three experts and the questions sought to address the profile of the interviewee and explore the EO topic. Thus, the semi-structured interview was conducted with significant managers and researchers in the university context studied. The choice of these interviewees followed the criterion of representativeness of the university structure. The tool used was the snowball that predicts which step to follow, by indicating the first participants and information about the other members of the institution of interest for the research. According to Ochoa (2015), it's a non-probabilistic sampling technique, and the process of creating a "snowball" sample is based on the use of a social network of initial participants to have access to the collective, on which the first participants invite others. In this way, 17 managers and researchers were interviewed.

The interview script was built based on the Entrepreneurial Orientation dimensions using two categories and subcategories: (I) University introduces new products to the market; and (II) evaluating financial or technological risks of projects. Figure 3 shows the dimensions of the EO and its categories and subcategories.

The data analysis was based on content analysis, which according to Bardin (2011), can be considered a cluster of strategies for intercommunication analysis, and aims to transcribe the content of said messages, documents, and behaviors analyzed, covering different ways of observing. For instance, it aims to demonstrate the "not said" in a semi-structured interview and or measure the speech depth. The treatment of the results was carried out through the interpretation of the analyzed materials content and the interviews conducted.

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Figure 3 Dimension Entrepreneurial Orientation.

Category	Subcategory
University introduces new products to the market	Research development needs; Assist entrepreneurship and innovation research; Stimulate and support research in society; Highlight incubators and technology parks; Entrepreneurial Orientation to innovative ability; Create project offices (embryo); Support to the patent product;
Assessing financial or technological risks of projects	Structure a way to assess risks; Junior Companies do feedback with other companies; Incubator finds resistance for the conservatism; Incubator develops meetings with the support of mentors.

Source: survey data.

4 RESULTS

After analyzing the interviews and documents, it was necessary to combine the options of Entrepreneurial Orientation with the purpose of creating a reliable interpretation of the answers obtained in the course of the research when the data were collected. We sought to triangulate the data of the interviews with the documents and references collected, as well as on-site observations.

The profile of the 17 interviewees regarding gender, current position/occupation, and place that develops their activities as manager or researcher is represented in Figure 4.

Figure 4 The profile of the interviewees

Place	Position	Sex	Age
Rectory	President	M	31-40
Rectory	Vice president	M	31-40
Pro-Rectory research and innovation.	Advisor	M	51-60
Pro-Rectory planning	Advisor	M	31-40
Pro-Rectory (Undergraduate Program)	Board of Directors	F	31-40
Unity	Deputy Director	F	61-70
Unity	Coordination Graduate Course	F	61-70
Incubator	Coordinator	M	31-40
Incubator	Coordinator	F	31-40
Pro-Rectory	Researcher Professor	M	41-50
Pro-Rectory	Researcher Professor	M	51-60
Technopole	Researcher Professor	F	51-60
Pro-Rectory	Head of sector	M	41-50
Pro-Rectory	Head of sector	M	41-50
Incubator	Doctorate student	M	31-40
Incubator	Master's student	M	25-30
Junior Company	Graduate student	M	25-30

Source: survey data.

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As for the profile of the interviewees, 12 are men and five are women. The age range of these managers varies between 28 to 62 years. Two managers are in the range between 25 and 30 years; seven in the range between 31 and 40 years, and three between 41 and 50 years. Three other managers are between 51 and 60 years old and two interviewees vary from 61 to 70 years old. Then, it's considered that there's a predominance of the interval between 31 and 40 years, a young population with fertile age to develop the academic management of the university. The interviews revealed that this higher percentage of managers appears significant maturity and sufficient experiences to participate in this research.

Interviewees mostly hold management positions, totaling 11 people. The remaining six are undergraduate and graduate students or researchers, indicated by the first interviewees, given their knowledge of the subject using the snowball technique (OCHOA, 2015).

As for how long the interviewees are in their respective positions at the university, some managers commented that they took the position for the first time, others started together with this new management, and others changed positions, but remain in management.

Regarding educational training, one interviewee is an undergraduate student and two are graduate students, Doctorate and Master's degree. The rest are masters and doctors.

Of the 17 interviewees, 15 are graduates, from Masters to Ph.D., which shows a qualified population who has in research and university management its daily work. Therefore, it's appropriate to analyze the factors that influenced the actions of Entrepreneurial Orientation in the university from these interviewees, considering there are researchers who are involved with scientific and technological production in the university.

4.1 ENTREPRENEURIAL ORIENTATION

The content analysis of the interviews considered two basic categories within the scope of the EO: how the university introduces new products/processes/innovations to the market and the technological risk assessment of the projects produced at the university. Such categories are based on literature and they are important for this analysis.

4.1.1 Introduction of new products, processes, or innovation

Most consider the introduction of new products, processes, or innovation well-diversified, but are unanimous in saying that it happens. The interviewee (I9) says the university currently has 15 scholarships for research professors with technology projects

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funded by the National Council for Scientific and Technological Development (CNPq), and 40 scholarships for researchers in the area of technological initiation and that has contributed to the institution through research and innovation.

Two interviewees mention patents when answering the question, highlighting that the "patent process grows geometrically, and there's a rule that a percentage is for the professor and the rest is for the researcher's unit". Still, this is serving “as a stimulus to professors, administrative technicians, and scholarship students to cultivate their entrepreneurial side” (I12). The interviewee (I9) states that:

> Before, entrepreneurship didn't have a lot of dimension in the market. There's an urban legend that the approach with companies was something harmful to the public university, this went on for many years. Later, this relation began to exist, which may be or may be not beneficial for the university, but it can also occur in other areas, such as extension, (the case of scholarships). But we are convinced this is changing with the cultural issue. The university has to dialogue with the market and not work against it. It also must have autonomy and know where the graduates will work. Today, the university has created, and is in the approval stage, an internal policy of technological innovation and policy of relationship with civil society, including companies (INTERVIEWED I9).

Another way to introduce new products or services is through the business incubator, a way to encourage entrepreneurship. In the vision of four managers, (I5, (I6), (I7), and (I10), the university introduces innovation by different forms: (I) extension projects; (II) information transfer; (III) technology and innovation; (IV) business incubator, according to the university's areas: in health, (technology transfer), engineering (computer technology and processes). Tondolo et al. (2016, p.57) highlight that “incubators and technology parks should serve as innovation development agents”. It seeks, through this synergy between university and company, to stimulate development.

On the other hand, managers (I1 and I13) say they have two distinct realities of market demands: public and private. The private company introduces new products through market demands. In the public one often "the product is launched with the internal reality, or even government demand, without the knowledge of the market” turning into a poorly formatted product, without forecast, losing its potentiality over time, say the interviewees.

> Talking about incubator companies, we seek first to do a market research, verify what are the real problems of companies, and from this angle, through dialogue, we seek solutions, creating new products and technologies. It happens always with the support of the university in which the incubator is inserted (I10).

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This incubator mechanism is what stimulates the creation of new products, services, and the process of technological innovation, as well as and the development of micro and small companies and the development of the region, as highlighted by Souza (2010).

For the interviewee (I7), one of the ways to undertake is through Junior Companies, to motivate students to seek market experiences. There are cases of companies being the result of an idea from a Junior Company, but this doesn't happen as a whole, they are isolated ideas, says the interviewee.

Figure 5 summarizes the research findings regarding the EO category in dimension (I) as the university introduces new products/processes/innovations to the market.

Figure 5 Introduction of new products

Introduction of new products	Effects	Author
Incentive to research professors with financed technology and innovation projects.	Return to the institution through research and innovations.	MANAGER INTERVIEWED (09)
Incubators and Technology parks	Serve as innovation development agents	TONDOLO et al. (2016)
Cultural change	Inclusion of a technological innovation internal policy and relation policy with civil society, including companies. Positive relationship between EO and organizational performance.	MAINELA et al. (2014) WANG (2008)
Incubator stimulates the creation of new products, services, and the process of technological innovation	Development of the region and micro and small enterprises	SOUZA (2010)
Junior Companies	Motivate students in the search for market experiences.	COSTA, BARROS and CARVALHO (2014)

Source: Survey data

4.1.2 Assessment of financial or technological risks of your projects

Risk is a set of uncertainties found when we risk making innovations (SALLES et al. 2012). This may affect the purpose of our projects. The PMPOX Guide (2013) determines that project risk management includes planning, identification, analysis, and risk control.

When asked how the university evaluates the financial or technological risks of its projects, some managers consider it's because it's very conservative and does not take risks. Due to the fact they remain conservative, the previous administrations had many losses, say the interviewees (I1, I3, and I8) believing it to be a cultural issue.

On the other hand, the interviewee (I9) considers important to assess the risks, and emphasizes “in this management, the university has grown in amplitude, but not in the risk assessment effectively”. Although this assessment of risks, both financial and technological

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ones, is relevant that "the university has nothing structured regarding the (risks) market" says the manager (I9). However, the lack of risk management in IT projects result in the failure of this type of project, and the percentage of failure has presented an increasingly high index (PIM, 2013).

About the question of intellectual property, the risk that public universities run is:

> Do not apply in the industry or in the market the knowledge discovered, thus compromising the transformation into goods and services. The possibility of failure of the development of a solution arising from an uncertain result process due to insufficient technical-scientific knowledge in which it's decided to carry out the action (PEREGRINO, 2018, P.11-14).

But when it comes to Junior Companies, they have a more provocative role of change, taking initiatives and evaluating their risks with feedback, thus evolving and sharing knowledge with each other through projects and partnerships, say the interviewees (I1 and I15).

The Technological Incubator finds a very great resistance, because it's a conservative university and it doesn't have this parameter of risk assessment yet, say the interviewees (I5, I6, I7 and I10), corroborating with the (I9) interviewee's speech.

Most managers report that the university has received innovative proposals in the new framework of innovation and technology, but when asked about the risks, the idea hangs, because “there's no risk assessment policy”, arising some questions, like who assumes them, is the university or the proposer? For the interviewee (I12) this idea has to be matured and perhaps in five years it can be put into practice. The managers (I9 and I12) consider that the university should be increasingly open to build partnerships, because this interaction along with the project development can “facilitate the training of resources and interaction in the development of it, each one with its responsibilities” (I9 and I12).

For the interviewee (I10), the incubator seeks to minimize problems through mentors, creating support for incubated, mitigating risks through specialized people, meetings, and guidance.

The incubator of the university, through its incubated companies, dialogues with society and from the ideas it proposes solutions. As it’s the case of the municipal body of the municipality with the theme of "selective collection of garbage", the interviewees (I7 and I10) affirm that:

> The university incubator organized an event called "Hakaton" in partnership with the basic sanitation service of the city of Pelotas (SANEP) with

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> duration of a weekend, which won the award for the best proposal for the solution of selective collection of garbage. The selected idea can develop a business. SANEP has the right to use, but nothing prevents this from becoming a product and sold to other city hall of the region (I7 and I10).

It's considered this is one of the ways the university, through the incubator, has given return to the municipality and to the region in terms of regional development.

The interviewee (I7) assures that there are a very high number of filing patents, but a few of granted and approved ones, stating that:

> The process is time consuming and many people give up in the course of it. It's necessary to register characterizing the originality and that the product is the result of investments deposited at the Brazilian National Institute of Industrial Property (INPI). After eight years, if it's characterized as original, it goes for the advanced charter paper and gets granted patent (I7 and I17).

For the interviewee (I7), the university doesn't have the capacity to monitor each of its patents yet. It's up to the research professor to control the process. The university in this case is like a company that negotiates as a competitive strategy, says the manager (I7).

The best way to protect a patent or a new product is its immediate application. In some cases in the Industry, Peregrino (2018) considers that:

> The sooner this is done, the less chances someone has to cross it or supplant it, as technology evolves exponentially. Universities are in this context and should prioritize industry and innovation, because they don't understand that an innovation environment is not composed only of rules of cooperation among companies, university, and government. Externalities should align with this desire to innovate, but Brazil hasn't reached that level yet. (PEREGRINO, 2018, P. 11).

It's considered that in the Entrepreneurial Orientation dimension presented through the two categories, introducing new products/process/innovation in the market and assessing risks, the university has used several activities or actions in order to support the innovative capacity of students and researchers, minimizing financial and or technological risks and monitoring each of these patents.

According to Colbari (2014), entrepreneurship has reached prominence today, due to the flexibility of the market and the change of social behavior, exchanging collective values and rights for an individualistic conduct.

In this way, new configurations of the relationship (company-worker) are seen as the decrease of the joint organization, resulting in an isolated behavior of the worker. Wang

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(2008) considers there are some studies that point to a positive relationship between Entrepreneurial Orientation and organizational performance.

Finally, it should be noted that, despite more changes and/or modifications that have occurred with the construct of entrepreneurship over the years, an element continues to acquire popularity through the entrepreneurial orientation. According to Costa, Barros, and Carvalho (2014), there's an increasing centrality of the company's role in this process. It currently occurs with the rescue of the entrepreneur's importance, but still in an intrinsic way to the organization, that is: as an organizational or collective entrepreneur.

Figure 6 presents the research findings regarding the EO's category in dimension (II) technological risk assessment of projects developed at the university.

Figure 6 Risk Assessment

Risks	Meaning	Authors
Young University	It does not consider risks	PEREGRINO, (2018)
Conservatism	It maintains conservative culture and tradition	COUTINHO (2014)
Organizational culture	Market flexibility and social behavior change	COLBARI, (2014) WANG (2008) MATTOS (2015)
No risk analysis	Lack of risk management	SALLES et al. (2012)
Assess risks	Feedbkeer	COSTA, BARROS and CARVALHO (2014)
Support innovative capacity	Minimizing financial and/or technological risks	Lumpkin and Dess (2006)
Support for managers and researchers	Monitoring each of these patents.	PEREGRINO, (2018)

Source: Survey data.

And it's precisely the act of daring, even knowing that there are threats, one of the important contributors to the emergence of risk management, ratifying what Salles et al. (2012) highlights when it emphasizes that risk management involves decision-making in uncertain, complex and dynamic environments.

5 FINAL CONSIDERATIONS

The present study aimed to analyze how EO happens in the public university and in what circumstances it contributes to territorial development.

To achieve the objective, the collection instrument was developed based on the EO's dimensions, through two categories and subcategories, in each of the theoretical

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constructs of the research, as shown in Figure 3. Thus, the design of the data collection instrument and the interview was determined.

In this way, it was possible to identify that the relation of entrepreneurial orientation at the university is positive, reflecting the greater the actions of innovation, pro-activity, and ability to take risks, the better the performance of researchers and students innovating and creating new products or businesses. For the authors, proactive organizations follow trends, find the needs of their customers, perceive changes in demands, and try to reach new opportunities.

However, it was understood that the university environment also influences the relation of Entrepreneurial Orientation when it comes to weakness, pointing out that researchers need to be cautious with technological changes in order to create strategies to maintain competitive advantage, a theme not well explored in the public university.

Considering the university is an important organizational source for the creation of knowledge, university research could be extended to society, because all knowledge broadens opportunities for social, cultural, and regional economic development, going with what Mainela et al. (2014) say, who defines opportunity as a set of ideas, beliefs, and attitudes that enable the development of future products and/or services that aren't in the current market yet.

It can be stated, through studies, that the entrepreneurial university is an institution capable of developing knowledge for society. However, entrepreneurship is still interpreted as a way to do research for companies, as a form to capture external financial resources, because there's still prejudice and ideological bias. Both entrepreneurship and development are difficult events to measure, because their concepts can vary in meaning, according to different environments and contexts.

From the studies, it became clear that the relationship between the university and the creation of new business is one of the indicators for development. For instance, the inclusion of entrepreneurship course in the curriculum of the programs is already an initiative present in the academy, which will contribute to the professional area, influencing the development of the region through the creation of new companies and the generation of new jobs.

In this context, the researched university is considered entrepreneurial, because it transfers knowledge and learning in the interactions between research groups and technology-based companies. The entrepreneurial university is seen as a social system and not as a

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business vision. It seeks to be innovative. Even taking risks and having change in its organizational structure, it aims at a promising posture for the future.

Also, the university has leadership characteristics with an entrepreneurial profile through the encouragement of the creation of Junior Companies in some programs, support to the technological incubator of the university and the technology park of the municipality, with the partnership of the municipal body (City Hall). Alves and Silveira (2018) corroborate that the technology park and the incubator provide new ideas and trends to the market. In addition, they also create a collaborative environment, providing infrastructure for the development and interaction between companies and the university.

As a future study, it's intended that the university continues to value innovation and entrepreneurship for the development of companies and the relevance of the role of itself. And that technological development is understood as an integrated process and it's associated with other forms of knowledge, making relevant the scientific base established in universities or region.

It's considered that the southern half of Rio Grande do Sul, made up of small and micro-enterprises with poor resources, recognize the university as a fundamental support for the consolidation of this dynamic of interrelationships for the promotion of innovation and entrepreneurship. Thus, the research is expected to continue contributing to the expansion of knowledge regarding the university's performance in the process of innovation and entrepreneurship.

Finally, government policies are expected to strengthen the integration between the university and the productive sector, which is fundamental for the consolidation of a strong scientific-technological base with prospects for competitive, local, and regional performance.

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